International Investigative Dermatology

International Investigative Dermatology

8-11 May 2013
Edinburgh

2013

Edinburgh
Scotland
8-11 May

Final Program

The Sixth Joint Meeting of the European Society for Dermatological Research (ESDR)

Japanese Society for Investigative Dermatology (JSID)

Society for Investigative Dermatology (SID)

IID 2013 Organising Committee

Tri-Society Program Committee

Tilo Biedermann (ESDR)
Carien Niessen (ESDR)
Vincent Piguet (ESDR)
Kenji Kabashima (JSID)
Shigetoshi Sano (JSID)
Tom Hornyak (SID)
Julie Segre (SID)

Local Organising Committee

Irene Leigh –Chair
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David Burden
Chris Griffiths
James Ferguson
Eugene Healy
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Colin Munro
Frank Nestle
Jonathan Rees
Nicholas Reynolds
Richard Weller
Hywel Williams

Finance & Fundraising Committee

Chris Griffiths –Chair
Eugene Healy
James Ferguson
Irene Leigh
Nicholas Reynolds
Richard Weller

Professional Conference Organisers

British Association of Dermatologists
Conference & Event Services
4 Fitzroy Square, London
W1T 5HQ, UK
Tel: +44 (0)20 7391 6357
Email: conference@bad.org.uk
Web: www.bad.org.uk/ces

European Society for Dermatological Research

Research
Rue Cingria 7,Geneva
Switzerland, 1205
Tel: +41 22 321 48 90
Email: office@esdr.org
Web: www.esdr.org

Japanese Society for Investigative Dermatology

Shunkosha Co., Ltd.
Lambdax Building 9F, 2-4-12 Ohkubo,
Shinjuku-ku, Tokyo, Japan
169-0072, Japan
TEL: +81-3-5291-6231
Email: office@jsid.org
Web: www.jsid.org

Society for Investigative Dermatology

526 Superior Avenue East, Suite 540
Cleveland, Ohio 44114, USA
Tel: +01 216-579-9300
Email: sid@sidnet.org
Web: www.sidnet.org

ACKNOWLEDGEMENTS

The International Investigative Dermatology meeting gratefully acknowledges the contribution of the many exhibitors & sponsors whose attendance has helped make the meeting possible.

Welcome

Dear Colleagues,

As President of the IID meeting 2013 I would like to cordially welcome you to Edinburgh. The three sister societies ESDR, SID, and JSID have done their best to organize a stimulating meeting full of excellent science. The program committee was able to select the top ranked abstracts for oral presentation from more than 1500 submissions representing the excellence of academic Dermatology wordwide! In addition, a number of outstanding scientists from all over the world have been selected by the three societies for our invited guest lectures. Furthermore, novel activities such as our international "IID trainee retreat" and our "Rising stars lectures" will make the scientific program even more attractive.

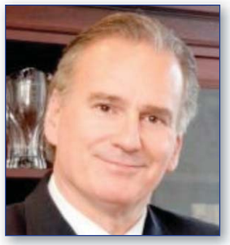
Besides great science, the local organizing committee will ensure good social interactions during our welcome reception, social gathering, and young investigators collegiality evening. Be assured that Edinburgh will offer plenty of opportunities to enjoy European lifestyle.

Old (Scottish) Europe welcomes you to this unique event of excellent science, great collegiality, and social interactions!

Alexander H. Enk
President of the IID meeting
President of the ESDR

Every five years, all the members of international societies for investigative dermatology and cutaneous biology throughout the world get together to exchange information and facilitate collaboration. The three societies, ESDR, SID, and JSID, share the same structure; international, abstract driven, peer reviewed, scientific meeting held in English. IID has been very successful since its launch in 1989 and will continue to be so in the future. We are working together closest than ever to prepare the IID 2013. Please enjoy this unique and memorable occasion at Edinburgh in 2013!

Masayuki Amagai
President of the JSID
Department of Dermatology, Keio University School of Medicine



In 2013 the European Society for Dermatological Research (ESDR) will host the Japanese Society for Investigative Dermatology (JSID) and The Society for Investigative Dermatology (SID) at the 6th meeting of International Investigative Dermatology (IID) in Edinburgh, Scotland. This international venue will be the site of the SID's 76th annual meeting. This terrific international meeting highlights the most outstanding science in skin biology from throughout the world. Start making your plans to participate now, since this event only occurs every five years. The high quality of science, the outstanding interaction with international colleagues and the wonderful city of Edinburgh will combine to make this an unforgettable experience.

We look forward to seeing you in Edinburgh 8-11 May, 2013

Thomas S Kupper
SID President

On behalf of the local organising committee, I look forward to welcoming you to Edinburgh in 2013.The UK has a long and proud history of dermatological research and we are proud that Edinburgh has been chosen to host the sixth International Investigative Dermatology Meeting in 2013, bringing together the European Society for Dermatological Research (ESDR), Japanese Society for Investigative Dermatology (JSID) and Society for Investigative Dermatology (SID). We are planning a wonderful, state of the art meeting to present the latest information on cutaneous biology and skin diseases together with some unique social events.

Irene Leigh
Chair, Local Organising Committee
College of Medicine, Dentistry and Nursing, University of Dundee

Program at a glance

TUESDAY 7 MAY 2013

TIME	SESSION DETAIL	ROOM	FLOOR	INFORMATION
13:00 – 16:00	International Psoriasis Council	Moorfoot	0	Page 23
12:00 – 17:00	Dermatoendocrinology	Ochil 1 & 2	1	Page 24
13:00 – 14:30	Neurobiology of the Skin	Sidlaw	3	Page 25
13:00 – 16:00	Research in Cutaneous Surgery	Fintry	3	Page 26
13:00 – 18:00	BSID Global Investigative Dermatology Showcase	Tinto	0	Page 27
13:00 – 15:30	Eastern European Research	Kilsyth	0	Page 28
14:00 – 17:00	Merkel cell carinoma interest group	Harris 1	1	Page 29
15:00 – 17:00	ITCH	Sidlaw	3	Page 30
16:30 – 22:00	IID Trainee Retreat	Kilsyth	0	Page 31
16:30 – 18:30	American Acne & Rosacea (AARS) Symposium	Fintry	3	Page 32
17:30 – 19:30	European Association of Dermato-Oncology (EADO)	Sidlaw	3	Page 33

WEDNESDAY 8 MAY 2013

TIME	SESSION DETAIL	ROOM	FLOOR	INFORMATION
08:00 – 11:00	National Psoriasis Foundation Scientific Advisory Committee	Ochil 2	1	Page 35
08:30 – 17:00	European Epidermal Barrier Research Network	Fintry	3	Page 36
09:00 – 12:00	Paediatric Dermatology	Sidlaw	3	Page 37
09:00 – 12:00	BSID Global Investigative Dermatology Showcase	Tinto	0	Page 38
08:30 – 13:00	IID Trainee Retreat	Kilsyth	0	Page 39
10:00 – 12:00	Cicatricial Alopecia Research Foundation	Ochil 1	1	Page 40
10:00 – 12:00	Academic-Industry Partnership Program	Moorfoot	0	Page 41
14:00 – 16:00	International Dermatoepidemiology Association	Sidlaw	3	Page 42
14:00 – 17:00	Innovation in drug discovery and stratified medicine	Pentland	3	Page 43
13:00 – 16:30	Future Leaders Symposium	Kilsyth	0	Page 44
16:00 – 17:00	North American Hair Research Society Annual Meeting	Harris 1 & 2	1	Page 45
13:00 – 14:00	Sponsored Symposium: Ceries	Moorfoot	0	Page 46
17:30 – 18:00	Opening Ceremony at the Usher Hall	Usher Hall		Page 47
18:00 – 19:00	Rising Stars Lectures	Usher Hall		Page 48
19:15 – 21:00	Welcome Reception at the EICC	EICC		Page 49

THURSDAY 9 MAY 2013

TIME	SESSION DETAIL	ROOM	FLOOR	INFORMATION
07:30 – 08:30	Sponsored Symposium: Boots	Kilsyth	0	Page 54
07:30 – 08:30	IVIg in Dermatology	Tinto	0	Page 55
08:45 – 10:00	Plenary Session 1	Pentland	3	Page 56
10:00 – 10:30	Rudi Cormane Lecture: John McGrath	Pentland	3	Page 57
11:00 – 12:30	Plenary Session 2	Pentland	3	Page 58
12:30 – 13:00	Herman Beerman Lecture: Allan Balmain	Pentland	3	Page 59
13:30 – 14:30	Sponsored Symposium: L'Oreal Research & Innovation	Sidlaw	3	Page 60
13:30 – 14:30	Sponsored Symposium: Celgene	Fintry	3	Page 61
14:45 – 15:15	JSID Guest Lecture: Hideyuki Okano	Pentland	3	Page 62
15:15 – 15:45	René Touraine Guest Lecture: Lars French	Pentland	3	Page 63
16:15 – 18:00	Concurrent 1: Autoimmunity & Inflammation I	Pentland	3	Page 64
16:15 – 18:00	Concurrent 2: Pigmentation & Melanoma	Sidlaw	3	Page 65
16:15 – 18:00	Concurrent 3: Epidermal Structure & Barrier Function	Fintry	3	Page 66
16:15 – 18:00	Concurrent 4: Stem Cell, Skin & Hair Development	Tinto	0	Page 67
16:15 – 18:00	Concurrent 5: Epidemiology & Health Services Research	Kilsyth	0	Page 68
18:00 – 19:00	Poster Session 1	Lennox & Mezzanine	-1	Page 69
19:00 - 23:00	Young Investigator Collegiality Evening	Dynamic Earth		Page 70

FRIDAY 10 MAY 2013

TIME	SESSION DETAIL	ROOM	FLOOR	INFORMATION
07:30 – 08:30	Sponsored Symposium: Novartis	Fintry	3	Page 75
08:30 – 09:30	ESDR, JSID & SID General Assemblies	Tinto/Moorfoot/ Kilsyth	0	Page 76
09:45 – 10:45	Plenary Session 3	Pentland	3	Page 77
10:30 – 12:00	Public Lecture	Moorfoot & Kilsyth	0	Page 78
11:15 – 12:15	Plenary Session 4	Pentland	3	Page 79
12:15 – 12:45	JSID Awardee Lecture: Manabu Fujimoto	Pentland	3	Page 80
13:00 – 15:00	Workshop for High School Students	Moorfoot & Kilsyth	0	Page 81
13:15 – 14:15	Sponsored Symposium: Pfizer	Sidlaw	3	Page 82
13:15 – 14:15	Sponsored Symposium: Stiefel, a GSK company	Fintry	3	Page 83
14:30 – 15:00	ESDR Guest Lecture: Richard Marais	Pentland	3	Page 84
15:00 – 15:30	William Montagna Lecture: Andrzej Dlugosz	Pentland	3	Page 85
16:00 – 17:45	Concurrent 6: Autoimmunity & Inflammation II	Pentland	3	Page 86
16:00 – 17:45	Concurrent 7: Genetic Disease	Sidlaw	3	Page 87
16:00 – 17:45	Concurrent 8: Human Clinical Research & Therapeutics I	Fintry	3	Page 88
16:00 – 17:45	Concurrent 9: Innate Immunity & Microbiology	Tinto	0	Page 89
16:00 – 17:45	Concurrent 10: Melanoma & Cutaneous Carcinogenesis	Moorfoot	0	Page 90
16:00 – 17:45	Concurrent 11: Tissue Regeneration & Wound Healing	Kilsyth	0	Page 91
18:00 – 19:00	Poster Session 2	Lennox & Mezzanine	-1	Page 92
19:00 – 23:00	Social Gathering	National Museum		Page 93

SATURDAY 11 MAY 2013

TIME	SESSION DETAIL	ROOM	FLOOR	INFORMATION
07:30 – 08:30	Sponsored Symposium: Galderma	Tinto	0	Page 97
07:30 – 08:30	Sponsored Symposium: Lilly	Kilsyth	0	Page 98
08:45 – 10:00	Plenary Session 5	Pentland	3	Page 99
10:00 – 10:30	Albert M. Kligman/Phillip Frost Leadership Lecture: Elaine Fuchs	Pentland	3	Page 100
11:00 – 12:30	Plenary Session 6	Pentland	3	Page 101
13:00 – 14:00	Sponsored Symposium: Abbvie	Fintry	3	Page 102
13:00 – 14:00	Sponsored Symposium: Janssen	Sidlaw	3	Page 103
14:15 – 14:45	Tanioku Kihei Memorial Lecture: Mark Udey	Pentland	3	Page 104
14:45 – 15:15	ESDR Guest Lecture: Andreas Trumpp	Pentland	3	Page 105
15:15 – 16:15	Poster Session 3	Lennox & Mezzanine	-1	Page 106
16:15 – 18:00	Concurrent 12: Adaptive Immunity	Pentland	3	Page 107
16:15 – 18:00	Concurrent 13: Carcinogenesis & Cancer Genetics	Sidlaw	3	Page 108
16:15 – 18:00	Concurrent 14: Human Clinical Research & Therapeutics II	Fintry	3	Page 109
16:15 – 18:00	Concurrent 15: Photobiology	Tinto	0	Page 110
16:15 – 18:00	Concurrent 16: Growth Factors	Kilsyth	0	Page 111
18:00 – 18:30	Closing Remarks	Pentland	3	Page 112

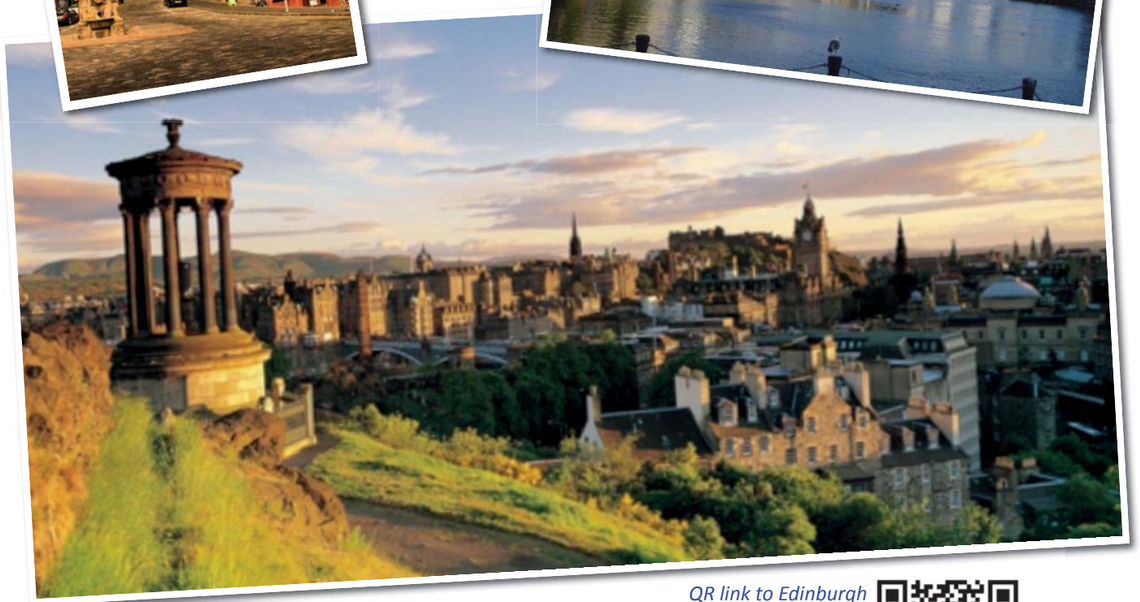
Edinburgh

Other Cities may go in and out of vogue, but Edinburgh will always command a place among the beautiful tourist meccas of the world.
Fodor's Guide

The most beautiful of all the capital cities of Europe.
Sir John Betjeman, 1952

Coming back to Edinburgh is like coming home.
Charles Dickens

"Edinburgh is unique... this is a place that knows how to blend ancient and modern"
Lonely Planet



QR link to Edinburgh Tourism website

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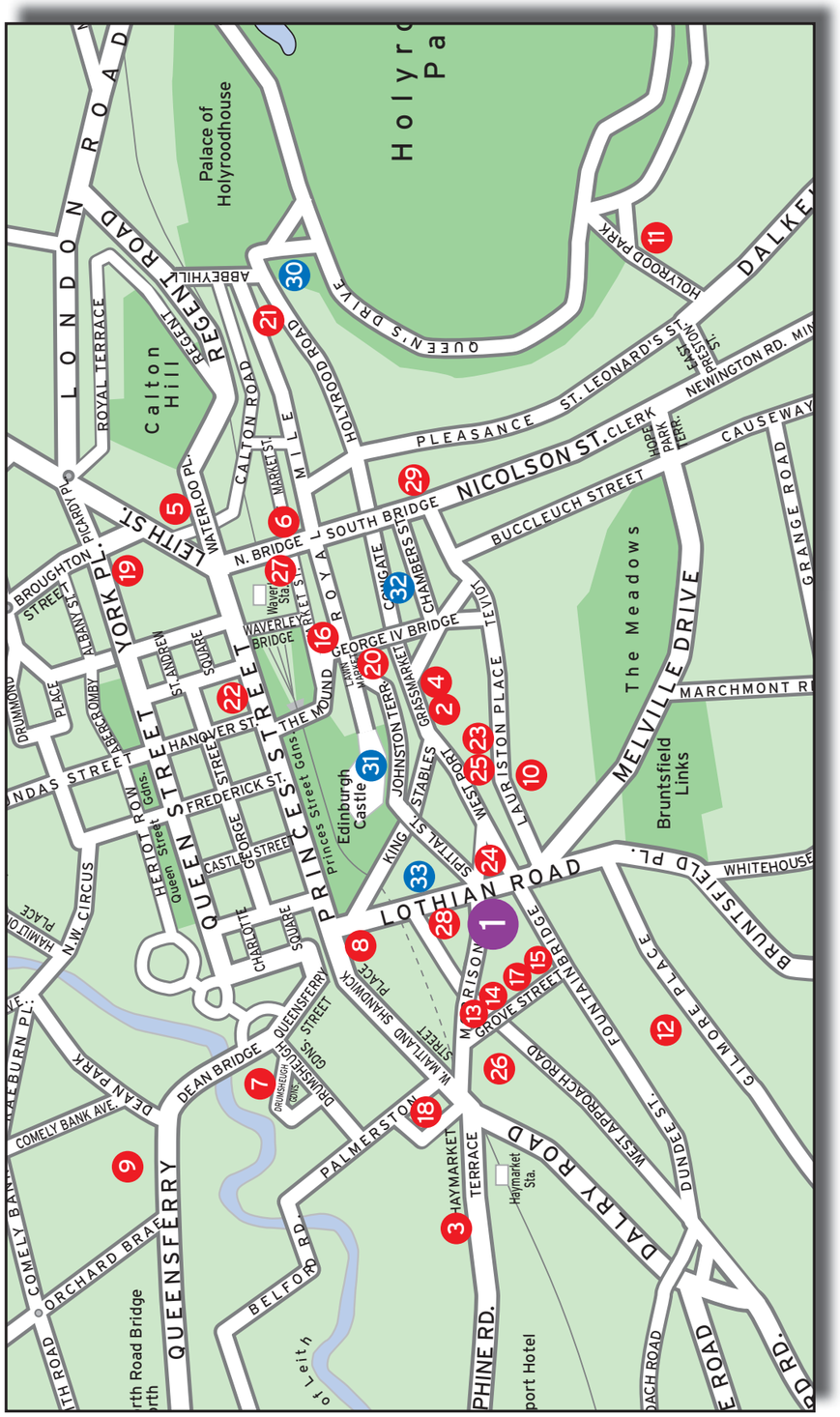
City Map



Conference Venue

1 **EICC** – The Exchange, Morrison Street, EH3 8EE

Hotels/Apartments

2 **Apex City Hotel**
3 **Apex European Hotel**
4 **Apex International Hotel**
5 **Apex Waterloo Place Hotel**
6 **Barceló Edinburgh Carlton Hotel**
7 **The Bonham**
8 **Caledonian Hilton Hotel**
9 **Channings**
10 **Edinburgh City Hotel**
11 **Edinburgh First – Masson House**
12 **Fountain Court Apartments – EQ2**
13 **Fountain Court Apartments – Grove**
14 **Fountain Court Apartments – Grove Executive**
15 **Fountain Court Apartments – Harris**
16 **Fraser Suites Boutique Hotel Edinburgh**
17 **Herald House Hotel**
18 **Hilton Edinburgh Grosvenor**
19 **Hotel Indigo**
20 **Hotel Missoni**
21 **Macdonald Holyrood Hotel**
22 **Mercure Edinburgh Princes Street**
23 **Novotel Edinburgh Centre**
24 **Point Hotel Edinburgh**
25 **Premier Inn Edinburgh Centre**
26 **Premier Inn Edinburgh City Centre (Haymarket)**
27 **The Scotsman Hotel**
28 **Sheraton Grand Hotel and Spa**
29 **Ten Hill Place**

Social Programme Venues

30 **Dynamic Earth**
112 Holyrood Road, EH8 8AS
31 **Edinburgh Castle**
Castlehill, EH1 2NG
32 **National Museums Scotland**
Chambers Street, EH1 1JF
33 **Usher Hall**
Lothian Road, EH1 2EA

General Information

ACCOMPANYING PERSONS

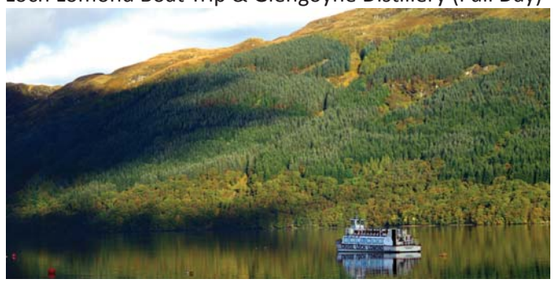
If you have registered as an accompanying person you will be entitled to attend the accompanying persons programme. Details are within the registration pack of your associated delegate.

The programme is:

Wednesday 8 May:
Edinburgh Castle & Walking Tour of the Old Town (Half Day)
Welcome reception at EICC

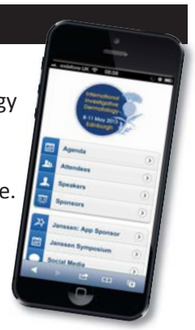
Thursday 9 May:
Royal Yacht Britannia & the Botanic Gardens (Half Day)
Young Investigators Collegiality Evening

Friday 10 May:
Loch Lomond Boat Trip & Glengoyne Distillery (Full Day)



We regret that children/babies are not permitted entrance to the exhibition areas.

APP



We are pleased to announce that the International Investigative Dermatology Conference will be providing a smartphone conference app for delegates to use during the conference.

The app will provide the following features;

- Real time polling during sessions
- Ask the speaker a question
- Take notes on sessions
- Provide session feedback
- Full agenda details
- Speaker profiles
- Social Media
- Sponsor and exhibitor listings

Now is a great time to get the conference app on your mobile device. To access the app simply open your smartphone browser and enter the following URL: www.iid2013app.org or scan this QR Code

BADGES

Conference badges will be handed to delegates on registration. For security purposes name badges must be worn at all times throughout the meeting. In the event that you lose your badge, a replacement must be obtained at the registration desk immediately.

BAGS

If you had indicated on your registration form that you wanted a bag, a ticket will be in your registration envelope. Please take it to the Delegate Bag Desk in the Strathblane Registration area to receive a bag. If you did not request a bag you can still receive the inserts from the bag desk.

BANKING

High street banks can be found within a 5 – 10 minute walk of the venue in the city centre.

BUSINESS SERVICES

The EICC Business Centre is located in the Strathblane Hall and provides a number of services.

CATERING

Lunch and all scheduled refreshment breaks will be served from designated points in the exhibition area, the Cromdale Hall of the EICC. If the nearest catering point is not open, staff will direct you to the next most convenient point.

Cash catering will be offered on Tuesday 7 May and throughout the meeting from the café on level 2 of the Atrium.

CERTIFICATES OF ATTENDANCE

Certificates of attendance will be in your registration envelope.

CHILDMINDING / BABYSITTING

There will be no crèche facilities at the meeting. Please approach your hotel directly for a babysitting service or to make alternative child care arrangements.

CLOAKROOM

The cloakroom is located in the Strathblane Hall (Level 0), adjacent to the registration area and will be staffed by the EICC daily. Guests will be able to store luggage on the day of departure with additional cloakroom space available in the Lomond Foyer on Level 0.

COMMITTEE MEETINGS

A programme of the scheduled committee meetings can be found on page 18.

CONTINUING PROFESSIONAL DEVELOPMENT CREDITS (CPD)

This event will be approved for External credit for the CPD Scheme of the Federation of Royal Colleges of Physicians of the UK. Physicians should record their credits in their diaries, in accordance with the current RCP recommendations. Participants should only record the number of hours they attended.

EXHIBITORS & SPONSORS

The exhibition will be located in Cromdale Hall of the EICC and will be open at the following times:

Wednesday	8 May	12:00 – 19:00
Thursday	9 May	09:00 – 17:30
Friday	10 May	09:00 – 17:30
Saturday	11 May	09:00 – 14:30

Please see page 21 for a full list of exhibitors and an exhibition plan.

FIRST AID

There is a first aid room, which is located on level -2 next to the Cromdale hall. There are a number of first aiders on site.

INTERNET CAFÉ

The Internet café is situated in the foyer area on the Cromdale hall on Level -2. There is also wi-fi available throughout the building.
IID 2013 is grateful for the support of the Internet café by Almirall.

Almirall
Solutions with you in mind

MESSAGES

A delegate notice board will be situated adjacent to the registration desk, where all delegates' messages will be displayed.

PARKING

There are many car parks in close walking distance to the EICC. National Car Parks in Edinburgh can be found at www.ncp.co.uk/find-a-car-park Additionally, there is a public car park at the Sheraton Hotel, 150 meters from the EICC, which has limited accessible parking spaces. For further details please see www.sheratonedinburgh.co.uk/car-park

PATIENT SUPPORT GROUPS

The following patient support groups will be represented at the meeting and will have stands in the Atrium:

- American Acne & Rosacea
- British Skin Foundation
- Debra
- International Federation of Dermatology Clinical Trial Networks
- International Psoriasis Council
- National Alopecia Areata Foundation
- PSALV
- Sturge-Weber Foundation

PAYMENT OF REGISTRATION FEES

Delegates can pay by cheque (pounds sterling drawn on a UK bank only or by sterling bank draft) made payable to the 'British Association of Dermatologists'. Cheques in other currencies cannot be accepted. Alternatively, delegates may pay by credit card and this is encouraged for overseas delegates. Please note that we only accept MasterCard and Visa. American Express cannot be accepted.

POSTER EXHIBITION

The poster exhibition will be located within the Lennox Suite and mezzanine level. The posters will be numbered and a list is provided on pages 114 – 173 of this programme. Poster presenters can ask at the poster desk on the mezzanine level the location of their posters, collect pre-printed posters and store poster tube holders.

REGISTRATION DESK

The registration desk will be located in the Strathblane Hall of the EICC and will be staffed during the following hours:

Tues 7 May	09:00 – 18:00
Wed 8 May– Sat 11 May	07:00 – 18:00

The telephone number for the registration desk is: 0131 519 4101

RELAY OF PLENARY

Due to the high registration numbers, where possible, the Plenary Lectures from the Pentland room will be relayed into overflow rooms (Tinto, Moorfoot, Kilsyth) and the registration area.

SOCIAL EVENTS

Please see Social Program page 16.

SPEAKER PREVIEW

Speaker preview will be located in the Soutra Room on the ground floor level foyer at the EICC, please ask at the registration desk for directions. All presenters must take their presentations to speaker preview at least two hours prior to their presentation. Data projection (PowerPoint) will be available.

Presentations can be provided as either Apple Keynote or Microsoft PowerPoint

Apple Keynotes

Early submissions can be made via the event speakerpreview website http://iid.speakerpreview.co.uk

Username: iid
Password: edinburgh

All speakers must attend the Speaker Preview room even if they have submitted their presentation via the website.

The IID program has a tight schedule and all speakers should make sure they keep to time. Session chairs have been instructed to stop talks that overrun.

TAXIS

Black Cabs are often parked outside the EICC. Alternatively, you can use the concierge to call you at taxi. The phone number of the local Black Cab company is 0131 229 2468.

TOURIST INFORMATION DESK

Edinburgh City Information can be obtained from the information desk within the Strathblane registration area. The desk will be staffed from 09:00 – 17:00 on Wednesday 8 May and Thursday 9 May to answer any questions on local amenities.

Further information can be found on the Edinburgh Convention Bureau website: http://www.conventionedinburgh.com/

TOURS & EXCURSIONS

Pacific World are providing the options for tours and excursions during your time in Scotland. The accompanying persons programme will include some of the options as part of the package. Please visit the stand within the Strathblane registration area for full details. Further details can be found on page 17

TRANSPORT – IN AND AROUND EDINBURGH - TO AND FROM EICC

Getting to Edinburgh
With excellent air links and rail and road network, getting to Edinburgh from overseas or within the UK has never been easier.

Travelling to Edinburgh by Train
Edinburgh has two railway stations - Waverley and Haymarket. Waverley is the main station and has direct routes to many cities across the country, including over 25 daily departures from London. For more information on the rail network within the UK visit www.eastcoast.co.uk or www.nationalrail.co.uk

Travelling to Edinburgh by Bus
Edinburgh's main bus terminal is located at St Andrews Square. Bus connections stretch right across the UK. For details of these routes visit:www.nationalexpress.com or www.citylink.co.uk. For information on local bus services throughout Edinburgh visit www.lothianbuses.com

Travelling to Edinburgh by Plane
Edinburgh has one of the UK's fastest growing airports and new flights are always being added. At the EICC, we have the luxury of being located right in the heart of the city and within 10km (6 miles) of Edinburgh International Airport. For more information on which

airlines and destinations connect to Edinburgh visitwww.edinburghairport.com.

From Edinburgh Airport by Bus
The Airlink 100 operates a frequent bus service (every 10 minutes at peak times) between Edinburgh Airport and the city centre, with designated stops en route. The service starts at 04.30 and runs until 00.22 at night, with the journey taking 20 minutes. Tickets cost £3.50 single and £6.00 return. Delegates are advised to disembark at Haymarket Railway Station and to follow signs for EICC on foot (5 minute walk).

The N22 bus also departs from outside the Airport entrance and runs every half an hour through the night until the Airlink service starts again. For more information about these services visit www.flybybus.com.

From Edinburgh Airport by Taxi
There is an excellent taxi service from the airport to the city. You'll find official airport taxis at the taxi rank outside the terminal building (follow the signs within the airport). It costs approximately £15 to get a taxi from the airport to the city centre and the journey takes 20 minutes depending on the time of day.

Travelling to Edinburgh by Car
The EICC is right in the centre of Edinburgh. The main entrance is on Morrison Street. For directions from your home or office visit www.multimap.com and input EH3 8EE for the destination postcode

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There is wi-fi access throughout the EICC. The wifi code will be available throughout the conference at the venue.

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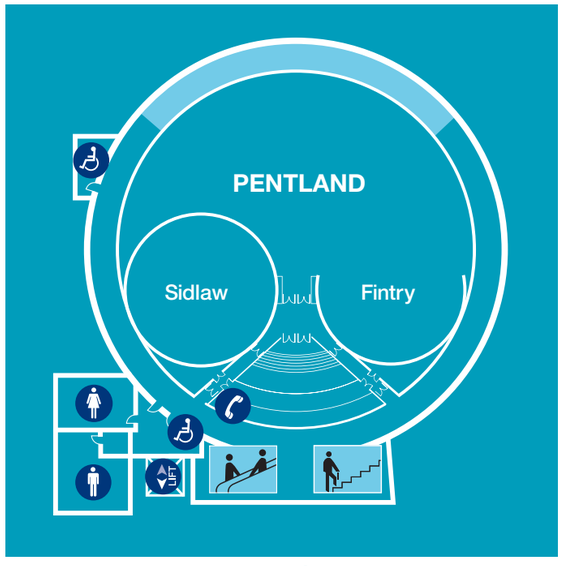
QR link to EICC website

EICC Room Layouts



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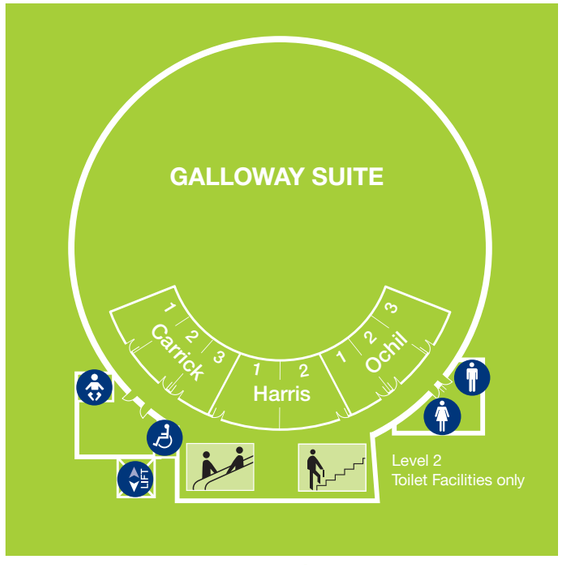

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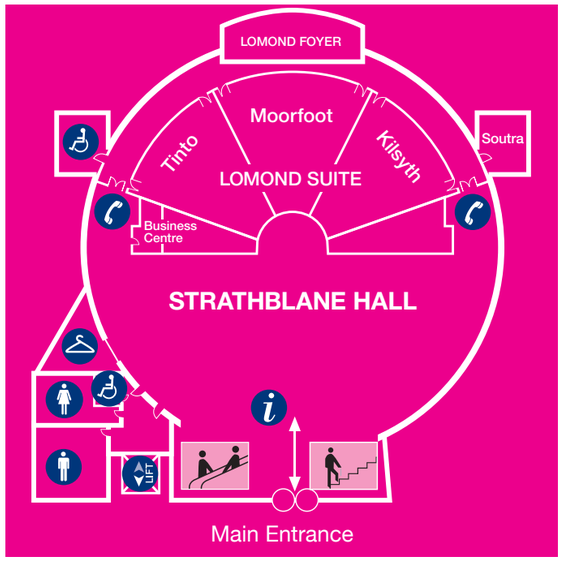

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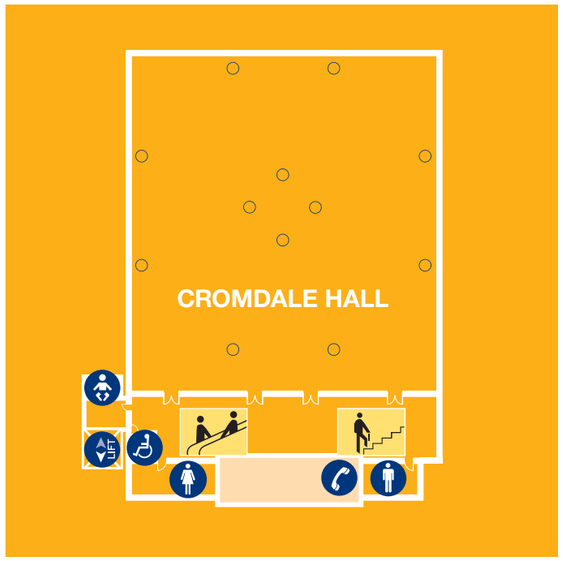


Level -2

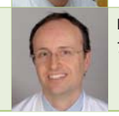
Conference Venue

Overview

WEDNESDAY 8 MAY 2013

TIME	RISING STARS LECTURERS			ROOM	INFORMATION
18:00 - 19:00	**Kamran Ghoreschi** (ESDR)	**Kenji Kabashima** (JSID)	**Rachael A. Clark** (SID)	Usher Hall	Page 48
	The intracellular signals determining T cell immune responses	*Visualization of skin immune responses*	*Human skin resident memory T cells: The ups and downs of on-site immunity*		

THURSDAY 9 MAY 2013

TIME		SPEAKER DETAIL	ROOM	FLOOR	INFORMATION
10:00 - 10:30		Rudi Cormane Lecture: **John McGrath** *Cell therapies for Epidermolysis Bullosa*	Pentland	3	Page 54
12:30 - 13:00		Herman Beerman Lecture: **Allan Balmain** *Network Biology of normal skin, inflammation & cancer*	Pentland	3	Page 59
14:45 - 15:15		JSID Guest Lecture: **Hideyuki Okano** *iPS technologies for CNS - regeneration and disorders*	Pentland	3	Page 62
15:15 - 15:45		René Touraine Guest Lecture: **Lars French** *The inflammasome, autoinflammation and the skin*	Pentland	3	Page 63

FRIDAY 10 MAY 2013

TIME		SPEAKER DETAIL	ROOM	FLOOR	INFORMATION
12:15 - 12:45		JSID Awardee Lecture: **Manabu Fujimoto** *Pathogenic and regulatory B cells in autoimmune disease*	Pentland	3	Page 80
14:30 - 15:00		ESDR Guest Lecture: **Richard Marais** *RAS and RAF signaling in melanoma: from basic discoveries to clinical benefit and back*	Pentland	3	Page 84
15:00 - 15:30		William Montagna Lecture: **Andrzej Dlugosz** *Hedgehog signaling in skin biology and tumorigenesis: where, when, and how?*	Pentland	3	Page 85

SATURDAY 11 MAY 2013

TIME		SPEAKER DETAIL	ROOM	FLOOR	INFORMATION
10:00 - 10:30		Albert M. Kligman/Phillip Frost Leadership Lecture: **Elaine Fuchs** *Skin stem cells in silence, action and cancer*	Pentland	3	Page 100
14:15 - 14:45		Tanioku Kihei Memorial Lecture: **Mark C. Udey** *Serendipity and Studies of Langerhans Cell Biology*	Pentland	3	Page 104
14:45 - 15:15		ESDR Guest Lecture: **Andreas Trumpp** *Circulating Tumor Cells and Metastasis*	Pentland	3	Page 105

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Exhibition Map

KEY

○ DENOTES BUILDING COLUMN

1 - ZenBio Inc.
S2 - The Boots Co.
3 - CELLnTEC Advanced Cell Systems AG
4 - Miltenyi Biotec GmbH
6 - Acta Dermato-Venereologica
7 - Regeneron Pharmaceuticals Inc.
8 - Society for Investigative Dermatology
9 - Nature Publishing Group
11 - European Society for Dermatological Research
12 - Karger Publishers
13 - Brymill UK
S14 - Lilly
G15 - Leo Pharma
G16 - Celgene
G17 - Pfizer Inc.
G18 - Janssen
G19 - Novartis
20 - Biologix Hair Inc.
G21 - AbbVie
G22 - Stiefel a GSK company
23 - Courage + Khazaka
24 - Hisamitsu UK Ltd
25 - Pern Consumer Products Ltd
26 - Delfin Technologies UK Limited
27 - Aeon Astron Europe - Biomimiq
28 - Agfa Healthcare
29 - MEDlight GmbH
30 - Alba Science
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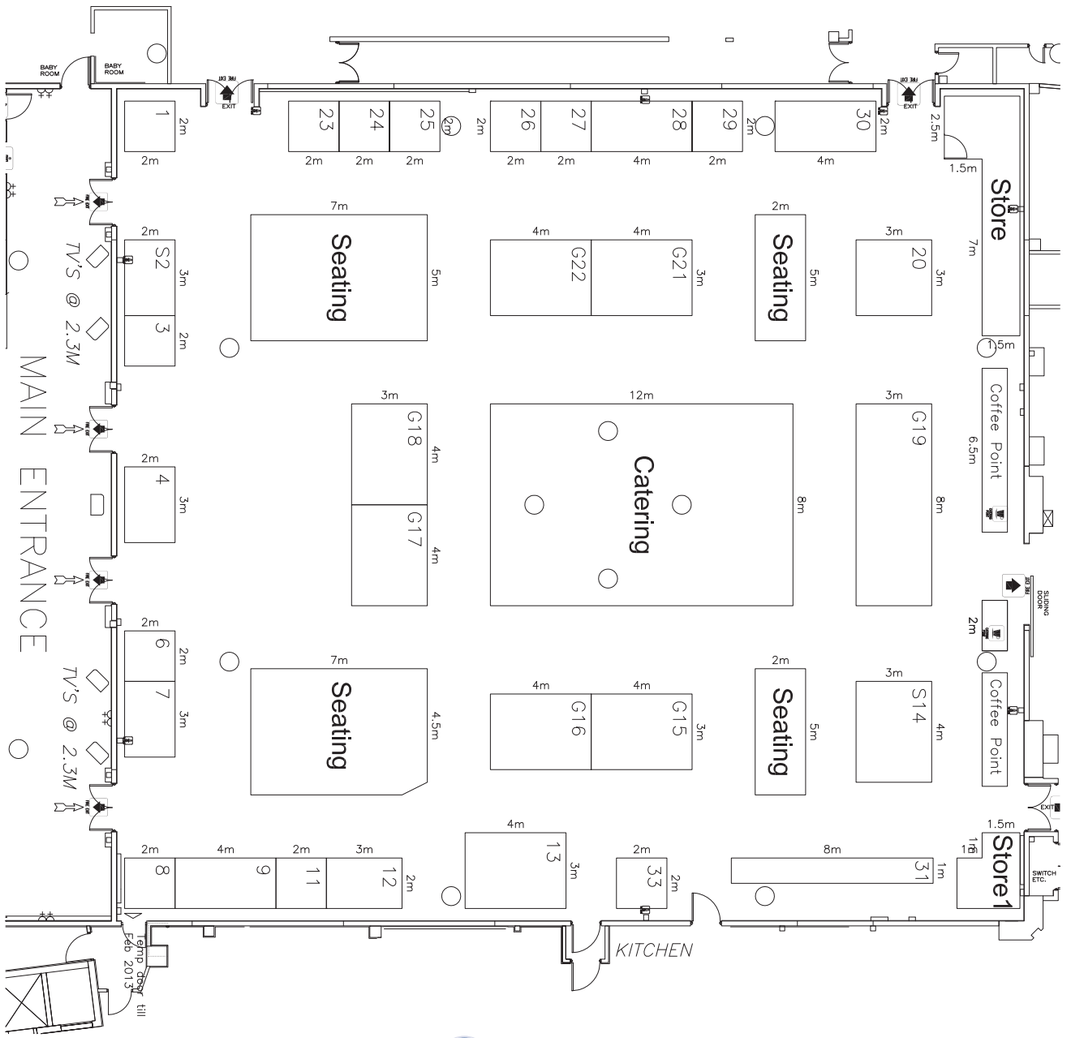
33 - Caltag Medsystems



TUESDAY 7 MAY 2013

TIME	SESSION DETAIL	ROOM LOCATION	FLOOR	INFORMATION
13:00 – 16:00	International Psoriasis Council	Moorfoot	0	Page 23
12:00 – 17:00	Dermatoendocrinology	Ochil 1 & 2	1	Page 24
13:00 – 14:30	Neurobiology of the Skin	Sidlaw	3	Page 25
13:00 – 16:00	Research in Cutaneous Surgery	Fintry	3	Page 26
13:00 – 17:00	BSID Global Investigative Dermatology Showcase	Tinto	0	Page 27
13:00 – 15:30	Eastern European Research	Kilsyth	0	Page 28
14:00 – 17:00	Merkel cell carinoma interest group	Harris 1	1	Page 29
15:00 – 17:00	ITCH	Sidlaw	3	Page 30
16:00 – 18:00	IID Trainee Retreat	Kilsyth	0	Page 31
16:30 – 18:30	American Acne & Rosacea (AARS) Symposium	Fintry	3	Page 32
17:30 – 19:30	Scientific Session of the European Association of Dermato-Oncology (EADO)	Sidlaw	3	Page 33

Date: Tuesday 7 May 2013
Time: 13:00-16:00
Room: Moorfoot
Floor: 0

PROGRAM

13:00 - 13:30	**Why stratify psoriasis** Catherine Smith (London, UK)
13:30 - 14:00	**Genetic approaches** James T Elder (Michigan, USA)
14:00 - 14:30	**Immunological biomarkers of treatment response** Erroll Prens (Rotterdam, The Netherlands)
14:30 - 15:00	**TNFi immunogenicity** Gertjan Wolbink (Sanquin, The Netherlands)
15:00 - 15:30	**Advances in tissue transcriptomics** James Kreuger (New York, USA)
15:30 - 16:00	**Data integration in strategies** Mike Barnes (London, UK)

NOTES

Dermatoendocrinology

Date: Tuesday 7 May 2013
Time: 12:00-17:00
Room: Ochil 1 & 2
Floor: 1

Tue 7 May

PROGRAM

12:00-12:10	**Welcome and introduction to dermatoendocrinology** Thomas A. Luger (Münster, Germany)
12:10-12:35	**Human hair follicles – as an ideal research tool for translational dermato-endocrinology** Ralf Paus (Manchester, UK)
12:35-13:00	**Cutaneous steroidogenesis – implications for the skin immune system** Andrzej Slominski (Tennessee, USA)
13:00-13:30	**3 Hot-off-the bench short talks (7+3 min each)**
13:30-14:30	**Coffee, snacks & poster viewing & networking**
14:30-14:55	**Alpha-MSH and the skin: Beyond the pigmentary horizon** Markus Böhm (Münster, Germany)
14:55-15:20	**The non-neuronal cholinergic system of the skin: Basic concepts and clinical implications** Sergej Grando (California, USA)
15:20-15:55	**"Stoned" skin: The cutaneous endocannaboid system from itch to acne** Tamas Biro (Debrecen, Hungary)
15:55-16:25	**3 Hot-off-the bench short talks (7+3 min each)**
16:25-16:55	**Podium discussion: "Emerging frontiers in Dermatoendocrinology** Desmond Tobin, Andrzej Slominski, Christoph Abels, Ralf Paus, Sergej Grando, Markus Böhm
16:55-17:00	**Closing perspective** Markus Böhm (Münster, Germany)

NOTES

Neurobiology of the skin

Date: Tuesday 7 May 2013
Time: 13:00-14:30
Room: Sidlaw
Floor: 3

Tue 7 May

PROGRAM

Chairs	**Anna Zalewska (Lodz, Poland) and Marcus Maurer (Berlin, Germany)**
13:00-13:05	**Welcome** Anna Zalewska (Poland)
13:05-13:21	**Neurotrophins and dermal fibroblasts** Alessandra Marconi and Carlo PIncelli (Italy)
13:21-13:37	**Mast cells – nerves interactions** Marcus Maurer and Martin Metz (Germany)
13:37-13:53	**Further insights into brain-skin interactions in psoriasis** Christopher EM Griffiths (UK)
13:53-14:09	**Alterations in dermal innervations associated with congenital insensitivity to pain** Sol-Britt Lonne-Rahm (Sweden)
14:09-14:25	**From PROMs to FROM©: widening our understanding of the impact of disease on families** Andrew Finlay (UK)
14:25-14:30	**Conclusions** Marcus Maurer (Germany)

NOTES

Research in Cutaneous Surgery

Date: Tuesday 7 May 2013
Time: 13:00-16:00
Room: Fintry
Floor: 3

Tue 7 May

PROGRAM

Chairs:	**Murad Alam, Diana Bolotin, Todd Cartee, and Chrysalyne Schmults, Co-Chairs**
13:05-13:19	**Evaluation of AJCC, UICC, and Brigham and Women's Hospital tumor staging for cutaneous squamous cell carcinoma** Chrysalyne Schmults (Boston, USA)
13:19-13:33	**Advanced Surgical Reconstruction Performed Under Local Anesthesia** Jeremy Bordeaux (Cleveland, USA)
13:33-13:47	**The PD-1 pathway is a potential drug target for Squamous cell carcinoma in solid organ transplant recipients** Claire Wang (New York, USA)
13:47-14:01	**Successful control of adverse events associated with vismodegib treatment of advanced basal cell carcinoma by recognition of hedgehog pathway activity in normal adult tissue** James Solomon (Ormond Beach, USA)
14:01-14:15	**Melanoma incidence in children and adolescents: Decreasing trends from 2000-2009 in the U.S.** Laura Campbell (Cleveland, USA)
14:15-14:29	**Risk of subsequent non-melanoma skin cancers in patients with prior non-melanoma skin cancer** Mackenzie Wehner (San Francisco, USA)
14:29-14:42	**Environmental and behavioral risk factors for melanoma among young women in the United States** Jacqueline Moreau (Pittsburgh, USA)
14:42-14:55	**Personal History of Prostate Cancer and Increased Risk of Incident Melanoma in U.S. Men** Wenqing Li (Boston, USA)
14:55-15:08	**Dermatologists and dermatopathologists have different levels of concern that partially sampled melanocytic lesions carrying a microscopic diagnosis of dysplastic nevus may actually be melanoma** Jonathan Kantor (Philadelphia, USA)
15:08-15:21	**Microneedle pretreatment may reduce incubation time in photodynamic therapy** Hader Lev-Tov (Sacramento, USA)
15:21-15:34	**No evidence for viral DNA in whole genome sequence of cutaneous squamous cell carcinoma** Sarah Arron (San Francisco, USA)
15:34-15:47	**Incidence of invasion found during treatment of superficial/in-situ non-melanoma skin cancers by Mohs micrographic surgery** Rajan Kulkarni (Los Angeles, USA)
15:47-16:00	**Second primary malignancies in patients with history of soft tissue tumors from the SEER database** Sherry Yu (Cleveland, USA)

British Society for Investigative Dermatology
Global Investigative Dermatology Showcase: Th' noo 'n' th' neist

Date: Tuesday 7 May 2013
Time: 13:00-17:00
Room: Tinto
Floor: 0

If you translate "the now and the next" into Scottish you get..... Th' noo 'n' th' neist (which you pronounce "the nu and the nice-st") then you can label the two sessions: Th' neist for the first session and Th' noo for the second session (©JMcG). **Th' neist (The "Next")**

Tue 7 May

PROGRAM

13:00-14:00	**BSID Annual General Assembly**
Chairs	**Alexander Enk & Helen Young**
14:00-14:05	**Welcome** Frank Nestle (UK)
14:05-14:30	**Immunity meets hair follicles** Keisuke Nagao (Japan)
14:30-14:55	**Diagnosis and treatment in aged skin** Tarl Prow (Australia)
14:55-15:20	**Targeting microRNA-31 Ameliorates Imiquimod-Induced Psoriasiform Skin Disease in Mice** Honglin Wang (China)
15:20-15:45	**Break**
Chairs	**Barbara Gilchrest & Andy South**
15:45-16:10	**Inherited cutaneous tumour syndromes** Neil Rajan (UK)
16:10-16:35	**Pro- and anti-inflammatory Th17 cells responses in human autoimmune diseases** Christina Zielinski (Germany)
16:35-17:00	**Skin resident DC control adaptive cutaneous responses** Dan Kaplan (USA)
16:35-17:00	**Skin resident DC control adaptive cutaneous responses** Dan Kaplan (USA)
17:00-18:00	**BSID Reception in the Moorfoot room**

NOTES

Eastern European Research

Date: Tuesday 7 May 2013
Time: 13:00-15:30
Room: Kilsyth
Floor: 0

This symposium should bring together people working in dermatological research in Eastern European countries. It should facilitate exchange of ideas and strategies to strengthen and enlarge the basis of EE research in Dermatology. A highlight will be the presentation of the EE Research prize for 2012 that is jointly sponsored by ESDR and Austrian Society of Dermatology.

PROGRAM

Chairs	**S. Bata-Csorgo & JW Bauer**
13:00-13:35	**Welcome**
13:35-13:45	**EER prize ceremony** S. Bata-Csorgo, JW Bauer
13:45-14:15	**Lectures of the winners** Academic leader - M. Szell (Szeged, Hungary) Research fellow - M. Arenbergerova (Prague, Czech Republic) Research fellow - I. Darlenski (Sofia, Bulgaria) Research fellow -A. Bebes (Szeged, Hungary)
14:15-14:45	**Keynote lecture** **Successful Science in Eastern Europe** A.Slominski (Tennessee, USA)
14:45-14:55	**Intratumoral lymphatic and blood microvessel density can predict the occurrence of metastases in melanoma patients** M. Buljan (Zagreb, Croatia)
14:55-15:05	**The possibility of having the same pathogenesis of mycosis fungoides, large-and small plaque parapsoriasis** A. Sidikov (Petersburg, Russia)
15:05-15:15	**"Weed against zit?" – Investigation of the anti-acne effects of cannabidiol** A. Olah (Debrecen, Hungary)

NOTES

Merkel Cell Carcinoma

Date: Tuesday 7 May 2013
Time: 14:00-17:00
Room: Harris 1
Floor: 1

PROGRAM

14:00-14:10	**Welcome from Co-Chairs, Introduction, Goals of session and Overview of Merkel cell carcinoma (MCC)** Paul Nghiem and David Blackbourn (Washington, USA and Birmingham, UK)
14:10-14:45	**Keynote Lecture:** **Merkel polyomavirus in MCC: Mechanisms of transformation and progress toward a new gold standard for viral detection** James DeCaprio (Boston, USA)
14:45-15:10	**Invited Speaker:** **CD8 T cell epitopes from Merkel polyomavirus oncoproteins elicit anti-viral T cell responses exclusively in Merkel cell carcinoma patients** Sine Hadrup (Herlev, Denmark)
15:10-15:20	**Break**
15:20-15:35	**Defective expression of class I antigen presentation pathway members in Merkel cell carcinoma may underlie low MHC I expression and contribute to immune evasion** Victor Huang (Boston, USA)
15:35-15:50	**Merkel cell carcinoma-specific T cells fluctuate with tumor burden and express therapeutically targetable PD1 and TIM3 exhaustion markers** Paul Nghiem (Washington, USA)
15:50-16:05	**Screening for cellular binding partners of the Merkel cell polyomavirus-small T antigen** Harrison Nguyen (Houston, USA)
16:05-16:20	**UISO cell line is not representative of Merkel cell carcinoma** Isaac Brownell (Bethesda, USA)
16:20-16:35	**Tumour-associated immune cells in primary Merkel cell carcinoma** Rachel Wheat (Birmingham, UK)
16:35-16:50	**Improving Guidelines and Developing Trials for MCC in the UK** Neil Steven (Birmingham, UK)
16:50-17:00	**Towards immune-stimulating clinical trials for MCC** Isaac Brownell (Bethesda, USA)

NOTES

Date: Tuesday 7 May 2013
Time: 15:00-17:00
Room: Sidlaw
Floor: 3

PROGRAM

15:00-15:25	**Molecular mechanisms of chronic itch** Zhou-Feng Chen (USA)
15:25-15:50	**Itch pathways defined by Mrgprs** Xinzhong Dong (USA)
15:50-16:15	**Neurophysiology and regulation of Itch -what can we learn from animal models?** Klas Kullander (Norway)
16:15-16:40	**The various mechanisms by which proteases trigger itch** Ethan Lerner (USA)
16:40-17:00	**Brain mechanisms of chronic itch and scratch** Gil Yosipovitch (USA)

NOTES

Date: Tuesday 7 May 2013
Time: 16:30-22:00
Room: Kilsyth, with networking in the Lomond Foyer
Floor: 0

Mission: To help attendees understand career pathways in skin biology research, and build understanding of how science is conducted internationally.
Note that this is an invitation-only event.

PROGRAM

16:30-17:30	**Registration** Alessandra Marconi and Carlo PIncelli (University of Modena and Reggio Emilia, Modena, Italy)
17:30-17:45	**Welcome From The Chairs** Carien Niessen ESDR (Cologne, Germany) Masayuki Amagai JSID (Keio, Japan) Alice Pentland SID (Rochester, USA)
17:45-19:00	**Dinner & Ice Breakers**
19:15-20:15	**"A Tale of Two Continents", Vignettes on Research & Academic Careers and Work/life Balance** Charlotte Proby (Dundee, UK) Riichiro Abe (Hokkaido, Japan)
20:15-22:00	**Networking Reception**

NOTES

American Acne & Rosacea (AARS) Symposium

Date: Tuesday 7 May 2013
Time: 16:30-18:30
Room: Fintry
Floor: 3

Tue 7 May

PROGRAM	
13:00-13:20	**Neurotrophins and dermal fibroblasts** Alessandra Marconi and Carlo PIncelli (University of Modena and Reggio Emilia, Modena, Italy)
13:20-13:35	**Mast cells – nerves interactions** Marcus Maurer (Dpt. of Dermatology and Allergy, Allergie-Centrum-Charité, Charité - Universitätsmedizin Berlin, Germany)
13:35-13:55	**Further insights into brain-skin interactions in psoriasis** Christopher EM Griffiths (University of Manchester, Manchester Academic health Science Centre, UK)
13:55-14:15	**From PROMs to FROM©: widening our understanding of the impact of disease on families** Andrew Finlay (Department of Dermatology and Wound Healing, Cardiff University School of Medicine, UK)
14:15-14:30	**Cutaneous neurobiology at the patient bedside** Anna Zalewska (Psychodermatology Department, Medical University of Lodz, Poland)

NOTES

European Association of Dermato-Oncology (EADO)

Date: Tuesday 7 May 2013
Time: 17:30-19:30
Room: Sidlaw
Floor: 3

"The Science behind skin cancer therapies"

Tue 7 May

PROGRAM	
17:30-17:50	**Epigenetic therapy in Cutaneous T cell lymphomas** Sima Rozati (Switzerland)
17:50-18:10	**Beta-Catenin and casein kinase-1alpha in metastasis and treatment resistance of melanoma** Birgit Schittek (Germany)
18:10-18:30	**hsp-27 as a novel therapeutic target in melanoma** Christoph Hoeller (Austria)
18:30-18:50	**Predictors of therapeutic benefit to CTLA-4 antibody treatment** Katja Schindler (Austria)
18:50-19:10	**Expression of the adrenomedullin system in melanoma** Caroline Gaudy (France)
19:10-19:30	**Hedgehog pathway and targeted therapies in BCC** Clio Dessinioti (Greece)

NOTES

Wednesday 8 May Overview

WEDNESDAY 8 MAY 2013				
TIME	SESSION DETAIL	ROOM LOCATION	FLOOR	INFORMATION
08:00 – 11:00	National Psoriasis Foundation Scientific Advisory Committee	Ochil 2	1	Page 35
08:30 – 17:00	European Epidermal Barrier Research Network	Fintry	3	Page 36
09:00 – 12:00	Paediatric Dermatology	Sidlaw	3	Page 37
09:00 – 12:00	BSID Global Investigative Dermatology Showcase	Tinto	0	Page 38
09:00 – 17:00	IID Trainee Retreat	Kilsyth	0	Page 39
10:00 – 12:00	Cicatricial Alopecia Research Foundation	Ochil 1	1	Page 40
10:00 – 12:00	Academic-Industry Partnership Program	Moorfoot	0	Page 41
14:00 – 16:00	International Dermatoepidemiology Association	Sidlaw	3	Page 42
14:00 – 17:00	Innovation in drug discovery and stratified medicine	Pentland	3	Page 43
14:30 – 16:30	Future Leaders Symposium	Kilsyth	0	Page 44
16:00 – 17:00	North American Hair Research Society Annual Meeting	Harris 2	1	Page 45
13:00 – 14:00	Sponsored Symposium: Ceries	Moorfoot	0	Page 46
17:30 – 18:00	Opening Ceremony at the Usher Hall	Usher Hall		Page 47
18:00 – 19:00	Rising Stars Lectures	Usher Hall		Page 48
19:00 – 21:00	Welcome Reception at the EICC	Cromdale Hall		Page 49

National Psoriasis Foundation Scientific Advisory Committee

Date: Wednesday 8 May 2013
Time: 08:00-11:00
Room: Ochil 2
Floor: 1

PRIVATE COMMITTEE MEETING

NOTES

10th Meeting of the European Epidermal Barrier Research Network

Date: Wednesday 8 May 2013
Time: 08:30-17:00
Room: Fintry
Floor: 3

E²BRN and COST Action BM0903: Skin Barrier in Atopic Disease

PROGRAM	
08:30-08:55	**The unique feature of epidermal barrier lipid formation** Yoshikazu Uchida (USA)
08:55-09:20	**Skin lipid barrier of patients with atopic eczema** Joke Bouwstra (The Netherlands)
09:20-10:10	**4 Short communications chosen from the abstracts**
10:10-10:40	**Coffee break**
10:40-11:05	**Antimicrobial peptides in skin barrier function in normal skin and atopic dermatitis** Jens Schröder (Germany)
11:05-11:40	**Filaggrin 2 and hornerin – more players in atopic dermatitis?** Michel Simon (France)
11:40-12:20	**4 Short communications chosen from the abstracts**
12:20-15:20	**Lunch and poster session**
15:20-15:45	**Transglutaminase-1 and skin barrier function and how to restore it** Heiko Traupe and Karin Aufenvenne (Germany)
15:45-16:10	**RIPK4 is required for keratinocyte differentiation and to prevent epithelial fusions** Wim Declercq (Belgium)
16:10-17:00	**4 Short communications chosen from the abstracts**

The meeting is sponsored by:

Paediatric Dermatology

Date: Wednesday 8 May 2013
Time: 09:00-12:00
Room: Sidlaw
Floor: 3

PROGRAM	
09:48-10:00	Abstract presentation #796: **Molecular identification of collagen 17a1 as a major genetic modifier of epidermolysis bullosa in mice** John Sundberg, PhD, Jackson Laboratories, Bar Harbor, Maine, USA
10:00-10:30	**Long noncoding RNAs and human diseases** Howard Chang, MD, PhD, Stanford University, Stanford, California, USA
10:36-10:48	Abstract presentation #757: **Production of gene engineered epithelia sheets for first-in-man use** Wei-Li Di, MBBS, PhD, University College London, London, U.K.
10:00-10:30	**Long noncoding RNAs and human diseases** Howard Chang (USA)
10:48-11:18	**Venous malformations: From pathogenesis to an animal model for therapeutic trials** Miikka Vikkula, MD, PhD, Catholic University of Louvain, Brussels, Belgium
11:18-11:30	Abstract presentation #813: **Identification of a hyperkeratosis "signature" in lamellar ichthyosis: Mdm2 inhibition prevents hyperkeratosis in lamellar ichthyosis models** Gehad Youssef, MRes, University College London, London, U.K.

NOTES

BSID Global Investigative Dermatology Showcase: Th' noo 'n' th' neist

Date: Wednesday 8 May 2013
Time: 09:00-12:00
Room: Tinto
Floor: 0

Th' noo (The "Now")

PROGRAM	
Chairs	**Richard Weller & Penny Lovat**
09:00-09:25	**Real time imaging of cutaneous immune responses** Wolfgang Weninger (Australia)
09:25-09:50	**Humoral and cellular autoimmune reaction to desmoglein 3** Masa Amagai (Japan)
09:50-10:15	**Driving melanomas back to nevi: fantasy or hope?** Martin Roecken (Germany)
10:15-10:45	**Break**
Chairs	**John McGrath & Irene Leigh**
10:45-11:10	**Skin Homing T Cells: 2013** Tom Kupper (USA)
11:10-11:35	**Pivotal Role of Dermal $\gamma\delta$ T Cells in the Pathogenesis of Psoriasis** Jie Zheng (China)
11:35-12:00	**Hereditary skin disease – from gene detection to gene correction** Irwin McLean (UK)
12:00-12:05	**Closing remarks** Frank Nestle (UK)

Wed 8 May

NOTES

IID Trainee Retreat

Date: Wednesday 8 May 2013
Time: 08:30-13:00
Room: Kilsyth
Floor: 0

Mission: To help attendees understand career pathways in skin biology research, and build understanding of how science is conducted internationally.

Note that this is an invitation-only event.

PROGRAM	
08:30-08:45	**Intro to breakout session** Carien Niessen ESDR (Cologne, Germany)
08:40-09:10	**Breakout Session 1** (Informal discussion on how best to pursue a research career) Basic Science Clinical Research Translational Research
09:10-09:40	**Breakout Session 2** (Switch to Different Group) Basic Science Clinical Research Translational Research
09:40-10:10	**Publishing a Manuscript** Barbara Gilchrest, MD, Editor, Journal of Investigative Dermatology British Journal of Dermatology Yoshiki Tokura, MD/PhD, Editor, Journal of Dermatological Science **How to deal with reviews, reviewers, pitfalls, etc.**
10:10-10:15	**Intro to Multidisciplinary Research Exercise:** Alice Pentland **Handouts for interdisciplinary research funding possibilities.**
10:15-11:15	**Multidisciplinary Research Exercise** Attendees will be grouped by research area, with 1 or 2 faculty mentors who have similar interests to design a research project together.
11:15-11:45	**Multidisciplinary Group Reports** At the end of the exercise, groups report back to share key issues. How to deal with reviews, reviewers, pitfalls, etc.
12:00-13:00	**Lunch and Wrap Up**

Wed 8 May

NOTES

Cicatricial Alopecia Research Foundation

Date: Wednesday 8 May 2013
Time: 10:00-12:00
Room: Ochil 1
Floor: 1

PROGRAM	
13:00-13:20	**Neurotrophins and dermal fibroblasts** Alessandra Marconi and Carlo PIncelli (University of Modena and Reggio Emilia, Modena, Italy)
13:20-13:35	**Mast cells – nerves interactions** Marcus Maurer (Dpt. of Dermatology and Allergy, Allergie-Centrum-Charité, Charité - Universitätsmedizin Berlin, Germany)
13:35-13:55	**Further insights into brain-skin interactions in psoriasis** Christopher EM Griffiths (University of Manchester, Manchester Academic health Science Centre, UK)
13:55-14:15	**From PROMs to FROM©: widening our understanding of the impact of disease on families** Andrew Finlay (Department of Dermatology and Wound Healing, Cardiff University School of Medicine, UK)
14:15-14:30	**Cutaneous neurobiology at the patient bedside** Anna Zalewska (Psychodermatology Department, Medical University of Lodz, Poland)

NOTES

Academic-Industry Partnership Program

Date: Wednesday 8 May 2013
Time: 10:00-12:00
Room: Moorfoot
Floor: 0

PROGRAM	
13:00-13:20	**Neurotrophins and dermal fibroblasts** Alessandra Marconi and Carlo PIncelli (University of Modena and Reggio Emilia, Modena, Italy)
13:20-13:35	**Mast cells – nerves interactions** Marcus Maurer (Dpt. of Dermatology and Allergy, Allergie-Centrum-Charité, Charité - Universitätsmedizin Berlin, Germany)
13:35-13:55	**Further insights into brain-skin interactions in psoriasis** Christopher EM Griffiths (University of Manchester, Manchester Academic health Science Centre, UK)
13:55-14:15	**From PROMs to FROM©: widening our understanding of the impact of disease on families** Andrew Finlay (Department of Dermatology and Wound Healing, Cardiff University School of Medicine, UK)
14:15-14:30	**Cutaneous neurobiology at the patient bedside** Anna Zalewska (Psychodermatology Department, Medical University of Lodz, Poland)

NOTES

International Dermatoepidemiology Association

Date: Wednesday 8 May 2013
Time: 14:00-16:00
Room: Sidlaw
Floor: 3

PROGRAM	
Chairs:	**Sinead Langan (EDEN) and Abrar Qureshi (ADEN)**
14:00-14:30	**Atopic dermatitis and food allergy - view from the skin** Carsten Flohr (London, UK)
14:30-14:40	**Risk of subsequent non-melanoma skin cancers in patients with prior non-melanoma skin cancer** Mackenzie Wehner (San Francisco, USA)
14:40-14:50	**Personal history of prostate cancer and increased risk of incident melanoma in US men** Wenqing Li (Harvard, USA)
14:50-15:00	**High prevalence rates of contact allergy in the European general population** Thomas Diepgen (Heidelberg, Germany)
15:00-15:10	**Moderate to severe psoriasis is associated with an increased risk of chronic and end stage renal disease** Shuwei Wang (Pennsylvania, USA)
15:10-15:20	**Systematic review of pharmacogenomics in psoriasis** Amy Foulkes (Manchester, UK)
15:20-15:30	**Identification of cutaneous T-cell lymphoma geographic hotspots in Houston metropolitan area** Ivan Litvinov (Montreal, Canada)
15:30-15:40	**Genes, environment and risk for skin cancer – Nature or nurture** Abrar Qureshi (Harvard, USA)

NOTES

Innovation in drug discovery and stratified medicine

Date: Wednesday 8 May 2013
Time: 14:00-17:00
Room: Pentland*
Floor: 3

Joint meeting of International Investigative Dermatology 2013 and Health Science Scotland

PROGRAM	
13:00-14:00	**Welcome lunch and networking in Tinto room**
Chairs	**David Reid & Nick Reynolds (UK)**
14:00-14:05	**Welcome to meeting** Andrew Morris & Nick Reynolds (UK)
14:05-14:35	**Tough medicine: challenges to Academic Industrial partnerships in drug discovery in the era of stratified medicine and patent cliffs** David Lane (UK)
14:35-15:05	**The role of genetics in disease stratification** John Whittaker (UK)
15:05-15:20	**Generation Scotland: a portal to stratified mechanisms and translation through health-related quantitative traits** David Porteous (UK)
15:20-15:40	**Tea & networking**
Chairs	**David Reid & Nick Reynolds (UK)**
15:40-15:45	**Introduction** Anna Dominiczak (UK)
15:45-16:15	**The role of biotec in therapeutic innovation** Anthony Quinn (UK)
16:15-16:30	**The development of stem cell medicines** Charles ffrench-Constant (UK)
16:30-16:45	**Lessons from the biologic revolution** Iain McInnes (UK)
16:45-17:00	**Discussion/Closing comments** Andrew Morris & Nick Reynolds (UK)

NOTES

Future Leaders Symposium - IID Trainee Retreat

Date: Wednesday 8 May 2013
Time: 13:00-17:15
Room: Kilsyth
Floor: 0

This session is part of the IID Trainee retreat, but open to all IID registrants.

PROGRAM

Organizing Committee	ESDR: Heleen de Koning, Anke Lonsdorf, Marlies Wakkee JSID: Satoshi Hirakawa, Manabu Ohyama SID: Michael Rosenblum, Kevin Wang
13:00-13:30 Chairs:	**Introduction to "Future Leaders" group activities, mentoring activities of each societies** John Ingram, Satoshi Hirakawa - ESDR: Marlies Wakkee - JSID: Manabu Ohyama - SID: Michael Rosenblum
13:30–14:30 Chairs:	**Establishing your own research group and scientific/clinical niche – Personal Journeys:** Anke Lonsdorf, Kevin Wang - SID: Dan Kaplan (University of Minnesota) - ESDR: Christina Zielinski (Charité, Berlin) - JSID: Satoshi Hirakawa (Hamamatsu Univ.)
14:30-15:00	**Establishing your own research group – A Personal Journey** Steve Katz (Bethesda, USA)
15:00-15:15	**Break**
15:15-16:15 Chairs:	**Scientific Presentations** Manabu Ohyama, Michael Rosenblum **Spontaneous development of tissue fibrosis in mice with double heterozygous deficiency of Klf5 and Fli1** JSID: Shinji Noda **Genomic Regulation by Noncoding RNAs** SID: Kevin Wang ESDR: Anissa Chikh **Skin barrier defect allows more abundant microbiota in skin and induces skin inflammation and the expression of antimicrobial peptides independently of microbiota** JSID: Ken Natsuga **Regulatory T cells in the skin** SID: Michael Bloomberg **IL36Ra - stepping stone between generalized pustular psoriasis and other neutrophilic dermatoses** ESDR: Alexander Navarini
16:15-16:20	**JID representative: "Outlook on the JID Connector Concept"**
16:20-16:25	**Closing Remarks**
16:30-17:15	**Closing reception (Lomond Foyer)**

NOTES

North American Hair Research Society Annual Meeting

Date: Wednesday 8 May 2013
Time: 16:00-17:00
Room: Harris 1 & 2
Floor: 1

PROGRAM

	Reception and business meeting of the North American Hair Research Society. RSVP required for food & beverage counts: info@nahrs.org

NOTES

Sponsored Symposium: Ceries

Date: Wednesday 8 May 2013
Time: 13:00-14:00
Room: Moorfoot
Floor: 0

Skin and Ageing

PROGRAM	
13:00-13:05	**Introductory remarks** Barbara Gilchrest (USA)
13:05-13:25	**Transcriptional regulation of skin ageing processes** Howard Chang (USA)
13:25-13:45	**Reactive oxygen species in skin ageing** Martin Rocken (Germany)
13:45-14:00	**Metrics of skin ageing in different ethnic populations** Barbara Gilchrest (USA)

NOTES

Opening Ceremony

Date: Wednesday 8 May 2013
Time: 17:30-18:00
Room: Usher Hall
For map see page 8

PROGRAM	
17:30-17:40	**Highland dancers**
17:40-18:00	**Opening Speeches** ESDR President, Alexander Enk Lord Provost representative, Dailie Angela Blacklock Cabinet Secretary for Health & Wellbeing, Alex Neil JSID President, Masayuki Amagai SID President, Tom Kupper Principal of Dundee, Pete Downes
18:00-19:00	**Rising Stars Lectures (see page 48)**
19:00-19:15	**Scottish pipe band perform beat the retreat onstage at the Usher Hall and lead delegates to back entrance of the EICC**
19:15-21:00	**Welcome Reception at the EICC (see page 49)**

NOTES

Rising Stars Lectures

Date: Wednesday 8 May 2013
Time: 18:00-19:00
Room: Usher Hall
For map see page 8

PROGRAM

18:00-19:00

Rising Stars Lectures

ESDR Guest Speaker
The intracellular signals determining T cell immune responses
Kamran Ghoreschi (Germany)

Kamran Ghoreschi graduated from the medical school of the Ludwig-Maximilians University (LMU) of Munich, Germany. He was trained in dermatology and allergology at the Department of Dermatology, LMU Munich, Germany (Prof. Dr. Dr. G. Plewig) and the Department of Dermatology, Eberhard Karls University of Tübingen, Germany (Prof. Dr. M. Röcken). He started his research career at the LMU Munich in the field of T cell immunology and continued his research activities at the University of Tübingen. In 2008 he joined the Molecular Immunology and Inflammation Branch (Dr. J.J. O'Shea) of the National Institute of Arthritis and Musculoskeletal and Skin Diseases, National Institutes of Health, Bethesda, United States as visiting postdoctoral fellow. In 2011 he returned to the Department of Dermatology, Eberhard Karls University of Tübingen, Germany where he has been appointed as a senior physician and lecturer in dermatology and allergology. He is head of the psoriasis study centre, deputy head of the clinical unit for autoimmune diseases and head of the laboratory for molecular immunology. Dr. Ghoreschi has published a number of scientific and clinical articles in high-ranking journals in the fields of immunology, dermatology, oncology and biochemistry. His work has been recognized with several national and international awards. The content of his scientific emphasis represents research in T cell immunology, cytokine signaling (JAK/STAT) and immune-regulating small molecules altering intracellular signaling pathways as well as clinical dermatology with special interest in autoimmune diseases. He is member of the European Society for Dermatological Research (ESDR), the German Dermatology Society (DDG), the Dermatological Research Association (ADF) and the German STI Society (DSTIG).

JSID Guest Speaker
Visualization of skin immune responses
Kenji Kabashima (Japan)

Kenji Kabashima was brought up in northern part of Kyushu in Japan. He trained in medicine/dermatology at the United Naval Hospital, Kyoto University Hospital, and University of Washington Medical Center. Then he started research on lipid mediators in immunology at Kyoto University, which led to a PhD (Prof. Shuh Narumiya). That year, he was appointed as assistant professor in Dermatology at Kyoto University (Prof. Yoshiki Miyachi), and then he researched on dendritic cell homeostasis and plasma cell mobilization at UCSF (Prof. Jason Cyster). In 2005, he moved to University of Occupational and Environmental Health as an associate professor (Prof. Yoshiki Tokura). Since 2008, he has been researching on the mechanism of inflammatory skin diseases by visualization of the skin at Kyoto University.

SID Guest Speaker
Human skin resident memory T cells: The ups & downs of on-site immunity
Rachael A. Clark (USA)

Rachael Clark is a dermatologist and an immunologist and an Associate Professor of Dermatology at Harvard Medical School. Dr. Clark's laboratory focuses on the study of tissue resident memory T cells in health and disease. Her research is carried out largely on human cells and tissues, focuses on problems identified in clinical practice and has the dual goals of improving treatments for skin diseases while at the same time providing novel insights into human immune responses

Welcome Reception

Date: Wednesday 8 May 2013
Time: 19:15-21:00
Room: Edinburgh International Conference Centre

Please join us in the EICC for an evening reception. There will drinks and light food served in the Cromdale Hall and the Strathblane Hall. Please also look out for the roving entertainment.

Catch up with colleagues and make new friends whilst enjoying some Scottish hospitality!!

NOTES

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L'ORÉAL

Research & Innovation

BEAUTY IS A SCIENCE

SINCE ITS CREATION BY A RESEARCHER, THE GROUP HAS BEEN PUSHING BACK THE FRONTIERS OF KNOWLEDGE. ITS UNIQUE RESEARCH ARM ENABLES IT TO CONTINUALLY EXPLORE NEW TERRITORIES AND INVENT THE PRODUCTS OF THE FUTURE, WHILE DRAWING INSPIRATION FROM BEAUTY RITUALS THE WORLD OVER

BEAUTY FOR ALL

BY DRAWING ON THE DIVERSITY OF ITS TEAMS, AND THE RICHNESS AND THE COMPLEMENTARITY OF ITS BRAND PORTFOLIO, L'ORÉAL HAS MADE THE UNIVERSALISATION OF BEAUTY ITS PROJECT FOR THE YEARS TO COME.

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• SINCERITY • QUALITY • SAFETY • EFFICACY • SINCERITY • QUALITY • SAFETY • EFFICACY •

Novel Therapies and Approaches: A New Era for Improved Outcomes for Psoriasis?

You are invited to a satellite symposium at the International Investigative Dermatology conference 2013

13:30–14:30, Thursday May 09, 2013

Fintry Room, Level 3
Edinburgh International Congress Centre

Overview

The symposium will explore ways in which current treatment outcomes might be improved to meet the continuing unmet needs of patients with psoriasis, considering both potential new therapies and new treatment approaches. Attendees will also have the opportunity to join an interactive discussion with the expert speakers.

Program

Chair: Carlo Pincelli, University of Modena and Reggio Emilia, Italy

13:30 Introduction
Carlo Pincelli

13:35 Improving treatment outcomes: do unmet needs remain in psoriasis?
Carle Paul, Paul Sabatier University, France

14:00 New mechanisms of action: new tools for improved outcomes in psoriasis?
Kristian Reich, Dermatologikum Hamburg, Germany

14:25 Conclusion and interactive discussion
Carlo Pincelli

Satellite symposium organized and sponsored by Celgene International
Please visit us at our Celgene booth #G16

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UK-APR130002i February 2013

THURSDAY 9 MAY 2013				
TIME	SESSION DETAIL	ROOM LOCATION	FLOOR	INFORMATION
07:30 – 08:30	Sponsored Symposium: Boots	Kilsyth	0	Page 54
07:30 – 08:30	IVIg in Dermatology	Tinto	0	Page 55
08:45 – 10:00	Plenary Session 1	Pentland	3	Page 56
10:00 – 10:30	Rudi Cormane Lecture: John McGrath	Pentland	3	Page 57
11:00 – 12:30	Plenary Session 2	Pentland	3	Page 58
12:30 – 13:00	Herman Beerman Lecture: Allan Balmain	Pentland	3	Page 59
13:30 – 14:30	Sponsored Symposium: L'Oreal Research & Innovation	Sidlaw	3	Page 60
13:30 – 14:30	Sponsored Symposium: Celgene	Fintry	3	Page 61
14:45 – 15:15	JSID Guest Lecture: Hideyuki Okano	Pentland	3	Page 62
15:15 – 15:45	René Touraine Guest Lecture: Lars French	Pentland	3	Page 63
16:15 – 18:00	Concurrent 1: Autoimmunity & Inflammation I	Pentland	3	Page 64
16:15 – 18:00	Concurrent 2: Pigmentation & Melanoma	Sidlaw	3	Page 65
16:15 – 18:00	Concurrent 3: Epidermal Structure & Barrier Function	Fintry	3	Page 66
16:15 – 18:00	Concurrent 4: Stem Cell, Skin & Hair Development	Tinto	0	Page 67
16:15 – 18:00	Concurrent 5: Epidemiology & Health Services Research	Kilsyth	0	Page 68
18:00 – 19:00	Poster Session 1	Lennox & Mezzanine	-1	Page 69
19:00 – 23:00	Young Investigator Collegiality Evening	Dynamic Earth		Page 70

Sponsored Symposium: Boots

Date: Thursday 9 May 2013
Time: 07:30-08:30
Room: Kilsyth
Floor: 0

A Cutting edge and comprehensive toolbox for Skin Ageing Research

PROGRAM	
Chair	**Rachel Watson (UK)**
07:30-07:50	**Skin ageing: acellular mechanisms and mechanical consequences** Michael J. Sherratt (UK)
07:50-08:10	**New insights into the potential role for aberrant melanin transfer in age related skin hyper pigmentation** Des Tobin (UK)
08:10-08:30	**Sun, Sunscreens & Vitamin D** Antony Young (UK)

NOTES

Thu 9 May

Scientific Symposium: IVIg in Dermatology

Date: Thursday 9 May 2013
Time: 07:30-08:30
Room: Tinto
Floor: 0

PROGRAM	
Chair	**Alexander Enk (Germany)**
07:30-08:00	**IVIg - mode of action** Georg Stingl (Austria)
08:00-08:30	**Advances in immunoglobulins** Stephen Jolles (UK)

NOTES

Thu 9 May

Plenary Session 1

Date: Thursday 9 May 2013
Time: 08:45-10:00
Room: Pentland
Floor: 3

PROGRAM

Chairs	**Masayuki Amagai (Japan), Alexander Enk (Germany), Tom Kupper (USA)**
08:45-08:57	**PL1-01 (Poster 616): *In vivo* and *in vitro* inhibition of the membrane-bound serine protease CAP1/Prss8 by serpins** Giovanna Crisante, Chloé Sergi, Anne-Marie Merillat, Simona Frateschi, Edith Hummler; departement of pharmacology and toxicology, University of Lausanne, Lausanne, Switzerland.
08:57-09:09	**PL1-02 (Poster 1147): Differential cell intrinsic MyD88- and STAT3-signaling promote immunity against *Staphylococcus aureus* skin infection** John Cho[1], Romela Ramos[2], Yi Guo[2], Jonathan Shahbazian[3], Lloyd Miller[3]; 1. Division of Dermatology, University of California Los Angeles (UCLA), Los Angeles, CA, USA; 2. Department of Translational Immunology, Dirks/Dougherty Laboratory for Cancer Research, John Wayne Cancer Institute, Santa Monica, CA, USA; 3. Department of Dermatology, Johns Hopkins University School of Medicine, Baltimore, MD, USA.
09:09-09:21	**PL1-03 (Poster 840): Higher-order chromatin folding and establishment of a gene regulatory circuitry within the Epidermal Differentiation Complex (EDC) locus in keratinocytes** Joanne Yarker[1], Krzysztof Poterlowicz[1], Natalia Naumova[2], Bryan Lajoie[2], Andrei Mardaryev[1], Andrei Sharov[3], Vladimir Botchkarev[1, 3], Job Dekker[2], Michael Fessing[1]; 1. University of Bradford, Bradford, United Kingdom; 2. University of Massachusetts School of Medicine, Worcester, MA, USA; 3. Boston University School of Madicine, Boston, MA, USA.
09:21-09:33	**PL1-04 (Poster 980): Link between innate and adaptive immune response in autoinflammatory condition of generalized pustular psoriasis** Akiko Arakawa[1, 2], Burkhard Summer[1], Yoshio Kawakami[1], Besgen Petra[1], Peter Thomas[1], Yoshiki Miyachi[2], Andreas Wollenberg[1], Jürgen Schauber[1], Sigrid Vollmer[1], Thomas Ruzicka[1], Jörg Prinz[1]; 1. Dermatology, Ludwig-Maximilians-Universität, München, Germany; 2. Dermatology, Kyoto University, Kyoto, Japan
09:33-09:45	**PL1-05 (Poster 1331): Introduction of the reprogramming factors into B16 murine melanoma cells attenuated *in vivo* metastasis through promoting mesencymal-epithelial transition** Mikiro Takaishi[1], Masahito Tarutani[1], Junji Takeda[2], Shigetoshi Sano[1]; 1. Dermatolgy, Kochi University, Nankoku, Japan; 2. Social and Environmental Medicine, Osaka University, Suita, Japan.
09:45-09:57	**PL1-06 (Poster 105): Germline autoreactivity of VH1-46 antibodies to desmoglein 3 may explain their predominance in pemphigus vulgaris** Michael Cho[1], Agnes Lo[3], Eun Choi[1], Arielle Nagler[1], Xuming Mao[1], Courtney Rubin[1], Marshall Posner[2], Lisa Cavacini[3], Aimee Payne[1]; 1. Univ. of Pennsylvania, Philadelphia, PA, USA; 2. Mt. Sinai School of Med., New York, NY, USA; 3. Harvard Med. School, Boston, MA, USA.

NOTES

Rudi Cormane Lecture

Date: Thursday 9 May 2013
Time: 10:00 -10:30
Room: Pentland
Floor: 3
Introduced by: Jonathan Barker (ESDR)

PROGRAM

10:00-10:30

Rudi Cormane Lecture

Cell therapies for Epidermolysis Bullosa
John McGrath (UK)

John McGrath is Professor of Molecular Dermatology at King's College London and Head of the Genetic Skin Disease Unit, as well as Honorary Consultant Dermatologist at St John's Institute of Dermatology, the Guy's and St Thomas' NHS Foundation Trust in London, and Honorary Professor of Dermatology at the University of Dundee. He was born in 1962 and grew up in England, Japan and Australia. He qualified in Medicine at Guy's Hospital (London) in 1985. He then trained in dermatology at St John's Institute in London and did post-doctoral work in Jefferson Medical College in Philadelphia. In 1996, he was appointed Senior Lecturer at St John's and became full Professor of Molecular Dermatology in 2000. He was Visiting Professor to Osaka University in 2010. He is a former Board member of the European Society for Dermatological Research and was the Society's President in 2007-8. His awards include the 2008 Sulzberger Lecture, the 2010 Dohi Memorial Lecture, the 2011 Montagna Lecture, and the 2012 Tanioku-Kihei Lecture. In 2011 he was elected to the UK National Academy of Medical Sciences and in 2012 he was awarded the Fothergill Gold medal by the London Medical Society. He is a former editor of the journal Clinical and Experimental Dermatology and was recently the Section Editor of Genetics and Deputy Editor for the Journal of Investigative Dermatology. His main research interests involve the molecular biology and pathology of inherited skin diseases, especially epidermolysis bullosa. His professional goals are to unravel the mysteries of human genetic skin diseases and to translate some of the benefits of genetic research into clinical improvements for patients.

Selected Publications:

Germline mutation in *EXPH5* implicates the Rab27B effector protein Slac2-b in inherited skin fragility. J. A. McGrath, K. L. Stone, R. Begum, M. A. Simpson, P. J. Dopping-Hepenstal, L. Liu, J. R. McMillan, A. P. South, C. Pourreyron, W. H. I. McLean, A. E. Martinez, J. E. Mellerio, M. Parsons. ***American Journal of Human Genetics*** 2012; 91: 1115-1121.

Germline mutation in *ATR* in autosomal dominant oropharyngeal cancer syndrome. A. Tanaka, S. Weinel, N. Nagy, M. O'Driscoll, J. E. Lai-Cheong, C. L. Kulp-Shorten, A. Knable, G. Carpenter, S. A. Fisher, M. Hiragun, Y. Yanase, M. Hide, J. Callen, J. A. McGrath. ***American Journal of Human Genetics*** 2012; 90: 511-517.

PDGFRa-positive cells in bone marrow are mobilized by high mobility group box 1 (HMGB1) to regenerate injured epithelia. K. Tamai, T. Yamazaki, T. Chino, M. Ishii, S. Otsuru, Y. Kikuchi, S.Iinuma, K. Saga, K. Nimura, T. Shimbo, N. Umegaki, I. Katayama, J. Miyazaki, J. Takeda, J. A. McGrath, J. Uitto. Y. Kaneda. ***Proceedings of the National Academy of Science USA*** 2011; 108: 6609-6614.

HB-EGF induces *COL7A1* expression in keratinocytes and fibroblasts: possible mechanism underlying allogeneic fibroblast therapy in recessive dystrophic epidermolysis bullosa N. Nagy, N. Almaani, A. Tanaka, J. E. Lai-Cheong, T. Techanukul, J. E. Mellerio, J. A. McGrath. ***Journal of Investigative Dermatology*** 2011; 131: 1771-1774.

Bone marrow transplantation for recessive dystrophic epidermolysis bullosa J. E. Wagner, A. Ishida-Yamamoto, J. A. McGrath, M. Hordinsky, D. R. Keene, M. J. Osborn, T. Lund, M. Dolan, B. R. Blazar, J. Tolar. ***New England Journal of Medicine*** 2010; 363: 629-639

A homozygous nonsense mutation within the dystonin gene coding for the coiled-coil domain of the epithelial isoform of BPAG1 underlies a new subtype of autosomal recessive epidermolysis bullosa simplex. R. W. Groves, L. Liu, P. J. Dopping-Hepenstal, H. S. Markus, P. A. Lovell, L. Ozoemena, J. E. Lai-Cheong, J. Gawler, K. Owaribe, T. Hashimoto, J. E. Mellerio, J. B. Mee, J. A. McGrath. ***Journal of Investigative Dermatology*** 2010; 130: 1551-1557.

Plenary Session 2

Date: Thursday 9 May 2013
Time: 11:00-12:30
Room: Pentland
Floor: 3

PROGRAM

Chairs	**Jonathan Barker (UK), Russ Hall (USA), Shinichi Sato (Japan)**
11:00-11:12	**PL2-01 (Poster 1047): Bone marrow transplantation has better outcomes than umbilical cord blood transplantation in recessive dystrophic epidermolysis bullosa (RDEB)** Jakub Tolar[1], John McGrath[2], Douglas Keene[3], Kristen Hook[4], Mark Osborn[1], Sima Kavand[4], Maria Hordinsky[4], David Woodley[5], Mei Chen[5], Alain Hovnanian[6], Katsuto Tamai[7], Bruce Blazar[1], John Wagner[1]; 1. Pediatric Blood and Marrow Transplantation, University of Minnesota, Minneapolis, MN, USA; 2. King's College, London, United Kingdom; 3. Shriners Hospital, Portland, OR, USA; 4. University of Minnesota, Minneapolis, MN, USA; 5. Dermatology, University of Southern California, Los Angeles, CA, USA; 6. INSERM, Necker Hospital, Paris, France; 7. Stem Cell Science, Osaka University, Osaka, Japan.
11:12-11:24	**PL2-02 (Poster 1467): Smad7 accelerated healing of cutaneous wounds associated with chronic inflammation** Gangwen Han[1], Fulun Li[1, 2], Shunsuke Iriyama[1], Bin Li[2], Qinghong Zhang[1], Xiao-Jing Wang[1]; 1. University of Colorado Denver Anschutz Medical Campus, Aurora, CO, USA; 2. Yueyang Hospital of Integrated Traditional Chinese and Western Medicine, Shanghai, China
11:24-11:36	**PL2-03 (Poster 695): A homozygous nonsense mutation of gene for *Mattrin*, a component of lamellar granule secretory system, produces spontaneous dermatitis in mice** Takashi Sasaki[1, 2], Aiko Shiohama[3, 4], Akiharu Kubo[1], Hiroshi Kawasaki[1], Akemi Ishida-Yamamoto[5], Taketo Yamada[6], Takayuki Hachiya[7], Atsushi Shimizu[8], Hideyuki Okano[9], Jun Kudoh[4], Masayuki Amagai[1]; 1. Dermatol, Keio Univ, Tokyo, Japan; 2. Integrated Med Res, Keio Univ, Tokyo, Japan; 3. MSD Program, Keio Univ, Tokyo, Japan; 4. Gene Med, Keio Univ, Tokyo, Japan; 5. Dermatol, Asahikawa Med Univ, Hokkaido, Japan; 6. Pathol, Keio Univ, Tokyo, Japan; 7. MBL Co., Nagoya, Japan; 8. Mol Biol, Keio Univ, Tokyo, Japan; 9. Physiol, Keio Univ, Tokyo, Japan.
11:36-11:48	**PL2-04 (Poster 1386): Epigenetic control of tumor suppressors and oncogenes by melanoma antigens (MAGE) and KRAB-zinc finger transcription factors (KZFs)** B Jack Longley, T. Xiao, Y. Suh, N. Maddodi, V. Setaluri; Department Of Dermatology and the Carbone Comprehensive Cancer Center, Univ. of Wisconsin, Madison, WI, USA.
11:48-12:00	**PL2-05 (Poster 025): Anaphylaxis triggered by innate immune signals as co-factors is mediated by basophils independent of IgE** Florian Wölbing[1], Susanne Kaesler[1], Wolfgang Kempf[1], Balasaheb Siraskar[2], Priscila Eckstein[1], Martin Köberle[1], Yuliya Skabytska[1], Florian Lang[2], Philipp Yu[3], David Voehringer[4], Martin Röcken[1], Tilo Biedermann[1]; 1. Department of Dermatology, Eberhard Karls University, Tübingen, Germany; 2. Department of Physiology, Eberhard Karls University, Tübingen, Germany; 3. Institute of Immunology, Philipps-University, Marburg, Germany; 4. Department of Infection Biology, Friedrich-Alexander-University, Erlangen, Germany.
12:00-12:12	**PL2-06 (Poster 1293) p63 regulates repair of UV-induced DNA damage in epidermal keratinocytes and squamous cell carcinoma cells** Katherine Ona-Vu[1, 2], Dennis Oh[1, 2]; 1. Dermatology Research Unit, VA Medical Center, San Francisco, CA, USA; 2. Department of Dermatology, University of California, San Francisco, San Francisco, CA, USA.
12:12-12:24	**PL2-07 (Poster 168): A novel necroptosis pathway of annexin A1/ FPR1 interaction in severe cutaneous adverse drug reactions** Nao Saito, Hongjiang Qiao, Teruki Yanagi, Satoru Shinkuma, Asuka Suto, Yasuyuki Fujita, Shotaro Suzuki, Toshifumi Nomura, Hideki Nakamura, Hiroshi Shimizu, Riichiro Abe; Dermatology, Hokkaido University Graduate School of Medicine, Sapporo, Japan.

Herman Beerman Lecture

Date: Thursday 9 May 2013
Time: 12:30-13:00
Room: Pentland
Floor: 3
Introduced by: Tom Hornyak (SID)

PROGRAM

10:00-10:30

Herman Beerman Lecture

Network Biology of normal skin, inflammation & cancer
Allan Balmain (USA)

Dr. Allan Balmain obtained his PhD in chemistry at the University of Glasgow, Scotland, and carried out post-doctoral research in France and Germany before returning to Scotland where he was the Jerry Turner Fellow of the Cancer Research Campaign and Professor of Cancer Genetics at the Beatson Institute, and Director of Laboratory Research in the Department of Medical Oncology at the University of Glasgow. He moved to the United States in 1997 to a position as Vice President of Research at Onyx Pharmaceuticals in San Francisco, California. Allan Balmain currently holds the Barbara Bass Bakar Distinguished Professorship in Cancer Genetics at the University of California, San Francisco. He is Co-Director of the Cancer Genetics Program and Director of the Genome Core Facility at UCSF Cancer Center. He is a member of the Board of Scientific Overseers of The Jackson Laboratory, Bar Harbor, and on several External Advisory Boards in the US and Europe. Awards and Honours include election to Fellowship of the Royal Society of Edinburgh (1995), the Tom Connors Prize and Lecture from the BACR (2000), the DiMaggio Lecture from Dana Farber Cancer Center (2004), The Cori Award from Roswell Park Cancer Center (2007), the John B. Little Award from Harvard School of Public Health (2007), and the American Skin Association Achievement Award (2011). .Dr. Balmain's main research interests have been the elucidation of the genetic basis of multistage carcinogenesis, with particular emphasis on mouse models of chemically induced skin tumor development. His strategy has been to identify the sequence of somatic genetic alterations, which are associated with discrete stages of tumorigenesis: initiation, promotion, progression to locally invasive lesions and development of metastases. His group has also identified genes and pathways associated with cancer susceptibility in different mouse strains and in human populations. His research at present is focused on systems approaches to analysis of cancer susceptibility and progression using computational biology and gene network analysis.

Selected Publications:

Wakabayashi Y, Mao JH, Brown K, Girardi M, Balmain A. Promotion of Hras-induced squamous carcinomas by a polymorphic variant of the Patched gene in FVB mice. ***Nature.*** 2007; 445(7129):761-5. PMID: 17230190

Wei G, Ku S, Ma GK, Saito S, Tang AA, Zhang J, Mao JH, Appella E, Balmain A, Huang EJ. HIPK2 represses beta-catenin-mediated transcription, epidermal stem cell expansion, and skin tumorigenesis. ***Proc Natl Acad Sci U S A***. 2007 Aug 7;104(32):13040-5. Epub 2007 Jul 31. PMCID: PMC1936219

Quigley DA, To MD, Pérez-Losada J, Pelorosso FG, Mao JH, Nagase H, Ginzinger DG, Balmain A. Genetic architecture of mouse skin inflammation and tumour susceptibility. ***Nature.*** 2009 458. 505-8. PMID 19136944
Quigley DA, Balmain A. Systems Genetics Analysis of cancer susceptibility:from mouse models to humans. ***Nat Rev Genet*** 2009 Sep;10(9):651-7. Epub 2009 Jul 28. PMID: 19636343

Chun MG, Mao JH, Chiu CW, Balmain A, Hanahan D. Polymorphic genetic control of tumor invasion in a mouse model of pancreatic neuroendocrine carcinogenesis. ***Proc Natl Acad Sci U S A***. 2010 Oct 5;107(40):17268-73. Epub 2010 Sep 20. PMID: 20855625

Quigley DA, To MD, Kim IJ, Lin KK, Albertson DG, Sjolund J, Perez-Losada J, Balmain A. Network analysis of skin tumor progression identifies a rewired genetic architecture affecting inflammation and tumor susceptibility. ***Genome Biol.*** 2011 Jan 18;12(1):R5. PMID: 21244661

Wang YV, Leblanc M, Fox N, Mao JH, Tinkum KL, Krummel K, Engle D, Piwnica-Worms D, Piwnica-Worms H, Balmain A, Kaushansky K, Wahl GM. Fine-tuning p53 activity through C-terminal modification significantly contributes to HSC homeostasis and mouse radiosensitivity. ***Genes Dev.*** 2011 Jul 1:25(13);1426-38. PMID: 21724834

Mao JH, Wu D, Kim IJ, Kang HC, Wei G, Climent J, Kumar A, Pelorosso FG, Delrosario R, Huang EJ, Balmain A. Hipk2 cooperates with p53 to suppress γ-ray radiation-induced mouse thymic lymphoma. ***Oncogene***. 2011 Jul 25. PMID:21785465.

Kang HC, Quigley D, Kim IJ, Wakabayashi Y, Ferguson-Smith MA, D'Alessandro M, Lane EB, Akhurst R, Goudie DR, Balmain A. Multiple Self-Healing Squamous Epithelioma (MSSE): rare variants in an adjacentregion of chromosome 9q22.3 to known *TGFBR1* mutations suggest a digenic or multilocus etiology. ***Journal of Investigative Dermatology***, in press.

Kang HC, Wakabayashi Y, Jen KY, Mao JH, Zoumpourlis V, Del Rosario R and Balmain A. Ptch1 Overexpression Drives Skin Carcinogenesis and Developmental Defects in K14PtchFVB Mice. ***Journal of Investigative Dermatology***, in press.

Sponsored Symposium: L'Oreal

Date: Thursday 9 May 2013
Time: 13:30-14:30
Room: Sidlaw
Floor: 3

L'ORÉAL
Research & Innovation

A Cutting edge and comprehensive toolbox for Skin Ageing Research

PROGRAM	
13:30-13:50	**Multiomics technologies to boost skin ageing research** Dominique Bernard (France)
13:50-14:10	**Assessing anti-ageing efficacy: the Manchester Assay** Rachel Watson (UK)
14:10-14:30	**In vivo multiphoton microscopy & skin ageing** Emmanuelle Tancrède (France)

NOTES

Sponsored Symposium: Celgene

Date: Thursday 9 May 2013
Time: 13:30-14:30
Room: Fintry
Floor: 3

Celgene

Novel therapies and approaches: a new era for improved outcomes for psoriasis?"

1. Understand that improved treatment outcomes must still be pursued (Augustin et al BJD 2012)
2. Communicate results of a population based survey "MAPP" conducted during 2012
3. Understand that new approaches are necessary to improve treatment outcomes: these include improvements to referral processes, screening, diagnosis and therapeutic interventions
4. Communicate information for novel therapeutic interventions with new mechanisms of action in development for the treatment of psoriasis

PROGRAM	
13:30-13:35	**Chair and Introduction** Carlo Pincelli (Modena, Italy)
13:35-14:00	**Improving Treatment Outcomes: Do Unmet Needs Remain in Psoriasis?** Carle Paul (Toulouse, France)
14:00-14:25	**New mechanisms of action: new tools for improved outcomes in psoriasis?** Kristian Reich (Hamburg, Germany)
14:25-14:30	**Conclusion & interactive discussion** Carlo Pincelli (Modena, Italy)

NOTES

JSID Guest Lecture

Date: Thursday 9 May 2013
Time: 14:45-15:15
Room: Pentland
Floor: 3
Introduced by: Masayuki Amagai (JSID)

PROGRAM

10:00-10:30

JSID Guest Lecture

iPS technologies for CNS-regeneration and disorders
Hideyuki Okano (Japan)

Hideyuki Okano received M.D. in Physiology from Keio University in 1983, and served as research associate in Keio University School of Medicine and in Osaka University Institute for Protein Research. After he obtained Ph.D. degree from Keio University in 1988, he held post doctoral position at Johns Hopkins University Medical School. He has appointed full professors at Tsukuba Univesity School of Medicine in 1994, Osaka University School of Medicine in 1997, and returned to Keio University Medical School in 2001 as a full professor of Physiology. He has been conducting basic research in the field of restorative medicine including, neural stem cells and iPS cells, spinal cord injury, developmental genetics and RNA binding proteins. He has awarded numbers of awards and honors including the Medal with Purple Ribbon in 2009. Currently, he is aim to establish and provide genetically modified non-human primate models for neuroscience research and to explore the molecular mechanisms of human-intellectual function by using the marmoset model. And, together with micro array system and genome sequence information of common marmoset, he tries to develop a wide range of research as a model of human diseases including Parkinson's disease, ALS and Alzheimer's diseases, neurophysiology, cognitive science and higher brain function research by taking advantage of our transgenic technology, thereby addressing discrete questions regarding neurobiological bases of human-intellectual function.

Selected Publications:

Okada S, Ishii K, Miyao T, Shimzakai T, Katoh H, Yamane J, Yoshimura A, Iwamoto Y, Nakamura M, Toyama Y, Okano H.: Conditional ablation of STAT3/SOCS3 discloses a dual role for reactive astrocytes after spinal cord injury. ***Nat. Med.*** 12: 829-834, 2006.

Naka H., Nakamura S., Shimazaki T., Okano H. Requirement for COUP-TFI and II in the temporal specification of neural stem cells in central nervous system development. ***Nature Neurosci.*** 11 (9): 1014-1023, 2008 doi:10.1038/nn.2168

Sasaki E, Suemizu H, Shimada A, Hanazawa K, Oiwa R, Kamioka M, Sotomaru Y, Hirakawa R, Eto T, Shiozawa S, Maeda T, Ito R, Kito C, Yagihashi C, Kawai K, Miyoshi H, Tanioka Y, Tamaoki N, Habu S, Okano H, Nomura T. : Generation of transgenic non-human primates with germ line transmission. ***Nature,*** 459(7246):523-527, 2009. (*H. Okano is the corresponding author in this paper)

Nori S, Okada Y, Yasuda A, Tsuji O, Takahashi Y, Kobayashi Y, Fujiyoshi K, Koike M, Uchiyama Y, Ikeda E, Toyama Y, Yamanaka S, Masaya N, Okano H.: Grafted human induced pluripotent stem cell-derived neurospheres promotes motor functional recovery after spinal cord injury in mice. ***Proc.Natl.Acad.Sci.USA*** 108(40): 16825-16830, 2011.

René Touraine Guest Lecture

Date: Thursday 9 May 2013
Time: 15:15-15:45
Room: Pentland
Floor: 3
Introduced by: Thomas Luger (RTF)

PROGRAM

14:45-15:15

René Touraine Guest Lecture

The inflammasome, autoinflammation and the skin
Lars French (Switzerland)

Prof. Dr. med. Lars E French MD is an internationally renowned clinician-scientist and the current professor and chairman of the Department of Dermatology at the Zürich University Hospital in Switzerland.

Professor French graduated from the University of Geneva and trained in internal medicine, basic research, and dermatology (Swiss board certification). He rapidly established his own research group in investigative dermatology alongside clinical activities at the Department of Dermatology of the University of Geneva under the direction of Professor Saurat with the support of a career development award from the Swiss National Science Foundation, before spending a year as visiting professor at the Department of Dermatology of the University of Pennsylvania, USA, and then being nominated as Louis-Jeantet Professor of Medicine at the University of Geneva.

Since October 2006, Professor French chairs the Department of Dermatology of the Zurich University Hospital, a leading Dermatology Department in Europe, and the largest in Switzerland with 160 employees, over 90'000 yearly specialized outpatient consultations, and highest-level expertise in the diagnosis and therapy of skin disease.

Professor French and his team are engaged in competitive research and development efforts with a particular interest for basic research on death-receptor signalling and innate immune responses regulated by the inflammasome-IL-1beta pathway, as well as translational research aimed at elucidating the pathogenesis of severe skin diseases (psoriasis, severe adverse drug eruptions, skin cancer) and developing new therapeutic avenues. Professor French is the author of over 170 original publications with an h-index of 32, and over 6700 citations. His research is actively funded by the Swiss National Science Foundation, the Swiss Cancer League and the European Union amongst others.

Professor French is recognized at an international level through his activities as board-member, secretary-treasurer and past-president of the European Society of Dermatological Research (ESDR), member of the executive committee and treasurer of the European Dermatology Forum, Member of the German Academy of Science Leopoldina, and vice-president of the Swiss Society for Dermatology and Venereology.

Selected Publications:

Watanabe H, Gaide O, Petrilli V, Martinon F, Contassot E, Roques S, Kummer JA, Tschopp J, French LE. Activation of the IL-1beta-Processing Inflammasome Is Involved in Contact Hypersensitivity. ***J Invest Dermatol.*** 127: 1956-1963, 2007.

Watanabe H, Gehrke S, Contassot E, Roques S, Tschopp J, Friedmann PS, French LE, Gaide O. Danger signaling through the inflammasome acts as a master switch between tolerance and sensitization. ***J Immunol.*** 180: 5826-5832, 2008

Feldmeyer L, Werner S, French LE, Beer HD. Interleukin-1, inflammasomes and the skin. ***Eur J Cell Biol.*** 89:638-644, 2010

Fettelschoss A, Kistowska M, LeibundGut-Landmann S, Beer HD, Johansen P, Senti G, Contassot E, Bachmann MF, French LE, Oxenius A, Kündig TM. Inflammasome activation and IL-1β target IL-1α for secretion as opposed to surface expression. ***Proc Natl Acad Sci USA.*** 108:18055, 2011

Sollberger G, Strittmatter GE, Kistowska M, French LE, Beer HD. Caspase-4 is required for activation of inflammasomes. ***J Immunol.*** 188:1992, 2012

Contassot E, Beer HD, French LE. Interleukin-1, inflammasomes, autoinflammation and the skin. ***Swiss Med Wkly.*** 142:w13590, 2012

Autoimmunity & Inflammation I – Concurrent Minisymposium 1

Date: Thursday 9 May 2013
Time: 16:15-18:00
Room: Pentland
Floor: 3

PROGRAM	
Chairs	**Masashi Akiyama (Japan), Michael Hertl (Germany) , Victoria Werth (USA)**
16:15-16:25	**CM1-01 (Poster 201): High throughput screening of small molecule libraries identifies histone deacetylases as new therapeutic targets in psoriasis.** Li Magal[1], Nadav Sagiv[1], Janna Nousbeck[1], Mor Pavlovsky[1], Dana Tyomkin[2], Varda Shoshan-Barmatz[2], Dana Fuchs-Telem[1], Ofer Sarig[1], Eli Sprecher[1]; 1. Tel Aviv Medical Center, Tel Aviv, Israel; 2. Ben Gourion University, Beer Sheva, Israel.
16:25-16:35	**CM1-02 (Poster 256): Increased proportion of regulatory B cells after rituximab therapy for autoimmune blistering skin diseases (AIBD): A potential mechanism for disease control** Alan Chen[1], Ayumi Yoshizaki[2], Tomomitsu Miyagaki[2], Robert Streilein[1], Thomas Tedder[2], Russell Hall[1, 2]; 1. Dermatology, Duke, Durham, NC, USA; 2. Immunology, Duke, Durham, NC, USA.
16:35-16:45	**CM1-03 (Poster 172): Bullous pemphigoid autoantibodies induce skin fragility in neonatal mice in a complement-independent manner** Tetsumasa Sasaoka, Hideyuki Ujiie, Wataru Nishie, Akihiko Shibaki, Hideki Nakamura, Hiroshi Shimizu; Depertment of Dermatology, Hokkaido University Graduate School of Medicine, Sapporo, Japan
16:45-16:55	**CM1-04 (Poster 187): Epidermal cFLIP is a critical regulator of skin homeostasis and protects from TNF-induced keratinocyte apoptosis** Diana Panayotova-Dimitrova[1], Maria Feoktistova[1], Beate Kellert[1], Michaela Ploesser[1], Alexander Marx[2], Stefan Porubsky[2], Mike Hupe[1], Federico Jensen[4], Ana Zenclussen[4], Peter Geserick[1], You-Wen He[3], Martin Leverkus[1]; 1. Section of Molecular Dermatology, Medical Faculty Mannheim, University Heidelberg, Mannheim, Germany; 2. Medical Faculty Mannheim, University Heidelberg, Mannheim, Germany; 3. Duke University Medical Center, Durham, NC, USA; 4. Medical Faculty, Otto-von-Guericke University, Magdeburg, Germany.
16:55-17:05	**CM1-05 (Poster 227): Reversal of long-standing alopecia areata in C3H/HeJ mice using topical JAK inhibitors** Ali Jabbari[1], Zhenpeng Dai[1], Luzhou Xing[3], Annemieke de Jong[1], Angela Christiano[1, 4], Raphael Clynes[1, 2, 3]; 1. Dermatology, Columbia University, New York, NY, USA; 2. Medicine, Columbia University, New York, NY, USA; 3. Pathology, Columbia University, New York, NY, USA; 4. Genetics & Development, Columbia University, New York, NY, USA.
17:05-17:15	**CM1-06 (Poster 137): Contact of Treg to dendritic cells (DC) is guided by Treg-derived adenosine, inducing directed migration and recruitment of adhesion molecules in DC via adenosine A2A receptors** Sabine Ring, Anna Pushkarevskaya, Alexander Enk, Karsten Mahnke; Ruprecht Karls University, Heidelberg, Germany.
17:15-17:25	**CM1-07 (Poster 273): A short peptide overlapping the RAL motif of desmoglein 1 contains the conformational epitope for pathogenic IgG4 autoantibodies in fogo selvagem** Flor Evangelista[1], Aleeza Roth[2], Kayla Shumate[1], Phillip Prisayanh[1], Zhi Liu[1], Valeria Aoki[3], Gunter Hans[3], Evandro Rivitti[3], Luis Diaz[1]; 1. Dermatology, University of North Carolina at Chapel Hill, Chapel Hill, NC, USA; 2. Kidney Center, University of North Carolina at Chapel Hill, Chapel Hill, NC, USA; 3. Dermatology, University of Sao Paulo, Sao Paulo, Brazil.
17:25-17:35	**CM1-08 (Poster 121): CX3CL1/fractalkine and its receptor CX3CR1 regulate atopic dermatitis by controlling effector T cell retention in inflamed skin** Delphine Staumont-Sallé[1, 2, 3], Nicolas Hornez[3], Céline Lavogiez[3], Akira Kanda[2], Cyrille Mionnet[4], Janne Prawitt[1, 2], Sébastien Fleury[1, 2], Emmanuel Bouchaert[1, 2], Anne Lazzari[4], Emmanuel Delaporte[2, 3], Nicolas Glaichenhaus[4], Bart Staels[1, 2], Valérie Julia[4], David Dombrowicz[1, 2]; 1. U1011, Inserm, Lille, France; 2. University of Lille 2, Lille, France; 3. Dermatology, University Hospital of Lille, Lille, France; 4. UMR 6097, CNRS, Nice, France.
17:35-17:45	**CM1-09 (Poster 114)** **Characterization of inflammation in keratinocyte Dlx3-deficient murine skin** Jin-Chul Kim[1], Youichi Ogawa[2], Elisabetta Palazzo[1], Mark Udey[2], Maria Morasso[1]; 1. Developmental Skin Biology Unit, NIAMS/NIH, Bethesda, MD, USA; 2. Dermatology Branch, NCI/NIH, Bethesda, MD, USA
17:45-17:55	**CM1-10 (Poster 123): A novel mouse model for a blistering skin disease** Tiina Hurskainen[1, 2], Nina Kokkonen[1, 2], Joanna Jackow[3], Raija Sormunen[4], Jyri Moilanen[1, 2], Stefanie Löffek[3], Raija Soininen[4], Claus Franzke[3], Leena Bruckner-Tuderman[3], Kaisa Tasanen[1, 2]; 1. Dermatology, University of Oulu, Oulu, Finland; 2. Clinical Research Center, Oulu University Hospital, Oulu, Finland; 3. Dermatology, University of Freiburg, Freiburg, Germany; 4. Biocenter Oulu, University of Oulu, Oulu, Finland.

Pigmentation & Melanoma - Concurrent Minisymposium 2

Date: Thursday 9 May 2013
Time: 16:15-18:00
Room: Sidlaw
Floor: 3

PROGRAM	
Chairs	**Neil Box (USA), Ryuhei Okuyama (Japan), Mauro Picardo (Italy)**
16:15-16:25	**CM2-01 (Poster 1336) : ATG7-dependent autophagy protects melanocytes against premature senescence and contributes to the control of the Nrf2 stress response** Cheng-Feng Zhang[1, 2], Florian Gruber[2], Michael Mildner[2], Ulrich Koenig[2], Susanne Karner[2], Caterina Barresi[2], Heidemarie Rossiter[2], Heidemarie Rossiter[2], Heidemarie Rossiter[2], Lionel Larue[3], Leopold Eckhart[2], Erwin Tschachler[2]; 1. Dermatology, Hua Shan Hospital, Fudan University, Shanghai, China; 2. Dermatology, Research Division of Biology and Pathobiology of the Skin, Medical University of Vienna, Vienna, Austria; 3. Institut Curie, Centre de Recherche, Developmental Genetics of Melanocytes, Orsay, France.
16:25-16:35	**CM2-02 (Poster 1413): The crucial role of Sox10-Sox9 axis in melanoma development** Olga Shakhova[1], Simon Schaefer[1], Daniela Mihic[2], Holger Moch[2], Reinhard Dummer[3], Lukas Sommer[1]; 1. Institute of Anatomy, University of Zurich, Zurich, Switzerland; 2. Institute of Surgical Pathology, University Hospital Zurich, Zurich, Switzerland; 3. Department of Dermatology, University Hospital Zurich, Zurich, Switzerland.
16:35-16:45	**CM2-03 (Poster 1315): Survivin promotion of melanoma metastasis requires upregulation of α5 integrin** Jodi McKenzie[1], Tong Liu[1], Douglas Grossman[1, 2]; 1. Huntsman Cancer Institute, University of Utah, Salt Lake City, UT, USA; 2. Dept. of Dermatology, University of Utah, Salt Lake City, UT, USA.
16:45-16:55	**CM2-04 (Poster 1306): Melanosome biogenesis protein complexes interact with the WASH complex** Pearl Ryder[1], Rachel Vistein[2], Avanti Gokhale[1], Matthew Seaman[3], Manoj Puthenveedu[2], Victor Faundez[1]; 1. Cell Biology, Emory University, Atlanta, GA, USA; 2. Biological Sciences, Carnegie Mellon University, Pittsburgh, PA, USA; 3. Clinical Biochemistry, University of Cambridge, Cambridge, United Kingdom.
16:55-17:05	**CM2-05 (Poster 1385): Loss of Noxa and Puma have inverse effects on melanomagenesis in a predisposed, genetically-defined mouse melanoma model** Nethia Mohana-Kumaran[1], Keryn Lucas[1], Ben Roediger[1], Richard Scolyer[2], Wolfgang Weninger[1, 4, 5], John Allen[3], Nikolas Haass[1, 4, 5]; 1. Centenary Institute, Newtown, NSW, Australia; 2. Tissue Pathology and Diagnostic Oncology, Royal Prince Alfred Hospital, Camperdown, NSW, Australia; 3. ANZAC Research Institute, Concord, NSW, Australia; 4. Discipline of Dermatology, University of Sydney, Camperdown, NSW, Australia; 5. Department of Dermatology, Royal Prince Alfred Hospital, Camperdown, NSW, Australia.
17:05-17:15	**CM2-06 (Poster 1408): Antibodies of the IgG4 subclass impaired immune responses against melanoma** Panagiotis Karagiannis, Amy Gilbert, Debra Josephs, Niwa Ali, Tihomir Dodev, Louise Saul, Isabel Correa, Luke Roberts, Emma Beddowes, Alexander Koers, Carl Hobbs, Silvia Ferreira, Jenny Geh, Ciaran Healy, Mark Harries, Katharine Acland, Philip Blower, Tracey Mitchell, David Fear, James Spicer, Katie Lacy, Frank Nestle, Sophia Karagiannis; King's College London, London, United Kingdom.
17:15-17:25	**CM2-07 (Poster 1338) : Comprehensive promoter methylation analysis identifies epigenetic silencing of MAPK13 in primary cutaneous melanoma** Linda Gao[1], Marjon Smit[2], Joost van den Oord[3], Jelle Goeman[4], Els Verdegaal[5], Sjoerd van der Burg[5], Marguerite Stas[6], Samuel Beck[7], Nelleke Gruis[1], Cornelis Tensen[1], Rein Willemze[1], Daniel Peeper[2], Remco van Doorn[1]; 1. Dermatology, Leiden University Medical Center, Leiden, Netherlands; 2. Molecular Oncology, Netherlands Cancer Institute, Amsterdam, Netherlands; 3. Pathology, KU Leuven, Leuven, Belgium; 4. Medical Statistics, Leiden University Medical Center, Leiden, Netherlands; 5. Clinical Oncology, Leiden University Medical Center, Leiden, Netherlands; 6. Surgical Oncology, KU Leuven, Leuven, Belgium; 7. Leiden Cytology and Pathology Laboratory, Leiden, Netherlands.
17:25-17:35	**CM8-08 (Poster 1358) : Hippo pathway oncogenic effectors YAP and TAZ in cutaneous melanoma** Flore Nallet-Staub[1], Veronique Marsaud[1], Ling Li[2], Cristele Gilbert[1], Sophie Dodier[1], Veronique Bataille[3], Marius Sudol[4], Meenhard Herlyn[2], Alain Mauviel[1]; 1. Team "TGF-beta and Oncogenesis", Institut Curie, ORSAY, France; 2. Wistar Institute, Philadelphia, PA, USA; 3. West Herts NHS Trust, London, United Kingdom; 4. Geisinger Clinic, Danville, PA, USA.
17:35-17:45	**CM2-09 (Poster 1370): PD-1 expression by melanoma cells modulates antitumor immunity and promotes cancer progression** Sonja Kleffel[1], Nayoung Lee[1], Vikram Juneja[2], Hansgeorg Mueller[1], Steven Barthel[1], Arlene Sharpe[2], Markus Frank[1, 3], Thomas Kupper[1], Tobias Schatton[1, 3]; 1. Department of Dermatology, Brigham and Women's Hospital, Harvard Medical School, Boston, MA, USA; 2. Department of Microbiology and Immunology, Harvard Medical School, Boston, MA, USA; 3. Transplantation Research Center, Children's Hospital, Harvard Medical School, Boston, MA, USA.
17:45-17:55	**CM2-10 (Poster 1424): Higher-order chromatin organization of melanocyte-specific gene loci in human melanocytes** Michal Gdula[1, 3], Tatyana Sharova[1], Krzysztof Poterlowicz[2], Michael Fessing[2], Andrey Sharov[1]; 1. Department of Dermatology, Boston University School of Medicine, Boston, MA, USA; 2. Centre for Skin Sciences, University of Bradford, Bradford, United Kingdom; 3. The Wellcome Trust Centre for Human Genetics, University of Oxford, Oxford, United Kingdom.

Epidermal Structure & Barrier Function - Concurrent Minisymposium 3

Date: Thursday 9 May 2013
Time: 16:15-18:00
Room: Fintry
Floor: 3

PROGRAM	
Chairs	**Akemi Ishida-Yamamoto (Japan), Maria Morasso (USA), Matthias Schmuth (Austria)**
16:15-16:25	**CM3-01 (Poster 609): Coal tar induces AhR-dependent skin barrier repair in atopic dermatitis: The search for the active ingredient(s).** Ellen van den Bogaard[1, 2], J. Bergboer[1], I. van Vlijmen-Willems[1], S. Hato[3], P. van der Valk[1], J. Schroder[4], I. Joosten[2], P. Zeeuwen[1], J. Schalkwijk[1]; 1. Dermatology, RUNMC, Nijmegen, Netherlands; 2. Lab of Med Immunology, RUNMC, Nijmegen, Netherlands; 3. Tumor Immunology, RUNMC, Nijmegen, Netherlands; 4. Dermatology, Univ Hospital of Schleswig-Holstein, Kiel, Germany.
16:25-16:35	**CM3-02 (Poster 624): Dlx3 as a cell cycle modulator during keratinocyte differentiation and tumor development.** Elisabetta Palazzo[1], Pietroni Valentina[1], Gormley Anna[1], Nadezda Radoja[1], Miroslav Blumenberg[3], Jin Chul Kim[1], Andrew Ryscavage[2], Christophe Cataisson[2], Maria Morasso[1]; 1. Developmental Biology Section Unit, NIH/NIAMS, Bethesda, MD, USA; 2. Laboratory of Cancer Biology and Genetics, NIH/NCI, Bethesda, MD, USA; 3. Department of Dermatology, New York University, New York, NY, USA.
16:35-16:45	**CM3-03 (Poster 636): TLR3 activation is important for skin barrier repair following UV exposure.** Andrew Borkowski, Richard Gallo; Medicine, University of California, San Diego, La Jolla, CA, USA.
16:45-16:55	**CM3-04 (Poster 671): Decreased adhesion of keratinocytes via E-cadherin downmodulation is a platform for leukocytes mobility in the epidermis.** Gyohei Egawa, Yoshiki Miyachi, Kenji Kabashima; Dermatology, Kyoto University, Kyoto, Japan.
16:55-17:05	**CM3-05 (Poster 653): Keratinocyte-specific PRSS3 effectively activates KLKs and degrades LEKTI ⍰ÛÒ a hidden mechanism of desquamation.** Masashi Miyai[1], Yuuko Matsumoto[1], Haruyo Yamanishi[1], Mami Yamamoto[1, 2], Ryoji Tsuboi[2], Toshihiko Hibino[1]; 1. Shiseido Research Center, Yokohama, Japan; 2. Dermatology, Tokyo Medical University, Tokyo, Japan.
17:05-17:15	**CM3-06 (Poster 713): Kallikreins 5 and -7 are coordinately transferred with glucosylceramides into lamellar bodies by ABCA12.** Lei Zhang[1], Dennis Roop[1], Melanie Hupe[2], Debra Crumrine[2], Peter Elias[2], Walter Holleran[2]; 1. Department of Dermatology, Charles C. Gates Center for Regenerative Medicine and Stem Cell Biology, University of Colorado Anschutz Medical Campus, Aurora, CO, USA; 2. Department of Dermatology, School of Medicine, University of California, San Francisco, CA, USA.
17:15-17:25	**CM3-07 (Poster 677): The stratum corneum comprises three layers with distinct barrier properties to metal ions.** Akiharu Kubo[1], Itsuko Ishizaki[2], Akiko Kubo[3], Hiroshi Kawasaki[1], Keisuke Nagao[1], Yoshiharu Ohashi[2], Masayuki Amagai[1]; 1. Dermatology, Keio University, Tokyo, Japan; 2. ULVAC-PHI, INC., Chigasaki, Japan; 3. Biochemistry, Keio University, Tokyo, Japan.
17:25-17:35	**CM3-08 (Poster 683): Loss of ELOVL1 enzyme depletes very long-chain fatty acids and causes lethal skin barrier disruption in mice.** Shotaro Suzuki[1, 2], Toshifumi Nomura[1], Takayuki Sassa[3], Yusuke Ohno[3], Masashi Akiyama[4], Akio Kihara[3], Hiroshi Shimizu[1]; 1. Department of Dermatology, Hokkaido University Graduate School of Medicine, Sapporo, Japan; 2. Products Research Laboratories, ALBION Co., Ltd., Ginza, Japan; 3. Laboratory of Biochemistry, Faculty of Pharmaceutical Sciences, Sapporo, Japan; 4. Department of Dermatology, Nagoya University Graduate School of Medicine, Nagoya, Japan.
17:35-17:45	**CM3-09 (Poster 726): Keratin 9 is required for the structural integrity and differentiation of palmoplantar epidermis.** Dun Jack Fu[1], Calum Thomson[2], Declan Lunny[3], Patricia Dopping-Hepenstal[4], John McGrath[5], Frances Smith[1], W.H. Irwin McLean[1], Deena Leslie Pedrioli[1]; 1. Centre for Dermatology and Genetic Medicine, University of Dundee, Dundee, United Kingdom; 2. Microscopy Facility, University of Dundee, Dundee, United Kingdom; 3. Institute of Medical Biology, Singapore, Singapore; 4. St. Thomas' Hospital, London, United Kingdom; 5. King's College London, London, United Kingdom.
17:45-17:55	**CM3-10 (Poster 727): The evolutionary origin of loricrin was associated with the transition to fully terrestrial life.** Bettina Strasser[1], Veronika Mlitz[1], Marcela Hermann[2], Erwin Tschachler[1], Leopold Eckhart[1]; 1. Dermatology, Medical University of Vienna, Vienna, Austria; 2. Medical Biochemistry, Medical University of Vienna, Vienna, Austria.

Stem Cells, Skin & Hair Development - Concurrent Minisymposium 4

Date: Thursday 9 May 2013
Time: 16:15-18:00
Room: Tinto
Floor: 0

PROGRAM	
Chairs	**Salvadoe Aznar-Benitah(Spain), Sarah Millar (USA), Manabu Ohyama(Japan)**
16:15-16:25	**CM4-01 (Poster 448): Full-thickness skin with mature and cycling hair follicles using tissue culture expanded human cells** Xunwei Wu, Larry Scott, Kurt Stenn; Aderans Research Institute, Inc, Marietta, GA, USA.
16:25-16:35	**CM4-02 (Poster 1435): The interfollicular epidermis is maintained by a hierarchy defined by stem cells within the non-cycling portion of hair follicles and committed progenitors** Edwige Roy[1], Zoltan Neufeld[1], Luca Cerone[1], Angeline Wong[1], Samantha Hodgson[1], Inna Tabansky[2], Kevin Eggan[2], Jean Livet[3], Kiarash Khosrotehrani[1]; 1. University of Queensland, Brisbane, QLD, Australia; 2. Harvard University, Howard Hughes Medical Institute, Cambridge, MA, USA; 3. UPMC Univ Paris 06, UMR_S 968, Institut de la Vision, Paris, France.
16:35-16:45	**CM4-03 (Poster 1441): Defining label retaining cells (LRCs) from nails as putative new skin stem cells** Yvonne Leung[1, 2], Eve Kandyba[1, 2], Yi-Bu Chen[3], Seth Ruffins[1], Krzysztof Kobielak[1, 2]; 1. Eli and Edythe Broad CIRM Center for Regenerative Medicine and Stem Cell Research, University of Southern California, Los Angeles, CA, USA; 2. Department of Pathology, University of Southern California, Los Angeles, CA, USA; 3. Norris Medical Library, University of Southern California, Los Angeles, CA, USA.
16:45-16:55	**CM4-04 (Poster 501): Trichomegaly, or Hollywood "movie lashes", resulting from mutations in FGF5 and an elongated hair cycle anagen phase** C. Higgins[1], L. Petukhova[1], Y. Ho[1], E. Drill[1], L. Shapiro[2], M. Wajid[3], A. Christiano[1]; 1. Dermatology, Columbia University, NYC, NY, USA; 2. Biochemistry, Columbia University, NYC, NY, USA; 3. Zoology, University of Education, Lahore, Pakistan.
16:55-17:05	**CM4-05 (Poster 493): A mouse model for *in vivo* quantitative monitoring of Wnt/B-Catenin signalling in skin reveals macroscopic hair cycle dynamics in health and disease** Samantha Hodgson, Zoltan Neufeld, Kiarash Khosrotehrani; The University of Queensland, Brisbane, QLD, Australia.
17:05-17:15	**CM4-06 (Poster 510): Blockade of Gli transcriptional activity in mature anagen hair follicles leads to impaired matrix cell proliferation, aberrant differentiation, and defective hair shaft formation** A. Ermilov, J. Pero, D. Wilbert, A. Photenhauer, H. Zabawa, M. Grachtchouk, A. Dlugosz; Dermatology, University of Michigan, Ann Arbor, MI, USA.
17:15-17:25	**CM4-07 (Poster 508): Polycomb component Cbx4 inhibits the expression of non-epidermal lineage genes and regulates cell proliferation in keratinocytes during skin development** Andrei Mardaryev[1], Valentina Rapisarda[1], Bo Liu[4], Krzysztof Poterlowicz[1], Andrey Sharov[2], Salvador Aznar-Benitah[3], Guo-Liang Xu[4], Vladimir Botchkarev[1, 2]; 1. Centre for Skin Sciences, University of Bradford, Bradford, United Kingdom; 2. Dermatology, Boston University, Boston, MA, USA; 3. Center for Genomic Regulation, Barcelona, Spain; 4. Shanghai Institute of Biological Sciences, Shanghai, China.
17:25-17:35	**CM4-08 (Poster 469): Inhibitory effects of anti-histamines against T cell-chemoattractions by suppression of F-actin polymerization in alopecia areata** Taisuke Ito[1], Hideo Hashizume[2], Yoshiki Tokura[1]; 1. Dermatology, Hamamatsu University School of Medicine, Hamamatsu, Japan; 2. Dermatology, Shimada Municipal Hospital, Shimada, Japan.
17:35-17:45	**CM4-09 (Poster 496): Autophagy-related gene Atg5 controls terminal differentiation of sebocytes in the preputial gland of the mouse** Supawadee Sukseree[1, 2], Heidemarie Rossiter[1], Michael Mildner[1], Maria Buchberger[1], Florian Gruber[1], Ramida Watanapokasin[2], Erwin Tschachler[1], Leopold Eckhart[1]; 1. Department of Dermatology, Medical University of Vienna, Vienna, Austria; 2. Department of Biochemistry, Srinakharinwirot University, Bangkok, Thailand.
17:45-17:55	**CM4-10 (Poster 1446): The touch dome defines a new niche in the skin epidermis** Yanne Doucet[1, 2], Seung-Hyun Woo[1, 4], Marlon Ruiz[1], David Owens[1, 3]; 1. Dermatology, Columbia University, New York, NY, USA; 2. Aix-Marseille Universite, Marseille, France; 3. Pathology and Cell Biology, Columbia University, New York, NY, USA; 4. Cell Biology, Scripps Research Institute, La Jolla, CA, USA.

Date: Thursday 9 May 2013
Time: 16:15-18:00
Room: Kilsyth
Floor: 0

PROGRAM

Chairs	**Martin Weinstock (USA), Hywel Williams (UK), Kenshi Yamasaki (Japan)**
16:15-16:25	**CM5-01 (Poster 598): Latent Ccass analysis of 697 patients with non-segmental viiligo identify of two clinical subtypes** Khaled Ezzedine[1], Aurélie le Thuaut[2], Thomas Jouary[1], Julien Seneschal[1], Alain Taieb[1], Sylvie Bastuji-Garin[2]; 1. Dermatology, Hôpital St-André, Bordeaux, France; 2. Public Health and Statistics, (1) Université Paris Est Créteil, LIC EA 4393 ; AP-HP, Hôpital Henri-Mondor, Créteil, France.
16:25-16:35	**CM5-02 (Poster 519): Dense genotyping of six atopic dermatitis and 180 autoimmune risk loci in 2,425 atopic dermatitis patients** Hansjoerg Baurecht[1], Elke Rodríguez[1], David Ellinghaus[2], Jorge Esparza-Gordillo[3, 4], Christian Gieger[5], Stefan Schreiber[2], Young-AE Lee[3, 4], Andre Franke[2], Stephan Weidinger[1]; 1. Department of Dermatology, Allergology, and Venerology, University Hospital Schleswig-Holstein, Kiel, Germany; 2. Institute of Clinical Molecular Biology, Christian-Albrechts-University, Kiel, Germany; 3. Pediatric Pneumology and Immunology, Charité, Berlin, Germany; 4. Max-Delbrück-Centrum (MDC) for Molecular Medicine, Berlin, Germany; 5. Institute of Genetic Epidemiology, Helmholtz Centre Munich, Neuherberg, Germany.
16:35-16:45	**CM5-03 (Poster 579): Thymic stromal lymphopoietin (TSLP) and atopic dermatitis (AD) in a longitudinal cohort** D. Margolis, B. Kim, A. Apter, J. Gupta, N. Mitra; University of Pennsylvania School of Medicine, Philadelphia, PA, USA.
16:45-16:55	**CM5-04 (Poster 564): Common warts in childhood are associated with increased atopy and infections: A US population-based study** Jonathan Silverberg, Nanette Silverberg; Dermatology, St. Luke's-Roosevelt Hospital and Beth Israel Medical Centers, New York, NY, USA.
16:55-17:05	**CM5-05 (Poster 542): Lower serum vitamin D levels are associated with increased risk of eczema in US adults** Teresa Fu, Christina Gamba, Hillary Ive, Jean Tang; Dermatology, Stanford University School of Medicine, Stanford, CA, USA.
17:05-17:15	**CM5-06 (Poster 536): Low dose aspirin is not associated with a decreased incident skin cancer risk: A population-based cohort study among 1.2 million Dutch inhabitants** Loes Hollestein[1], Myrthe van Herk-Sukel[2], Rikje Ruiter[1], Esther de Vries[1, 3], Ron Mathijssen[1], Erik Wiemer[1], Theo Stijnen[4], Valery Lemmens[1, 3], Ron Herings[2], Bruno Stricker[1, 2], Tamar Nijsten[1]; 1. Erasmus University MC, Rotterdam, Netherlands; 2. PHARMO, Utrecht, Netherlands; 3. Eindhoven Cancer Registry, Eindhoven, Netherlands; 4. Leiden University MC, Leiden, Netherlands.
17:15-17:25	**CM5-07 (Poster 517): Alcohol intake is associated with increased risk of squamous cell carcinoma of the skin: Prospective cohort study** Satu Siiskonen[1, 2], Jiali Han[2, 3, 4], Tricia Li[3], Tamar Nijsten[1], Abrar Qureshi[2, 3]; 1. Department of Dermatology, Erasmus MC, Rotterdam, Netherlands; 2. Clinical Research Program, Department of Dermatology, Brigham and Women's Hospital, Harvard Medical School, Boston, MA, USA; 3. Channing Division of Network Medicine, Department of Medicine, Brigham and Women's Hospital, Harvard Medical School, Boston, MA, USA; 4. Department of Epidemiology, Harvard School of Public Health, Boston, MA, USA.
17:25-17:35	**CM5-08 (Poster 545): Surgical excision versus imiquimod 5% cream for basal-cell carcinoma (SINS): A multi-centre non-inferiority randomised controlled trial** Hywel Williams, Fiona Bath-Hextall, Mara Ozolins, Graham Colver, William Perkins, Sarah Armstrong, Paul Miller; University of Nottingham, Nottingham, United Kingdom.
17:35-17:45	**CM5-09 (Poster 587): Inverse relationship between melanoma death and sentinel lymph node metastases by age in the SEER Databases (2003-2009)** Margaret Cavanaugh-Hussey[1], Euphemia Mu[1], Timothy Wang[1], Charles Balch[2], Sewon Kang[1]; 1. Dermatology, Johns Hopkins Medical Institutions, Baltimore, MD, USA; 2. Surgical Oncology, University of Texas Southwestern Medical Center, Baltimore, MD, USA.
17:45-17:55	**CM5-10 (Poster 606): Fragrance contact allergy in the European general population** Thomas Diepgen[1], Luigi Naldi[2], Magnus Bruze[3], Simone Cazzaniga[2], Pieter Jan Coenraads[4], Peter Elsner[5], Margarida Goncalo[6], Robert Ofenloch[1], Ake Svensson[3]; 1. Department for Clinical Social Medicine, University Hospital Heidelberg, Heidelberg, Germany; 2. Centro Studi GISED, Bergamo, Italy; 3. University Hospital Malmö, Malmö, Sweden; 4. University Hospital Groningen, Groningen, Netherlands; 5. University Hospital Jena, Jena, Germany; 6. University Hospital Coimbra, Coimbra, Portugal.

Date: Thursday 9 May 2013
Time: 18:00-19:00
Room: Lennox Suite and Mezzanine
Floor: -1

Poster #'s 001-499 ODD & #'s 502-1000 EVEN

Poster walks will take place during all official poster viewing sessions. The walks are guided thematic tours of selected posters accompanied by a senior investigator.

Each poster presenter will be asked to briefly describe their work and a short group discussion will be held.

If your poster has been selected for a Poster Walk, please join the appropriate group in the Poster Area (Poster desk on the mezzanine level).

All other delegates are welcome to join the walk/s of their choice.

The poster walk leaders and subject areas are:

David Rubenstein	Autoimmunity I
Rod Sinclair	Photobiology
Peggy Myung	Stem cells, skin, hair
Cristina de Guzman-Strong	Epidermal structure
Tamar Nijsten	Epidemiology

NOTES

Young Investigators Collegiality Evening

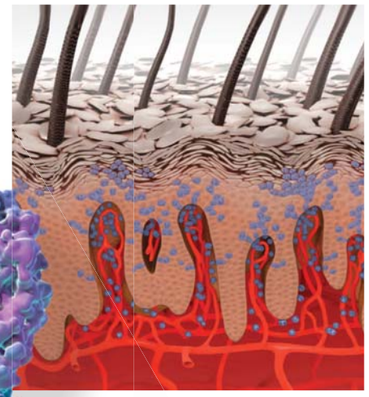
Date: Thursday 9 May 2013
Time: 19:30
Venue: Our Dynamic Earth
112-116 Holyrood Road
Edinburgh
EH8 8AS

For map see page 8

This is a ticketed event and numbers are limited, if you do not have a ticket please ask at the Onsite Registration desk.

The Young Investigators Collegiality Evening is a great opportunity to meet with colleagues and network in a relaxed and informal setting. Join us for a drinks reception and food at Our Dynamic Earth.

PLEASE JOIN US for an Educational Symposium



FOLLOWING THE PATH OF

IL-17

FROM JOINTS TO SKIN

10 May 2013

07:30–08:30

Breakfast sponsored symposium

Fintry Room
Edinburgh International Conference Centre (EICC)

Pathophysiological Pathway of IL-17A in Psoriasis

Jonathan Barker Chair
MD, FRCP, FRCPath
King's College London, UK

Inhibiting the IL-17 Pathophysiological Pathway in Psoriasis

Kristian Reich
MD
Georg-August-University Gottingen, Germany

Targeting the IL-17 Pathway: New Agents in Development to Treat Psoriatic Arthritis

Iain McInnes
MBChB (Hons), PhD, FRCP, FRSE
University of Glasgow, UK

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CH-4002 Basel, Switzerland

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SCK13-C006 Date of Preparation March 2013

IID2013-symposium-a2

International Investigative Dermatology (IID) Meeting, Edinburgh, Scotland

Invitation

Emerging oral investigational compounds in development for

psoriasis

13.15–14.15, Friday 10 May 2013

Sidlaw Room, Edinburgh International Conference Centre
Edinburgh, Scotland

Dear Colleague

On behalf of the faculty, I am delighted to invite you to the Pfizer satellite symposium, '**Emerging oral investigational compounds in development for psoriasis**.' The symposium will be held on Friday 10 May 2013, from 13.15 to 14.15, during the International Investigative Dermatology (IID) conference in Edinburgh, Scotland.

The symposium will highlight a new category of oral agents currently in advanced clinical development for the treatment of psoriasis. A unique feature among these investigational agents is the ability to reduce cytokine signalling intracellularly, which is distinct from the extracellular mechanism of action employed by biologic agents.

In this symposium, the expert faculty will set the stage by reviewing the role of intracellular signalling pathways in the pathogenesis of psoriasis and, for each pathway, providing a brief overview of current investigational oral compounds in development for psoriasis. We will then focus on efficacy data from novel, oral agents in phase 3 clinical development for psoriasis. Finally, the symposium will close with an overview of key safety results of oral agents in advanced phase trials, and place the data in context with current and emerging investigational compounds in development for psoriasis.

I look forward to welcoming you to Edinburgh, for what promises to be an interesting and educational symposium.

Frank Nestle (Chair)
St John's Institute of Dermatology, King's College London, London, UK

Programme

13.15 Chair's welcome
Frank Nestle (Chair), UK

13.20 Intracellular cytokine signalling pathways: A rational target in psoriasis
Frank Nestle (Chair), UK

13.40 Novel oral investigational compounds for psoriasis in the era of biologic therapies:

- **Understanding efficacy**
  Richard Langley, Canada
- **Interpreting safety**
  Kamran Ghoreschi, Germany

14.10 Conclusions and questions
Frank Nestle (Chair), UK

14.15 Close

This meeting is organised and funded by Pfizer
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March 2013. EU-JAK-84-0313 NPENB529

Pfizer

Toctino is licensed for adults with severe chronic hand eczema unresponsive to potent topical corticosteroids

- 48% of patients receiving 30mg dose achieved clear / almost clear hands with up to 6 months treatment[1]
- Convenient once daily oral dose[2]
- Toctino has an established safety profile[2]
- Toctino is teratogenic - pregnancy prevention material is available on www.toctino.com

Toctino® (alitretinoin)

UK Prescribing information: TOCTINO® (ALITRETINOIN) 10mg or 30mg Capsules
Before prescribing please refer to the full Summary of Product Characteristics. **Name of Medicinal Product:** Toctino® (alitretinoin) 10mg or 30mg capsules. **Non-proprietary name:** Alitretinoin. Presentation: Soft capsules containing 10mg or 30mg of alitretinoin. **Indication:** Severe chronic hand eczema that is unresponsive to treatment with potent topical corticosteroids. Predominantly hyperkeratotic features are more likely to respond to treatment than pompholyx. **Dosage and administration.** Toctino should only be prescribed by dermatologists, or physicians withexperience in the use of systemic retinoid therapy. The recommended dose range for Toctino is 10mg-30mg once daily to be taken orally with a meal. The recommended start dose for Toctino is 30mg once daily. A dose reduction to 10mg once daily may be considered in patients with unacceptable adverse reactions to the higher dose. High risk patients with diabetes, obesity, cardiovascular risk factors or lipid metabolism disorders should be initiated on 10mg once daily and titrated up to 30mg once daily if necessary. A treatment course can be given for 12 to 24 weeks depending on response. In the event of relapse, patients may benefit from further treatment courses. Prescriptions of Toctino for women of childbearing potential should be limited to 30 days and dispensed within 7 days of the prescription in accordance with the Pregnancy Prevention Programme. **Contraindications:** Pregnancy is an absolute contraindication to treatment with Toctino. Use during pregnancy or in women of childbearing potential is contraindicated unless all conditions of Pregnancy Prevention Programme are met. If pregnancy does occur in spite of the Pregnancy Prevention Programme during treatment with Toctino or in the month following discontinuation of therapy there is a high risk of very severe and serious malformation of the foetus. Please refer to the Toctino Summary of Product Characteristics for further details. If pregnancy occurs in a woman treated with Toctino, treatment must be stopped and the patient should be referred to a physician specialised or experienced in teratology for advice. Toctino is contraindicated during breastfeeding. Toctino is contraindicated in patients with hepatic insufficiency, severe renal insufficiency, uncontrolled hypercholesterolaemia, hypertriglyceridaemia, hypothyroidism, hypervitaminosis A, hypersensitivity to alitretinoin, other retinoids or excipients, allergy to peanut or soya, hereditary fructose intolerance and concomitant tetracyclines treatment. **Precautions and warnings:** Toctino is not recommended for use in patients under 18 years of age. Male fertility may be compromised by treatment. Patients should be reminded not to share medications or donate blood during therapy and for one month following therapy with Toctino. Psychiatric disorders have been seen with retinoids including alitretinoin, therefore particular care should be taken in patients with a history of depression. Patients should be observed for signs of depression and referred for appropriate treatment if necessary. Effects of UV light may be enhanced and patients should avoid excessive exposure to sunlight, unsupervised use of sun lamps and use appropriate sun protection of at least SPF 15. Patients experiencing visual difficulties should be referred to an ophthalmologist and treatment discontinuation may be required. Decreased night vision has been reported and patients should be warned to be cautious when driving or operating machinery. Patients who develop signs of benign intracranial hypertension, including headache, nausea and vomiting, visual disturbances and papilloedema, should discontinue treatment immediately. Serum cholesterol and triglycerides should be monitored. Treatment should be discontinued if hypertriglyceridaemia cannot be controlled at an acceptable level or if symptoms of pancreatitis occur. In 'high risk' patients with diabetes, obesity, cardiovascular risk factors or a lipid metabolism disorder more frequent checks of serum values for lipids may be necessary. Dose reduction or discontinuation should be considered in the event of persistent clinically relevant elevation of transaminases. If severe diarrhoea is observed, diagnosis of inflammatory bowel disease should be considered and treatment discontinued immediately. Severe allergic reactions necessitate interruption of therapy and careful monitoring. Please refer to the Toctino Summary of Product Characteristics for further details. **Interactions:** Concomitant use of St. John's Wort may cause failure of combined hormonal contraceptives. Concomitant use of vitamin A or other retinoids may cause hypervitaminosis A. Concomitant use of tetracyclines may increase the risk of benign intracranial hypertension. **Common Adverse Effects: Very common (≥10%)** headaches, hypertriglyceridaemia, hypercholesterolaemia, decreased HDL. **Common (≥1-10%)** anaemia, increased iron binding capacity, decreased monocytes, increased thrombocytes, decreased TSH, decreased free T4, conjunctivitis, dry eye, eye irritation, flushing, increased liver transaminases, dry skin, dry lips, cheilitis, eczema, dermatitis, erythema, alopecia, arthralgia, myalgia, increased blood creatinine phosphokinase. **Serious adverse effects: Uncommon (≥0.1-1%)** blurred vision, cataract, epistaxis, ankylosing spondylitis. **Rare (≥0.01-0.1%)** benign intracranial hypertension, vasculitis. **Overdose:** Reversible adverse effects observed consistent with retinoid toxicity including severe headache, diarrhoea, facial flushing, hypertriglyceridaemia. Please refer to the Toctino Summary of Product Characteristics for full details of adverse effects with Toctino. **Storage instructions:** Do not store above 30°C. Store in the original packaging and protect from light. **Marketing authorisation number and NHS list price:** PL 32205/0001 Toctino 10mg 30 capsule pack £411.43; PL 32205/0002 Toctino 30mg 30 capsule pack £411.43. **Legal category:** POM. **Name and address of authorisation holder:** Basilea Medical Ltd, 14/16 Frederick Sanger Road, The Surrey Research Park, Guildford, Surrey GU2 7YD. Toctino® is a registered trademark of Basilea Pharmaceuticals International AG.
Date of preparation: August 2012 UK/ART/0001/12.

Adverse events should be reported. Reporting forms and information can be found at www.mhra.gov.uk/yellowcard. Adverse events should also be reported to GSK on 0800 221 441.

References: 1. Ruzicka T, Lynde CW, Jemec GBE, et al. Efficacy and safety of oral alitretinoin (9-cis retinoic acid) in patients with severe chronic hand eczema refractory to topical cortico-steroids: results of a randomized, placebo-controlled, multicentre trial. Br J Dermatol. 2008; 158: 808–817. **2.** Toctino Summary of Product Characteristics. Basilea Pharmaceutica; 2011.

Stiefel a GSK company

Date of preparation: March 2013. SEU/OD/0006/13

FRIDAY 10 MAY 2013

TIME	SESSION DETAIL	ROOM LOCATION	FLOOR	INFORMATION
07:30 – 08:30	Sponsored Symposium: Novartis	Fintry	3	Page 75
08:30 – 09:30	ESDR, JSID & SID General Assemblies	Tinto/Moorfoot/ Kilsyth	0	Page 76
09:45 – 10:45	Plenary Session 3	Pentland	3	Page 77
10:30 – 12:00	Open Lecture for citizens	Moorfoot & Kilsyth	0	Page 78
11:15 – 12:15	Plenary Session 4	Pentland	3	Page 79
12:15 – 12:45	JSID Awardee Lecture: Manabu Fujimoto	Pentland	3	Page 80
13:00 – 15:00	Workshop for High School Students	Moorfoot & Kilsyth	0	Page 81
13:15 – 14:15	Sponsored Symposium: Pfizer	Sidlaw	3	Page 82
13:15 – 14:15	Sponsored Symposium: Stiefel, a GSK company	Fintry	3	Page 83
14:30 – 15:00	ESDR Guest Lecture: Richard Marais	Pentland	3	Page 84
15:00 – 15:30	William Montagna Lecture: Andrzej Dlugosz	Pentland	3	Page 85
16:00 – 17:45	Concurrent 6: Autoimmunity & Inflammation II	Pentland	3	Page 86
16:00 – 17:45	Concurrent 7: Genetic Disease	Sidlaw	3	Page 87
16:00 – 17:45	Concurrent 8: Human Clinical Research & Therapeutics I	Fintry	3	Page 88
16:00 – 17:45	Concurrent 9: Innate Immunity & Microbiology	Tinto	0	Page 89
16:00 – 17:45	Concurrent 10: Melanoma & Cutaneous Carcinogenesis	Moorfoot	0	Page 90
16:00 – 17:45	Concurrent 11: Tissue Regeneration & Wound Healing	Kilsyth	0	Page 91
18:00 – 19:00	Poster Session 2	Lennox & Mezzanine	-1	Page 92
19:00 – 23:00	Social Gathering	National Museum		Page 93

Date: Friday 10 May 2013
Time: 07:30-08:30
Room: Fintry
Floor: 3

Following the Path of IL-17 from Joints to Skin

PROGRAM

07:30-07:35	**Chairman's Welcome** Jonathan Barker (London, UK)
07:35-07:50	**Pathophysiological Pathway of IL-17A in Psoriasis** Jonathan Barker (London, UK) • Current pathogenic model of psoriasis emphasizes IL-23/Th17 axis • Genetic markers in psoriasis and the link to pathophysiology • Role of IL-17A - Other pathogenic sources of IL-17A (innate lymphoid cells, mast cells, etc) - Normal role of IL-17A in immunity
07:50-08:10	**Inhibiting the IL-17 Pathophysiological Pathway in Psoriasis** Kristian Reich (Hamburg, Germany) • Strategies to target IL-17 - Anti-cytokine to anti-receptor - Phase 2 clinical trials in psoriasis Secukinumab Ixekizumab Brodalumab
08:10-08:25	**Targeting the IL-17 Pathway: New Agents in Development** Iain McInnes (Glasgow, UK) • Role of IL-17A in pathogenesis of psoriatic arthritis • Phase 2 clinical results of secukinumab in psoriatic arthritis • Phase 2 clinical results of ustekinumab in psoriatic arthritis
08:25-08:25	**Q & A**

NOTES

Date: Friday 10 May 2013
Time: 08:30-09:30
Room: Tinto/Moorfoot/Kilsyth
Floor: 0

ESDR
Room: Tinto

OPEN TO ESDR Members
All ESDR Members are invited to attend the Annual General Meeting (AGM) of members. Presentations will be made by the President, Secretary-Treasurer and members of the Board.

Election of New Board Members
The AGM will be invited to approve the ESDR Board's recommendation of new Board members.

Appointment of Honorary Members
The following will receive ESDR's highest award, that of honorary membership, at the AGM: Ronald Marks, Peter van de Kerkhof.

JSID
Room: Moorfoot

OPEN TO JSID Members
All JSID Members are invited to attend the Annual General Meeting (AGM) of members.

SID
Room: Kilsyth

OPEN TO ALL MEETING ATTENDEES
Presentations will be made by the President, Secretary-Treasurer, and by the Journal editor. Members will elect new members and officers, approve the minutes of the 2012 Business Meeting and discuss SID affairs.

Election of New Officers
After conducting its annual request for nominations for new officers, the Committee on Nominations received a total over 25 nominees for office. After consideration of multiple factors including demographics, strategic planning, initiatives, commitment and prior service and/or participation in SID activities, the Committee recommends the following candidates to the Board of Directors: S. Wright Caughman, MD (President-elect); Alexa Kimball, MD/MPH (Vice President-elect); David Margolis, MD/PhD and Maranke Koster, PhD (Board Members); and Fang Lei, PhD (Resident Board Member).

Appointment of Honorary Members
The SID is pleased to appoint the following honorary members: Paul Bergstresser, MD, David Norris, MD, Braham Shroot, PhD, Takeji Nishikawa, MD, Gerald Krueger, MD, and Sheldon Pinnell, MD.

Date: Friday 10 May 2013
Time: 09:45-10:45
Room: Pentland
Floor: 3

PROGRAM

Chairs	**Tom Hornyak (USA), Irene Leigh (UK), Akimichi Morita (Japan)**
09:45-09:57	**PL3-01 (Poster 39): Epidermotropic resident memory T cells require hair follicle-derived cytokines to reside in epidermis** Takeya Adachi, Tetsuro Kobayashi, Masayuki Amagai, Keisuke Nagao; Dermatology, Keio University School of Medicine, Tokyo, Japan.
09:57-10:09	**PL3-02 (Poster 339): Drug-resistant basal cell carcinomas maintain hedgehog pathway output by activating aPKC signaling** Scott Atwood, Jean Tang, Anthony Oro; Program in Epithelial Biology, Stanford University School of Medicine, Stanford, CA, USA.
10:09-10:21	**PL3-03 (Poster 1049): Systemic treatment of patients with severe atopic dermatitis (AD) with an anti IL-4Rα mAb (REGN668/SAR231893) results in rapid and sustained improvements in disease signs and symptoms** Lisa Beck[1], Diamant Thaci[2], Jennifer Hamilton[3], Haobo Ren[3], Ross Rocklin[4], Jeffrey Ming[4], Neil Graham[3], Allen Radin[3]; 1. University of Rochester, Rochester, NY, USA; 2. Johann Wolfgang Goethe-University, Frankfurt/Main, Germany; 3. Regeneron Pharmaceuticals, Tarrytown, NY, USA; 4. Sanofi, Bridgewater, NJ, USA.
10:21-10:33	**PL3-04 (Poster 100): Autoimmunity against epidermal antigen by Th17 cells induces psoriasis-like skin inflammation** Shuhei Nishimoto[1, 2], Hayato Takahashi[2], Masayuki Amagai[2], Akihiko Yoshimura[1]; 1. Department of Microbiology and Immunology, Keio University School of Medicine, Tokyo, Japan; 2. Department of Dermatology, Keio University School of Medicine, Tokyo, Japan.
10:33-10:45	**PL3-05 (Poster 679): Disturbed lipid metabolism in fetal skin predisposes for development of allergic disorders** Denis Khnykin[1, 5], Meei-Hua Lin[2], Louise Bjerkan[3], Naoko Goto-Inoue[4], Yoshikazu Uchida[5], Ingrid Hausser[6], Mitsutoshi Setou[7], Jeffrey Miner[2], Finn-Eirik Johansen[1], Frode Jahnsen[1]; 1. Pathology, University of Oslo, Oslo, Norway; 2. Internal Medicine, Washington University School of Medicine, St. Louis, MO, USA; 3. Oral Biology, University of Oslo, Oslo, Norway; 4. Health Promotion Sciences, Tokyo Metropolitan University, Tokyo, Japan; 5. Dermatology, UCSF, San Francisco, CA, USA; 6. Dermatology, University Clinic Heidelberg, Heidelberg, Germany; 7. Cell Biology and Anatomy, Hamamatsu University School of Medicine, Hamamatsu, Japan.

NOTES

International Investigative Dermatology 2013 Public Lecture
Guest Speaker Dr Michael Mosley

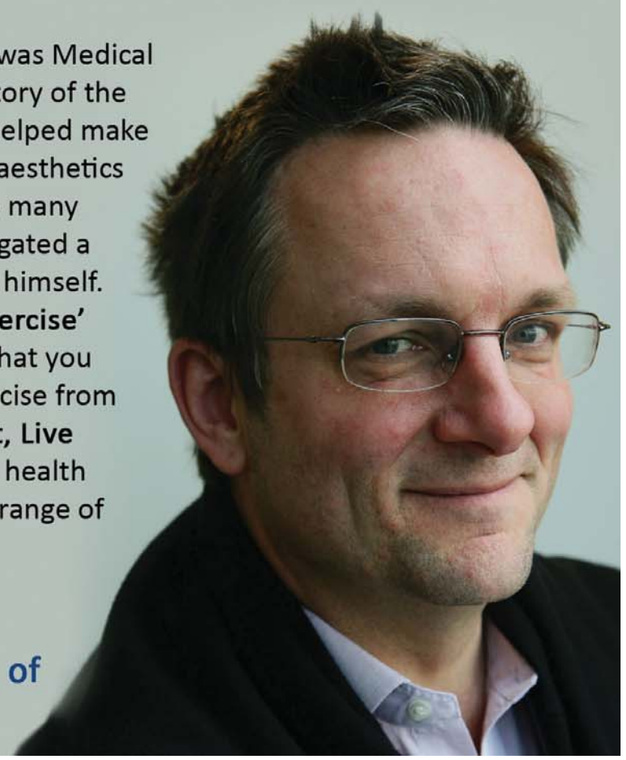
International Investigative Dermatology
8-11 May 2013
Edinburgh

Date: Friday 10 May 2013
Time: 10:30am - 12:00pm
Venue: Moorfoot & Kilsyth Rooms
Edinburgh International Conference Centre
The Exchange, Edinburgh, EH3 8EE
Tickets: This event is free and open to all however a ticket is required, only one ticket per person can be requested. To request a ticket email iid2013@bad.org.uk

The Pleasures of Self Experimenting

Join Dr Michael Mosley, BBC Science presenter, who will be talking about his many and varied experiences over the last twenty five years making science and history programmes. Starting off behind the camera, as a director, more recently he has become a well known face in front of the camera. He will be talking about the wide range of programmes he has been involved in, taking as his theme 'Self Experimentation'.

Michael's first series as a presenter was Medical Mavericks, a series which told the story of the numerous self experimenters who helped make crucial medical discoveries, from anaesthetics to vaccines. Since then he has made many programmes in which he has investigated a number of ideas by testing them on himself. These include **'The Truth about Exercise'** in which he tested the proposition that you can get many of the benefits of exercise from just 3 minutes a week and **'Eat, Fast, Live Longer'** in which he looked into the health benefits of fasting by undertaking a range of fasts himself.



British Association of Dermatologists
Healthy Skin for All
Established 1920

Supported by the
British Association of Dermatologists

Date: Friday 10 May 2013
Time: 11:15-12:15
Room: Pentland
Floor: 3

PROGRAM

Chairs	**Tilo Biederman (Germany), Alice Pentland (USA), Shigetoshi Sano (Japan)**
11:15-11:27	**PL4-01 (Poster 28): Identification of inducible lymph node-like structures in the skin: A key site to elicit contact hypersensitivity responses** Yohei Natsuaki[1, 2], Gyohei Egawa[1], Satoshi Nakamizo[1], Sho Hanakawa[1], Takashi Hashimoto[2], Yoshiki Miyachi[1], Kenji Kabashima[1]; 1. Dermatology, Kyoto University Graduate School of Medicine, Kyoto, Japan; 2. Dermatology, Kurume University School of Medicine, Kurume, Japan.
11:27-11:39	**PL4-02 (Poster 888): The dynein light chain Tctex-1 is a novel interacting protein of desmoglein 1 that regulates epidermal morphogenesis** Oxana Nekrasova[1], Robert Harmon[1], Samantha Lin[2], Spiro Getsios[2], Kathleen Green[1, 2]; 1. Department of Pathology, Northwestern University Feinberg School of Medicine, Chicago, IL, USA; 2. Department of Dermatology, Northwestern University Feinberg School of Medicine, Chicago, IL, USA.
11:39-11:51	**PL4-03 (Poster 1439): The cell polarity protein aPKCl controls mammalian epidermal stem cell dynamics and tissue homeostasis through the regulation of cell fate and division orientation** Michaela Niessen[1, 2], Jeanie Scott[1], Susanne Vorhagen[1], Julia Zielinski[1], Panagiota Sotiropoulou[3], Cedric Blanpain[3], Michael Leitges[4], Carien Niessen[1]; 1. Department of Dermatology, Center for Molecular Medicine Cologne, Cologne Excellence Cluster on Cellular Stress Responses in Aging-Associated Diseases (CECAD), Cologne, Germany; 2. International Graduate School for Genetics and Functional Genomics (IGS-GFG), Cologne, Germany; 3. Interdisciplinary Research Institute (IRIBHM), Université Libre de Bruxelles, Brussels, Belgium; 4. Biotechnology Institute, University of Oslo, Oslo, Norway.
11:51-12:03	**PL4-04 (Poster 427): Cutaneous squamous cell carcinoma carries the highest burden of mutation of any human tumor type and harbors prevalent mutations in CARD11 and CREBBP** Andrew South[1], Stephen Watt[1], Karin Purdie[2], Charlotte Proby[1], Catherine Harwood[2], Irene Leigh[1]; 1. Division of Cancer Research, University of Dundee, Dundee, United Kingdom; 2. Centre For Cutaneous Research, Barts and The London School of Medicine and Dentistry, London, United Kingdom
12:03-12:45	**PL4-05 (Poster 582): Herpes zoster vaccine effectiveness against incident herpes zoster and post-herpetic neuralgia in an older US population** Sinead Langan[1], Liam Smeeth[1], David Margolis[2], Sara Thomas[1]; 1. Dept of Epidemiology and Population Health, London School of Hygiene and Tropical Medicine, London, United Kingdom; 2. Dept of Dermatology, University of Pennsylvania, Philadelphia, PA, USA

NOTES

JSID Awardee Lecture

Date: Friday 10 May 2013
Time: 12:15-12:45
Room: Pentland
Floor: 3
Introduced by: Shinichi Sato (JSID)

PROGRAM

10:00-10:30

JSID Awardee Lecture

Pathogenic and regulatory B cells in autoimmune disease
Manabu Fujimoto (Japan)

Manabu Fujimoto graduated from the University of Tokyo in 1992, before working in several medical institutions including University of Tokyo Hospital and Tokyo Metropolitan Police Hospital. From 1997 to 2000, he was Research Associate in the Department of Immunology, Duke University Medical Center in North Carolina, under the supervision of Professor Thomas Tedder. He was then appointed as Division Chief in Research Institute, International Medical Center of Japan in 2000. He has been Associate Professor of the Department of Dermatology, Faculty of Medicine, Institute of Medical, Pharmaceutical and Health Sciences, Kanazawa University, Ishikawa, Japan, since 2005. Dr. Fujimoto's research interests include basic and clinical aspects of autoimmune and connective tissue diseases, including scleroderma and dermatomyositis. He has also been conducting research on B cell biology, especially signal transduction, autoantibody production and regulatory B cells.

Selected Publications:

Fujimoto M et al. ***Immunity***, 1999;11:191-200.

Fujimoto M et al. ***Immunity***, 2000; 13:47-57.

Fujimoto M et al. ***J Biol Chem,*** 2001;276:44820-7.

Fujimoto M et al. ***J Immunol***, 2002;168:5465-76.

Saito E et al. ***J Clin Invest***. 2002;109:1453-62.

Yazawa N et al. ***Blood.*** 2003 102: 1374-80.

Poe JC et al. ***Nat Immunol***, 2004; 5: 1078-87.

Fujimoto M et al. ***J Immunol.*** 2006;176:873-9.

Watanabe R et al. ***Am J Pathol***, 2007;171:560-70.

Kaji K et al. ***Rheumatology***, 2007;46: 25-8.

Matsushita T et al. ***J Clin Invest***, 2008;118:3420-30.

Nakashima H et al. ***J Immunol***, 2010;184 4637-45.

Watanabe R et al. ***J Immunol***, 2010;184:4801-9.

Fujimoto M et al. ***Arthritis Rheum***. 2012; 64:513-22.

Workshop for High School Students

Date: Friday 10 May 2013
Time: 13:00-15:00
Room: Moorfoot & Kilsyth
Floor: 0

Sponsored Symposium: Pfizer

Date: Friday 10 May 2013
Time: 13:15-14:15
Room: Sidlaw
Floor: 3

Emerging oral investigational compounds in development for psoriasis

PROGRAM	
13:15-13:20	**Chairman's Welcome** Frank Nestle (UK)
13:20-13:40	**Intracellular cytokine signaling pathways: A rational target in psoriasis** Frank Nestle (UK)
13:40-14:10	**Novel oral organisational compounds in development in the era of biologic therapies for psoriasis:** - **Understanding efficacy** Richard Langley (Canada) - **Interpreting safety** Kamran Ghoreschi (Germany
14:10-14:15	**Conclusion & Questions** Frank Nestle (UK)

NOTES

Sponsored Symposium: Stiefel, a GSK company

Date: Friday 10 May 2013
Time: 13:15-14:15
Room: Fintry
Floor: 3

The methodology of data collection and evidence for the management of chronic hand eczema

PROGRAM	
13:15-13:25	**Introduction** John English (Nottingham, UK)
13:25-13:35	**Need and benefit of a systematic review** Thomas Diepgen (Heidelburg, Germany)
13:35-13:55	**Approaches to treatment of hand eczema** Tove Agner (Copenhagen, Denmark)
13:55-14:05	**What can we learn from health care research** Thomas Diepgen (Heidelburg, Germany)
14:05-14:15	**Summary** John English (Nottingham, UK)

NOTES

ESDR Guest Lecture I

Date: Friday 10 May 2013
Time: 14:30-15:00
Room: Pentland
Floor: 3
Introduced by: Irene Leigh (ESDR)

PROGRAM

14:30-15:00

ESDR Guest Lecture I

RAS and RAF signaling in melanoma: from basic discoveries to clinical benefit and back
Richard Marais (UK)

Richard obtained his BSc in Genetics and Microbiology from the University College London in 1985, after which he undertook his PhD in Comparative Studies on Protein Kinase C Isotypes at the Ludwig Institute for Cancer Research in London, which he completed in 1989. He then worked as a Postdoctoral Research Fellow at the Imperial Cancer Research Fund, London, until 1993.

Richard then moved to The Institute of Cancer Research (ICR) in London as an Independent Postdoctoral Research Fellow. It was at the ICR where Richard spent the next 19 years of his career focusing on cell signalling in melanoma, developing a particular interest in the role of oncogenic BRAF. During his time at the ICR, Richard progressed to Team Leader of the Signal Transduction Team in 1998, then to Professor of Molecular Oncology in 2007, to Deputy Chair, Section of Cell and Molecular Biology, in 2008, and finally to the Division Head, Division of Cancer Biology, in 2011.

Throughout his career, Richard has received numerous accolades for his contributions to cancer research. In 2007, he was elected Fellow of the Academy of Medical Sciences. In 2009, he was elected Fellow of the European Academy of Cancer Sciences and became an EMBO member. In 2011, he received the Society for Melanoma Research Estella Medrano Memorial Award for outstanding contributions to melanoma research. Richard became Director of the Paterson Institute for Cancer Research in February 2012 where he also continues to head his Molecular Oncology Group.

Selected Publications:

Viros A, Hayward R, Martin M, Yashar S, Yu CC, Shanchez-Laorden B, Zambon A, Niculescu-Duvaz D, Springer C, Lo RS and **Marais R.** (2013).Topical 5-fluorouracil elicits regressions of BRAF inhibitor-induced cutaneous squamous cell carcinoma. **Journal of Investigative Dermatology, 133:** 274–276.

Su F, Viros A, Milagre C, Trunzer K, Bollag C, Spleiss O, Reis-Filho JS, Kong X, Koya RC, Flaherty KT, Chapman PB, Jung Kim M, Hayward F, Martin M, Yang H, Wang Q, Hilton H, Hang JS, Noe J, Lambros M, Geyer F, Dhomen N, Niculescu-Duvaz I, Zambon A, Niculescu-Duvaz D, Preece N, Robert L, Otte NJ, Mok S, Kee D, Ma Y, Zhang C, Habets G, Burton EA, Wong B, Nguyen H, Kockx M, Andries L, Lestini B, Nolop KB, Lee RJ, Joe AK, Troy JL, Gonzalez F, Hutson TE, Puzanov I, Chmielowski B, Springer CJ, McArthur GA, Sosman JA, Lo RS, Ribas A and **Marais R**.(2012). RAS mutations in cutaneous squamous cell carcinomas with BRAF inhibitors. **The New England Journal of Medicine, 366**: 207-215.

Arozarena I, Sanchez-Laorden B, Packer L,, Hidalgo-Carcedo C, Hayward R, Viros A, Sahai E and **Marais R.** (2011). Oncogenic BRAF induces melanoma cell invasion by down-regulating the cGMP-specific phosphodiesterase PDE5A. **Cancer Cell, 19**: 45-57.

Packer LM, Rana S, Hayward R, O'Hare T, Eide CA, Rebocho A, Heidorn S, Zabriskie MS, Niculescu-DuvazI, Druker BJ, Springer C and **MaraisR.** (2011). Nilotinib and MEK inhibitors induce synthetic lethality through paradoxical activation of RAF in drug-resistant chronic myeloid leukemia. **Cancer Cell, 20**: 715-727.

Whittaker S, Kirk R, Hayward R, Zambon A,Viros A, Cantarino N, Affolter A, Nourry A, Niculescu-Duvaz D, Springer C and **Marais R.** (2010). Gatekeeper mutations mediate resistance to BRAF targeted therapies. **Science Translational Medicine, 2**: 35ra41.

Heidorn SJ, Milagre C, Whittaker S, Nourry A, Niculescu-Duvas I, Dhomen N, Hussain J, Reis-Filho JS, Springer CJ, Pritchard C and **Marais R.** (2010). Kinase-dead BRAF and oncogenic RAS cooperate to drive tumor progression through CRAF. **Cell, 140**: 209-221.

Dhomen N, Reis-Filho JS, Da Rocha Dias S, Hayward R, Savage K, Delmas V, Larue L, Pritchard C and **Marais R.** (2009). Oncogenic Braf induces melanocyte senescence and melanoma in mice. **Cancer Cell, 15**: 294-303.

Fri 10 May

René Touraine Guest Lecture

Date: Thursday 9 May 2013
Time: 15:00-15:30
Room: Pentland
Floor: 3
Introduced by: Julie Segre (SID)

PROGRAM

15:00-15:30

William Montagna Lecture

Hedgehog signaling in skin biology and tumorigenesis: where, when, and how?
Andrzej A. Dlugosz (USA)

Dr. Dlugosz is both Professor of Cutaneous Oncology and Professor in the Departments of Dermatology and Cell & Developmental Biology at the University of Michigan. He is Director of the Cancer Biology Program in Dermatology and Co-director of the Cancer Cell Biology Program at the University of Michigan Comprehensive Cancer Center. He received his BA from Franklin and Marshall College, MD from Penn State, and completed a dermatology residency at the University of Pennsylvania. He did post-doctoral training at the NCI in Dr. Stuart Yuspa's laboratory. Dr. Dlugosz's honors include the Marion B. Sulzberger, MD, Memorial Award and Lectureship and election to the American Society for Clinical Investigation and the Association of American Physicians. His research has centered on defining the functions of the Hedgehog signaling pathway in hair follicle biology and tumorigenesis, with a major emphasis on basal cell carcinoma (BCC). Dr. Dlugosz's work has helped establish a central role for deregulated Hedgehog signaling in BCC initiation and maintenance; defined a critical interaction between the Hedgehog and Wnt pathways in tumorigenesis; and elucidated the importance of cell of origin, timing of oncogene activation, and magnitude of Hedgehog signaling as key determinants of tumor phenotype.

Selected Publications:

Chiang C, Swan RZ, Grachtchouk M, Bolinger M, Litingtung Y, Robertson EK, Cooper MK, Gaffield W, Westphal H, Beachy PA, Dlugosz AA. Essential role for Sonic hedgehog during hair follicle morphogenesis. *Dev Biol*. 1999 Jan 1; 205(1):1-9.

Grachtchouk M, Mo R, Yu S, Zhang X, Sasaki H, Hui CC, Dlugosz AA. Basal cell carcinomas in mice overexpressing Gli2 in skin. *Nat Genet*. 2000 Mar; 24(3):216-7.

Grachtchouk V, Grachtchouk M, Lowe L, Johnson T, Wei L, Wang A, de Sauvage F, Dlugosz AA. The magnitude of hedgehog signaling activity defines skin tumor phenotype. *EMBO J*. 2003 Jun 2; 22(11):2741-51. PMCID: PMC156767.

Allen M, Grachtchouk M, Sheng H, Grachtchouk V, Wang A, Wei L, Liu J, Ramirez A, Metzger D, Chambon P, Jorcano J, Dlugosz AA. Hedgehog signaling regulates sebaceous gland development. *Am J Pathol*. 2003 Dec; 163(6):2173-8. PMCID: PMC1892397.

Hutchin ME, Kariapper MS, Grachtchouk M, Wang A, Wei L, Cummings D, Liu J, Michael LE, Glick A, Dlugosz AA. Sustained Hedgehog signaling is required for basal cell carcinoma proliferation and survival: conditional skin tumorigenesis recapitulates the hair growth cycle. *Genes Dev*. 2005 Jan 15; 19(2):214-23. Epub 2004 Dec 29. PMCID: PMC545881.

Grachtchouk M, Liu J, Wang A, Wei L, Bichakjian CK, Garlick J, Paulino AF, Giordano T, Dlugosz AA. Odontogenic keratocysts arise from quiescent epithelial rests and are associated with deregulated hedgehog signaling in mice and humans. *Am J Pathol*. 2006 Sep; 169(3):806-14. PMCID: PMC1698812.

Michael LE, Westerman BA, Ermilov AN, Wang A, Ferris J, Liu J, Blom M, Ellison DW, van Lohuizen M, Dlugosz AA. Bmi1 is required for Hedgehog pathway-driven medulloblastoma expansion. *Neoplasia*. 2008 Dec; 10(12):1343-9, 5p following 1349. PMCID: PMC2586685.

Yang SH, Andl T, Grachtchouk V, Wang A, Liu J, Syu LJ, Ferris J, Wang TS, Glick AB, Millar SE, Dlugosz AA. Pathological responses to oncogenic Hedgehog signaling in skin are dependent on canonical Wnt/beta-catenin signaling. *Nat Genet*. 2008 Sep; 40(9):1130-5. doi: 10.1038/ng.192. PMCID: PMC2688690.

Ames HM, Bichakjian CK, Liu GY, Oravecz-Wilson KI, Fullen DR, Verhaegen ME, Johnson TM, Dlugosz AA, Ross TS. Huntingtin-interacting protein 1: a Merkel cell carcinoma marker that interacts with c-Kit. *J Invest Dermatol*. 2011 Oct; 131(10):2113-20. doi: 10.1038/jid.2011.171. Epub 2011 Jun 23. PMCID: PMC3174286.

Grachtchouk M, Pero J, Yang SH, Ermilov AN, Michael LE, Wang A, Wilbert D, Patel RM, Ferris J, Diener J, Allen M, Lim S, Syu LJ, Verhaegen M, Dlugosz AA. Basal cell carcinomas in mice arise from hair follicle stem cells and multiple epithelial progenitor populations. *J Clin Invest*. 2011 May; 121(5):1768-81. doi:10.1172/JCI46307. Epub 2011 Apr 25. PMCID: PMC3083781.

Fri 10 May

Autoimmunity & Inflammation II - Concurrent Minisymposium 6

Date: Friday 10 May 2013
Time: 16:00-17:45
Room: Pentland
Floor: 3

PROGRAM

Chairs	**Setsuya Aiba (Japan), Abrar Quereshi (USA), Kerstein Steinbrink (Germany)**
16:00-16:10	**CM6-01 (Poster 099): Inflammatory gammadelta T cells collaborate with Th17 cells to maintain psoriasiform dermatitis in the CD18hypo PL/J mouse model** Martina Gatzka[1], Heidi Hainzl[1], Thorsten Peters[1], Kamayani Singh[1], Alpaslan Tasdogan[2], Meinhard Wlaschek[1], Karin Scharffetter-Kochanek[1]; 1. Dept. of Dermatology and Allergic Diseases, Ulm University, Ulm, Germany; 2. Dept. of Immunology, Ulm University, Ulm, Germany.
16:10-16:20	**CM6-02 (Poster 004): Programmed cell death1 (PD-1) regulates the effector function of autoimmune CD8 T cells and protects against immune-related disease** Naoko Okiyama, Stephen Katz; Dermatology Branch, CCR, NCI, NIH, Bethesda, MD, USA.
16:20-16:30	**CM6-03 (Poster 181): Epicutaneous application of Toll-like receptor 7 agonists leads to systemic autoimmunity in wild-type mice: A new model of SLE** Maki Yokogawa, Mikiro Takaishi, Kimiko Nakajima, Sayo Kataoka, Yoshio Terada, Shigetoshi Sano; Kochi University, Nankoku, Japan.
16:30-16:40	**CM6-04 (Poster 305): Keratinocyte-derived over-expression of protease-activated receptor-2 (PAR-2) results in epidermal-neuronal communication with pruritus and atopic dermatiti** Ferda Cevikbas[1], Akihiko Ikoma[1], Cordula Kempkes[1], Tasuko Akiyama[2], Timo Buhl[1], Mikael Langner[1], Eric Camerer[3], Earl Carstens[2], Shaun Coughlin[4], Martin Steinhoff[1]; 1. Depts. of Dermatology and Surgery, University of California San Francisco, San Francisco, CA, USA; 2. Dept. of Neurobiology, University of California Davis, Davis, CA, USA; 3. Cardiovascular Research Center, INSERM, Paris, France; 4. Cardiovascular Research Institute, University of California San Francisco, San Francisco, CA, USA.
16:40-16:50	**CM6-05 (Poster 249): Immune complexes recruit slanDCs and NK cells to the vascular interface** Thomas Döbel, Anke Lonsdorf, Anja Kunze, Alexander Enk, Knut Schäkel; Department of Dermatology, Heidelberg University Hospital, Heidelberg, Germany.
16:50-17:00	**CM6-06 (Poster 262): A non-infectious sand fly salivary gland protein is likely involved in the development and clonal selection of anti-Dsg1 autoantibodies in Fogo Selvagem** Ye Qian[1], Joseph Jeong[1], Jesus Valenzuela[2], Flor Evangelista[1], Valeria Aoki[3], Gunter Hans[4], Evandro Rivitti[3], Luis Diaz[1]; 1. Dermatology, University of North Carolina at Chapel Hill, Chapel Hill, NC, USA; 2. Vector Molecular Biology Section, Laboratory of Malaria and Vector Research, NIAID, NIH, Rockville, MD, USA; 3. Dermatology, University of Sao Paulo, Sao Paulo, Brazil; 4. Dermatology, University of Mato Grosso do Sul, Campo Grande, Brazil.
17:00-17:10	**CM6-07 (Poster 022): GILT expression in medullary thymic epithelial cells is required for presentation of tissue-specific self antigens and deletion of autoreactive T cells** Matthew Rausch[1], Todd Metzger[2], Mark Anderson[2], Karen Hastings[1]; 1. University of Arizona College of Medicine, Phoenix, AZ, USA; 2. University of California, San Francisco, CA, USA.
17:10-17:20	**CM6-08 (Poster 119): Detection of pathological cleavage sites and neoepitopes on collagen XVII, a major autoantigen for bullous pemphigoid** Wataru Nishie, Hideyuki Ujiie, Kentaro Izumi, Hiroshi Shimizu; Department of Dermatology, Hokkaido University Graduate School of Medicine, Sapporo, Japan.
17:20-17:30	**CM6-09 (Poster 253): ΔNp63 is a key driver of inflammatory signaling in atopic dermatitis** Rose-Anne Romano[1], Emma Guttman-Yassky[2], Satrajit Sinha[1]; 1. Biochemistry, State University of New York at Buffalo, Buffalo, NY, USA; 2. Dermatology, Rockefeller University, New York, NY, USA.
17:30-17:40	**CM6-10 (Poster 173): CD4, but not CD8, T cells are required for induction of experimental epidermolysis bullosa acquisita** Hiroaki Iwata[1], Katja Bieber[1], Benjamin Tiburzy[2], Navina Chrobok[3], Kathrin Kalies[3], Atsushi Shimizu[4], Sarah Leineweber[5], Akira Ishiko[4], Enno Schmidt[1], Detlef Zillikens[1], Jürgen Westermann[3], Karsten Seeger[5], Rudolf Manz[2], Ralf J. Ludwig[1]; 1. Dermatology, University of Lübeck, Lübeck, Germany; 2. Systemic Inflammation Research, University of Lübeck, Lübeck, Germany; 3. Anatomy, University of Lübeck, Lübeck, Germany; 4. Dermatology, Toho University, Ota-ku, Japan; 5. Chemistry, University of Lübeck, Lübeck, Germany.

Genetic Diseases/Gene Regulation/Gene Therapy - Concurrent Minisymposium 7

Date: Friday 10 May 2013
Time: 16:00-17:45
Room: Sidlaw
Floor: 3

PROGRAM

Chairs	**Alain Hovnanian (France), Daisuke Sawamura (Japan), Jakub Tolar (USA)**
16:00-16:10	**CM7-01 (Poster 779): Successful therapeutic transplantation of revertant skin in a patient with epidermolysis bullosa** Antoni Gostynski, Anna Pasmooij, Jeroen Bremer, Janneke Huizinga, José Duipmans, Marcel Jonkman; Center for Blistering Diseases and Department of Dermatology, University Medical Center Groningen and University of Groningen, Groningen, Netherlands.
16:10-16:20	**CM7-02 (Poster 817): AAV-mediated somatic genetic correction of epidermolysis bullosa** Sandra Melo[1], Leszek Lisowski[2], Lisa Bashkirova[1], Mark Kay[2], Anthony Oro[1]; 1. Dermatology, Stanford University School of Medicine, Stanford, CA, USA; 2. Pediatrics, Stanford University School of Medicine, Stanford, CA, USA.
16:20-16:30	**CM7-03 (Poster 843): Gene therapy for recessive dystrophic epidermolysis bullosa using COL7A1 gene corrected autologous fibroblasts** Alya Abdul-Wahab[1, 2], Christos Georgiadis[1], Waseem Qasim[1], Adrian Thrasher[1], John McGrath[2], Wei-Li Di[1]; 1. Institute of Child Health, London, United Kingdom; 2. Kings College London, London, United Kingdom.
16:30-16:40	**CM7-04 (Poster 828): PDGFRα-positive mesenchymal stem/progenitor cells in bone marrow migrate in RDEB mouse skin by CXCR4/SDF-1α axis to provide type VII collagen after bone marrow cell transplantation** Shin Iinuma[1, 4], Eriko Aikawa[1], Yasushi Kikuchi[1], Takenao Chino[1, 5], Ryo Fujita[1], John McGrath[2], Jouni Uitto[3], Ichiro Katayama[1], Yasufumi Kaneda[1], Katsuto Tamai[1]; 1. Osaka University, Suita, Japan; 2. King's College, London, United Kingdom; 3. Jefferson Medical College, Philadelphia, PA, USA; 4. Asahikawa Medical College, Asahikawa, Japan; 5. Fukui University, Fukui, Japan.
16:40-16:50	**CM7-05 (Poster 864): Targeted gene correction of type VII collagen in recessive dystrophic epidermolysis bullosa patient-specific induced pluripotent stem cells** Satoru Shinkuma[1], Noriko Umegaki[1], Munenari Itoh[1, 2], Rodolfo Murillas[3], Marcela Del Río[3, 4], Fernando Larcher[3], Angela Christiano[1, 5]; 1. Department of Dermatology, Columbia University, New York, NY, USA; 2. Department of Dermatology, Jikei University School of Medicine, Tokyo, Japan; 3. Epithelial Biomedicine Division, CIEMAT-CIBERER, Madrid, Spain; 4. Department of Bioengineering, CIEMAT-CIBERER, Madrid, Spain; 5. Department of Genetics and Development, Columbia University, New York, NY, USA.
16:50-17:00	**CM7-06 (Poster 790): Regulation and mechanisms of action of RBM28, a protein deficient in ANE syndrome** Emily Warshauer[1], Ofer Sarig[1], Liat Samuelov[1], Dana Fuchs-Telem[1], Noam Shomron[2], Luba Farberov[2], Metsada Pasmanik-Chor[2], Ralf Paus[3], Eli Sprecher[1], Janna Nousbeck[1]; 1. Tel Aviv Medical Center, Tel Aviv, Israel; 2. Tel Aviv University, Tel Aviv, Israel; 3. University of Luebeck, Luebeck, Germany.
17:00-17:10	**CM7-07 (Poster 844): Topical formulation for delivery of therapeutic RNA into the epidermis** Vikas Hegde[1], Sitheswaran Nainamalai[1], Paul Campbell[1, 2], Frances Smith[1], Irwin McLean[1], Deena Leslie Pedrioli[1]; 1. Centre for Dermatology and Genetic Medicine, University of Dundee, Dundee, United Kingdom; 2. Carnegie Physics Laboratory, University of Dundee, Dundee, United Kingdom.
17:10-17:20	**CM7-08 (Poster 854): A nonsense mutation in the mattrin gene causes the matted mouse phenotype and is a predisposing gene for atopic dermatitis in humans** Christabelle Goh[1], Sean Saunders[2], Christian Cole[1], Stephan Weidinger[3], Hansjörg Baurecht[3], Young-Ae Lee[4], Nick Reynolds[5], Jonathan Barker[6], Heather Cordell[5], Sara Brown[1], Alan Irvine[2], Irwin McLean[1], Aileen Sandilands[1], Padraic Fallon[2]; 1. University of Dundee, Dundee, United Kingdom; 2. Trinity College Dublin, Dublin, Ireland; 3. University of Kiel, Kiel, Germany; 4. Charité, Berlin, Germany; 5. Newcastle University, Newcastle upon Tyne, United Kingdom; 6. King's College London, London, United Kingdom.
17:20-17:30	**CM7-09 (Poster 803): Meta-analysis of psoriasis and psoriatic arthritis identifies three new susceptibility loci** Rajan Nair[1], Lam Tsoi[1], Philip Stuart[1], Vinod Chandran[2], Trilokraj Tejasvi[1], Eva Ellinghaus[4], John Voorhees[1], Michael Weichenthal[4], Andre Franke[4], Goncalo Abecasis[1], Proton Rahman[3], Dafna Gladman[2], James Elder[1]; 1. Univ Michigan, Ann Arbor, MI, USA; 2. Toronto Western Hospital, Toronto, ON, Canada; 3. Memorial Univ, St. John's, NF, Canada; 4. Univ Kiel, Kiel, Germany.
17:30-17:40	**CM7-10 (Poster 861): Functional genomics and targeted next generation sequencing points to ULBP6 as a critical node in the NKG2D axis in alopecia areata** L. Petukhova[1, 3], E. Drill[2, 3], M. Duvic[6], M. Hordinsky[7], D. Norris[8], V. Price[9], R. Clynes[4, 5], A. Christiano[3, 5]; 1. Epidemiology, Columbia, NY, NY, USA; 2. Biostatistics, Columbia, NY, NY, USA; 3. Dermatology, Columbia, NY, NY, USA; 4. Medicine, Columbia, NY, NY, USA; 5. Genetics&Dev, Columbia, NY, NY, USA; 6. Dermatology, MDAnderson, Houston, TX, USA; 7. Dermatology, U MN, Minneapolis, MN, USA; 8. Dermatology, U CO, Denver, CO, USA; 9. Dermatology, UCSF, San Francisco, CA, USA.

Human Clinical Research & Therapeutics I - Concurrent Minisymposium 8

Date: Friday 10 May 2013
Time: 16:00-17:45
Room: Fintry
Floor: 3

PROGRAM

Chairs	**Chia-Yu Chu(Taiwan), Alexa Kimball (USA), Erwin Tschachler (Austria)**
16:00-16:10	**CM8-01 (Poster 1089): Transcriptome analysis reveals that severity of psoriasis is correlated with expression of genes involved in epidermal differentiation and proliferation** Trilokraj Tejasvi[1, 2], Lam Tsoi[1], Philip Stuart[1], Rajan Nair[1], John Voorhees[1], Goncalo Abecasis[1], James Elder[1, 2]; 1. Dermatology, Univerisity of Michigan, Ann Arbor, MI, USA; 2. Ann Arbor VA Hospital, Ann Arbor, MI, USA.
16:10-16:20	**CM8-02 (Poster 935): 12 weeks of treatment with an oral SIRT1 activator, SRT2104, leads to clinical improvement and skin microarray modification in patients with psoriasis** Eric Jacobson[1], Mayte Suárez-Fariñas[2], Inna Cueto[2], Artemis Katcherian[2], Robert Matheson[5], Lawrence Parish[3, 4], Denise Shortino[6], Akanksha Gupta[1], George Vlasuk[1], James Krueger[2]; 1. Sirtris, a GSK company, Cambridge, MA, USA; 2. The Rockefeller University, New York, NY, USA; 3. Jefferson Medical College of Thomas Jefferson University, Philadelphia, PA, USA; 4. Paddington Testing Co, Inc., Philadelphia, PA, USA; 5. Oregon Medical Research Center, PC, Portland, OR, USA; 6. GlaxoSmithKiine, RTP, NC, USA
16:20-16:30	**CM8-03 (Poster 993): Anti-TNF-alpha treatment reduces circulating Th22 cells and regulatory T cells, but does not reduce circulating Th17 cells in psoriasis patients** Takuya Furuhashi, Chiyo Saito, Kan Torii, Emi Nishida, Akimichi Morita; Department of Geriatric and Environmental Dermatology, Nagoya City University Graduate School of Medical Sciences, Nagoya, Japan..
16:30-16:40	**CM8-04 (Poster 1048): Blocking IL-4Rα signaling with REGN668/SAR231893 rapidly suppresses major pathogenic pathways in severe atopic dermatitis** Jennifer Hamilton[1], M. Suarez-Farinas[2], Ana Kostic[1], Jeffrey Ming[3], N. Dhingra[2], Allen Radin[1], J. Krueger[2], Emma Guttman-Yassky[2, 4]; 1. Regeneron Pharmaceuticals, Inc., Tarrytown, NY, USA; 2. Rockefeller University, New York, NY, USA; 3. Sanofi, Bridgewater, NJ, USA; 4. Mount Sinai School of Medicine, New York, NY, USA.
16:40-16:50	**CM8-05 (Poster 990): Filaggrin-null individuals with and without eczema have a higher proportion of CD11c positive antigen presenting cells than wild type individuals** Zoe Venables[1], Claire Leitch[1, 2], Nayani Madarasingha[1], Paul Fitch[1], Sarah Howie[1], Jurgen Schwarze[1], Richard Weller[2, 1]; 1. Centre for Inflammation Research, Queen's Medical Research Institute, University of Edinburgh, Edinburgh, United Kingdom; 2. Department of Dermatology, University of Edinburgh, Edinburgh, United Kingdom.
16:50-17:00	**CM8-06 (Poster 1025): Intrinsic atopic dermatitis (AD) shows similar Th2 and higher Th17 immune activation compared to extrinsic AD** Mayte Suárez-Fariñas[1], Nikhil Dhingra[1, 2], Julia Gittler[1], Avner Shemer[3], James Krueger[1], Emma Guttman-Yassky[2, 1]; 1. Investigative Dermatology, The Rockefeller University, NY, NY, USA; 2. Dept. of Dermatology, Mount Sinai School of Medicine, NY, NY, USA; 3. Dermatology Department, Tel-Hashomer, Tel-Aviv, Israel.
17:00-17:10	**CM8-07 (Poster 1024): Human keratinocyte proline-rich protein (*hKPRP*) is a novel keratinization-related protein whose deficiency may contribute to development of atopic dermatitis** Hiraku Suga[1], Makoto Sugaya[1], Tsuyoshi Ishii[3], Hiroyuki Nishida[3], Shumpei Ishikawa[2], Masashi Fukayama[2], Shinichi Sato[1]; 1. Dermatology, University of Tokyo, Tokyo, Japan; 2. Pathology, University of Tokyo, Tokyo, Japan; 3. Rohto Pharmaceutical Co., LTD., Osaka, Japan.
17:10-17:20	**CM8-08 (Poster 1105): Differential effect of butorphanol on histamine itch, cowhage itch and heat pain sensitivity. A combined psychophysical and neuroimaging study** Alexandru Papoiu, Leigh Nattkemper, Robert Kraft, Robert Coghill, Gil Yosipovitch; Dermatology, Wake Forest University School of Medicine, Winston Salem, NC, USA.
17:20-17:30	**CM8-09 (Poster 1039): Steroid treatment during the acute stage of severe drug eruptions is associated with improved long-term outcomes in the generation of autoantibodies: Longitudinal analysis up to 12 years of autoantibodies against epidermal proteins** Aya Ukida[1], Yumi Aoyama[1], Yoshinori Shirafuji[1], Hiroshi Umemura[1], Koji Kamiya[1], Yukiko Ushigome[2], Yoko Kano[2], Tetsuo Shiohara[2], Keiji Iwatsuki[1]; 1. Dermatology, Okayama University, Okayama, Japan; 2. Dermatology, Kyorin University, Mitaka, Japan.
17:30-17:40	**CM8-10 (Poster 236): Upregulation of miR-18a is associated with keratinocyte apoptosis in toxic epidermal necrolysis** Asako Ichihara, Masatoshi Jinnin, Keisuke Sakai, Shinichi Masuguchi, Satoshi Fukushima, Hironobu Ihn; Dermatology and Plastic Surgery, Kumamoto University, Kumamoto, Japan.

Innate Immunity & Microbiology - Concurrent Minisymposium 9

Date: Friday 10 May 2013
Time: 16:00-17:45
Room: Tinto
Floor: 0

PROGRAM

Chairs	**Michel Gilliet (Switzerland), Lloyd Miller (USA), Koji Sayama (Japan)**
16:00-16:10	**CM9-01 (Poster 1126): Attenuation of cutaneous inflammation in a model of atopic dermatitis by innate immune signals of non-pathogenic bacteria** Thomas Volz, Yuliya Skabytska, Susanne Kaesler, Tilo Biedermann; Department of Dermatology, University Hospital, Tübingen, Germany..
16:10-16:20	**CM9-02 (Poster 1184): Antimicrobial peptide LL-37 produced by HSV-2-infected keratinocytes enhances HIV infection of Langerhans cells** Youichi Ogawa[1], Tatsuyoshi Kawamura[1], Takamitsu Matsuzawa[1], Rui Aoki[1], Kenshi Yamasaki[2], Andrew Blauvelt[3], Shinji Shimada[1]; 1. Dermatology, University of Yamanashi, Yamanashi, Japan; 2. Dermatology, Tohoku University Graduate School of Medicine, Sendai, Japan; 3. Oregon Medical Research Center, Portland, OR, USA.
16:20-16:30	**CM9-03 (Poster 1165): The immune atlas - a topographical three-dimensional study of the skin immune system using multiphoton microscopy and multi-parameter flow cytometry** Philip Tong[1, 2, 3], Rohit Jain[1], Ben Roediger[1], Wolfgang Weninger[1, 2, 3]; 1. Centenary Institute, Newtown, NSW, Australia; 2. Discipline of Dermatology, University of Sydney, Camperdown, NSW, Australia; 3. Department of Dermatology, Royal Prince Alfred Hospital, Camperdown, NSW, Australia.
16:30-16:40	**CM9-04 (Poster 1219): IL-17A-producing mucosa-associated innate T cells are present in psoriatic lesions** Marcel Teunissen, Saskia Chielie, Phyllis Spuls, Menno de Rie, Pieter Res; Dermatology, Academic Medical Center, Amsterdam, Netherlands.
16:40-16:50	**CM9-05 (Poster 1169): Perivascular macrophages are key regulators of neutrophil recruitment during skin infection and are targeted by a Staphylococcus aureus virulence factor** Rohit Jain[1], Arby Abtin[1], Ben Roediger[1], Anthony Brzoska[2], Andrew Mitchell[1], Lai Ng[3], Lois Cavanagh[1, 4], Ulrich von Andrian[5], Neville Firth[2], Wolfgang Weninger[1, 6]; 1. The Centenary Institue, Newtown, NSW, Australia; 2. School of Biological Sciences, University of Sydney, Sydney, NSW, Australia; 3. Singapore Immunology Network, Biopolis, Singapore; 4. Sydney Medical School, Sydney, NSW, Australia; 5. Immune Disease Institute, Harvard Medical School, Boston, MA, USA; 6. Discipline of Dermatology, Sydney Medical School, Sydney, NSW, Australia.
16:50-17:00	**CM9-06 (Poster 1161): Dermal adipose tissue participates in skin defense against bacterial infection** Ling-juan Zhang, Richard Gallo; Dermatology, University of California San Diego, San Diego, CA, USA
17:00-17:10	**CM9-07 (Poster 1136): Post-septic immune-suppression following Gram positive sepsis is mediated by TLR dependent induction of myeloid derived suppressor cells** Martin Köberle, Yuliya Skabytska, Tilo Biedermann; Dermatology, Eberhard Karls University, Tübingen, Germany.
17:10-17:20	**CM9-08 (Poster 1192): MyD88 plays a role in deciding between apoptotic and necroptotic cell death after UV irradiation** Erin Harberts[1, 2], Rita Fishelevich[2], Juan Liu[2], Sergei Atamas[3], Anthony Gaspari[1, 2]; 1. Microbiology and Immunology, Univ. of MD, Baltimore, MD, USA; 2. Dermatology, Univ. of MD, Baltimore, MD, USA; 3. Medicine, Univ. of MD, Baltimore, MD, USA.
17:20-17:30	**CM9-09 (Poster 1154): The alarmin IL-33 derived from HSV-2-infected keratinocytes triggers mast cell-mediated antiviral innate immunity** Rui Aoki[1], Tatsuyoshi Kawamura[1], Fumi Goshima[2], Yukihiro Nishiyama[2], Shinji Shimada[1]; 1. Dermatology, University of Yamanashi, Yamanashi, Japan; 2. Virology, Nagoya University Graduate School of Medicine, Nagoya, Japan.
17:30-17:40	**CM9-10 (Poster 1176): The innate immune defect in atopic dermatitis includes a deficiency in antimicrobial activity produced by the skin microbiome** Teruaki Nakatsuji, Daniel MacLeod, Aimee Two, Faiza Shafig, Tissa Hata, Richard Gallo; Dermatology, University of California, San Diego, San Diego, CA, USA.

Melanoma & Cutaneous Carcinogenesis - Concurrent Minisymposium 10

Date: Friday 10 May 2013
Time: 16:00-17:45
Room: Moorfoot
Floor: 0

PROGRAM

Chairs	**Eugene Healy (UK), Keiji Iwatsuki (Japan), Paul Nghiem (USA)**
16:00-16:10	**CM10-01 (Poster 417): Targeting Merkel cell carcinoma dependence on Bcl-2 family members promotes efficient cell death *in vitro* and *in vivo*** Monique Verhaegen, Jack Weick, Tracy Vozheiko, Doris Mangelberger, Joanna Pero, Timothy Johnson, Christopher Bichakjian, Andrzej Dlugosz; Dermatology, University of Michigan, Ann Arbor, MI, USA.
16:10-16:20	**CM10-02 (Poster 421): Cyclosporine A polarizes T cells toward T22 and induces IL-22 receptor in human SCC cells *in vitro*: A mechanism driving IL-22 induced SCC proliferation** Valerie Yanofsky[1], Hirsohi Mitsui[2], Claire Wang[2], Juana Gonzalez[3], James Krueger[2], Diane Felsen[4], John Carucci[1]; 1. Department of Dernatology, NYU Medical Center, New York, NY, USA; 2. Lab for Investigative Dermatology, Rockefeller, New York, NY, USA; 3. Translational Immunology Resource Center, Rockefeller, New York, NY, USA; 4. Institute for Pediatric Urology, Rockefeller, New York, NY, USA
16:20-16:30	**CM10-03 (Poster 436): Genetic loss of Srcasm promotes oncogenic signaling and cell growth after UVB exposure** Xioaping Yang[1], Kosei Tsukamoto[1, 2], Michael Gober[1], Christine Marshall[1], Lynn Wang[1], Tzvete Dentchev[1], John Seykora[1]; 1. Dermatology, Perelman School of Medicine UPenn, Philadelphai, PA, USA; 2. Rohto Pharmaceutical, Kyoto, Japan.
16:30-16:40	**CM10-04 (Poster 341): Identification of a distinct microRNAome and tumor suppressive role of microRNA-125b in cutaneous squamous cell carcinoma** Ning Xu[1], Lingyun Zhang[2], Florian Meisgen[1], Masako Harada[3], Johan Heilborn[1], Bernhard Homey[4], Dan Grandér[3], Mona Ståhle[1], Enikö Sonkoly[1], Andor Pivarcsi[1]; 1. Department of Medicine, Karolinska Institutet, Stockholm, Sweden; 2. Tianjin Life Science Research Center and Basic Medical School, Tianjin Medical University, Tianjin, China; 3. Department of Oncology-Pathology, Karolinska Institutet, Stockholm, Sweden; 4. Department of Dermatology, Heinrich-Heine-University, Düsseldorf, Germany
16:40-16:50	**CM10-05 (Poster 430): Bone marrow-derived epithelial cells as well as hair follicle bulge-derived cells contribute to skin tumors and ulcer-associated dysplasia mediated by tumor promotion in the mouse** H. Park[2, 3, 4], N. Readio[1], G. Jin[4], S. Asfaha[4], A. Singh[1], A. Singh[1], X. Yang[4], K. Patterson[4], C. Trempus[5], T. Wang[4], R. Morris[1, 2, 3]; 1. The Hormel Institute/University of Minnesota, Austin, MN, USA; 2. Dermatology, Columbia University, New York, NY, USA; 3. Pathology and Cell Biology, Columbia University, New York, NY, USA; 4. Medicine, Columbia University, New York, NY, USA; 5. Matrix Biology Group, NIEHS, Research Triangle Park, NC, USA.
16:50-17:00	**CM10-06 (Poster 1352): Melanomas resist T-cell therapy through inflammation-induced reversible dedifferentiation** Judith Kohlmeyer[1], Jenny Landsberg[1], Marcel Renn[1], Tobias Bald[1], Meri Rogava[1], Mira Cron[1], Martina Fatho[2], Volker Lennerz[2], Thomas Wölfel[2], Thomas Tüting[1]; 1. Laboratory of Experimental Dermatology, Dermatology and Allergy, University of Bonn, Bonn, Germany; 2. Department of Medicine, University of Mainz, Mainz, Germany
17:00-17:10	**CM10-07 (Poster 1415): Eradication of melanoma by intratumoral injection of attenuated vaccinia virus requires CD8+ T cells and combination of anti-CTLA-4 blockade and virotherapy enhances therapeutic efficacy in advanced melanoma** Xianzhong Wu[1], Peihong Dai[2, 1], Weiyi Wang[1, 2], Francesca Avogadri[4], Hua Cao[1, 2], Tanvi Parikh[1, 5], Xuejun Jiang[3], Allan Halpern[1, 5], Alan Houghton[4], Stewart Shuman[2], Taha Merghoub[4], Jedd Wolchok[4], Liang Deng[1, 5]; 1. Dermatology/ Medicine, Memorial Sloan-Kettering Cancer Center, New York, NY, USA; 2. Molecular Biology Program, Memorial Sloan-Kettering Cancer Center, New York, NY, USA; 3. Cell Biology Program, Memorial Sloan-Kettering Cancer Center, New York, NY, USA; 4. Immunology Program, Memorial Sloan-Kettering Cancer Center, New York, NY, USA; 5. Dermatology, Weill Medical College of Cornell University, New York, NY, USA.
17:10-17:20	**CM10-08 (Poster 1351): New candidate oncomiRs for malignant melanoma** Animesh Bhattacharya[1], Ulf Schmitz[2], Yvonne Raatz[1], Madeleine Schönherr[1], Manfred Kunz[1]; 1. Department of Dermatology, Venereology and Allergology, University of Leipzig, Leipzig 04103, Germany; 2. Department of Computer Science, University of Rostock, Rostock, 18051, Germany.
17:20-17:30	**CM10-09 (Poster 1304): Shedding of CD44 in human melanoma cells - the CD44 ectodomain is released by direct ADAM10-cleavage and binds to vimentin on neighboring cells** U. Anderegg, C. Haiduk, T. Eichenberg, J. Simon; Dept. of Dermatology, University of Leipzig, Leipzig, Germany.
17:30-17:40	**CM10-10 (Poster 416): Depletion of MRG-binding protein invokes TIP60 histone acetyltransferase-dependent apoptosis in cutaneous squamous cell carcinoma cells** Stephen Watt, Kate Arrand, Irene Leigh, Andrew South; Division of Cancer Research, University of Dundee, Dundee, United Kingdom.

Tissue Regeneration & Wound Healing - Concurrent Minisymposium 11

Date: Friday 10 May 2013
Time: 16:00-17:45
Room: Kilsyth
Floor: 0

PROGRAM

Chairs	**Sabine Eming (Germany), Pritinder Kaur (Australia), Brian Pollack (USA)**
16:00-16:10	**CM11-01 (Poster 1454): Human dermis-derived ABCB5-positive mesenchymal stem cells accelerate mouse skin full-thickness excisional wound healing in part by the secretion of interleukin-1 receptor antagonist** Seppe Vander Beken[1], Dongsheng Jiang[1], Yu Qi[1], Juliane de Vries[1], Andreas Kluth[2], Yvonne Ziouta[2], Christoph Ganss[2], Meinhard Wlaschek[1], Karin Scharffetter-Kochanek[1]; 1. Department of Dermatology and Allergic Diseases, Ulm University, Ulm, Germany; 2. Ticeba GmbH, Heidelberg, Germany.
16:10-16:20	**CM11-02 (Poster 1463): Apelin inhibits subcutaneous adipose tissue accumulation by enhancing lymphatic and blood vessel integrity** Kentaro Kajiya[1], Mika Sawane[1, 2], Hiroyasu Kidoya[2], Fumitaka Muramatsu[2], Nobuyuki Takakura[2]; 1. Shiseido Innovative Science Research and Development Center, Yokohama, Japan; 2. Department of Signal Transduction, Research Institute for Microbial Diseases, Osaka University, Osaka, Japan.
16:20-16:30	**CM11-03 (Poster 1491): Oligosaccharide modification by N-acetylglucosaminyltransferase-V promotes skin sclerosis by inducing macrophages to shift toward M2** Mika Terao[1], Mizuki Yutani[1, 2], Arisa Kato[1, 2], Hiroyuki Murota[1], Eiji Miyoshi[2], Ichiro Katayama[1]; 1. Dermatology, Osaka University Graduate School of Medicine, Suita, Japan; 2. Molecular Biochemistry and Clinical Investigation, Osaka University Graduate School of Medicine, Suita, Japan.
16:30-16:40	**CM11-04 (Poster 1457): Impaired β_2 integrin-dependent activation of NOX2 in macrophages delays wound healing in *CD18*$^{-/-}$ mice** Andrea Kügler[1], Susanne Schatz[1], Seppe Vander Beken[1], Bruno DeGeest[2], Carmen Hauser[3], Angelika Rück[3], Phillip Hawkins[4], Karin Scharffetter-Kochanek[1], Anca Sindrilaru[1]; 1. Department of Dermatology and Allergic Diseases, University of Ulm, Ulm, Germany; 2. University of Ghent, Ghent, Belgium; 3. University of Ulm, Ulm, Germany; 4. The Babraham Institute, Cambridge, United Kingdom.
16:40-16:50	**CM11-05 (Poster 1484): Collagen XVII ectodomain shedding alters keratinocyte proliferation and motility through modulation of cell adhesiveness** Joanna Jacków[1], Stepfanie Löffek[1], Andreas Schlosser[2], Alexander Nyström[1], Cassian Sitaru[1], Kaisa Tasanen[3], Leena Bruckner-Tuderman[1], Claus-Werner Franzke[1]; 1. Dept. of Dermatology, University Freiburg Medical Center, Freiburg, Germany; 2. Center of Systems Biology, University of Freiburg, Freiburg, Germany; 3. Dept. of Dermatology, University of Oulu, Oulo, Finland.
16:50-17:00	**CM11-06 (Poster 1488): Interleukin 6 promotes adult de novo hair follicle organogenesis through STAT3 phosphorylation** Amanda Nelson, Adiya Katseff, Sydney Resnik, Luis Garza; Dermatology, Johns Hopkins School of Medicine, Baltimore, MD, USA.
17:00-17:10	**CM11-07 (Poster 1499): TAp63α promotes the transition of hair follicle stem cells to interfollicular keratinocytes** Daisy Dai, Aaron Huebner, Robert Long, Dennis Roop; University of Colorado Anschutz Medical Campus, Aurora, CO, USA.
17:10-17:20	**CM11-08 (Poster 1511): VEGF promotes cutaneous wound healing via VEGFR-1 signaling in keratinocytes and macrophages** Kelly Johnson, Monica Lachey, Traci Wilgus; Pathology, The Ohio State University, Columbus, OH, USA.
17:20-17:30	**CM11-09 (Poster 1520): Bone morphogenetic protein signalling regulates keratinocyte proliferation and migration during wound healing in murine and human skin** Chris Lewis[1], Andrei Mardaryev[1], Andrey Sharov[2], Tatyana Sharova[2], Vladimir Emelianov[2], Natalia Botchkareva[1], David Sharpe[1], Vladimir Botchkarev[1, 2]; 1. Centre for Skin Sciences, University of Bradford, Bradford, United Kingdom; 2. Dermatology, Boston University, Boston, MA, USA.
17:30-17:40	**CM11-10 (Poster 1523): Expression of either microRNA-198 or FSTL1 from a primary transcript is controlled by TGF-β and KSRP for efficient wound healing** Gopinath Sundaram, John Common, Birgit Lane, Prabha Sampath; Institute of Medical Biology, A*STAR, Singapore, Singapore.

Poster Session 2

Date: Friday 10 May 2013
Time: 18:00-19:00
Room: Lennox Suite and Mezzanine
Floor: -1

Poster #'s 1001-1523 ODD & #'s 002-500 EVEN

Poster walks will take place during all official poster viewing sessions. The walks are guided thematic tours of selected posters accompanied by a senior investigator.

Each poster presenter will be asked to briefly describe their work and a short group discussion will be held.

If your poster has been selected for a Poster Walk, please join the appropriate group in the Poster Area (Poster desk on the mezzanine level).

All other delegates are welcome to join the walk/s of their choice.

The poster walk leaders and subject areas are:

Riichiro Abe	Adaptive Immunity
Caterina Missero	Cutaneous and hair development
Naotomo Kambe	Innate Immunity
Akiharu Kubo	Growth factors and cell adhesion
Jennifer Y. Zhang	Carcinogenesis

NOTES

Social Gathering

Date: Friday 10 May 2013
Time: 19:30
Venue: National Museum of Scotland
Chambers Street
Edinburgh
EH1 1JF

For map see page 8

This is a ticketed event, if you do not have a ticket they can be purchased at the Onsite Registration desk.

The Social Gathering will be held at the National Museum of Scotland, situated in the heart of Edinburgh's historic Old Town, just minutes from the Royal Mile and Edinburgh Castle.

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STELARA® 45 mg solution for injection in pre-filled syringe
PRESCRIBING INFORMATION
ACTIVE INGREDIENT(S): Ustekinumab. Please refer to Summary of Product Characteristics (SmPC) before prescribing. **INDICATION(S):** Treatment of moderate to severe plaque psoriasis in adults who failed to respond to, or who have a contraindication to, or are intolerant to other systemic therapies including ciclosporin, methotrexate and PUVA. **DOSAGE & ADMINISTRATION:** Under the guidance and supervision of a physician experienced in diagnosis and treatment of psoriasis. Subcutaneous injection. Avoid areas with psoriasis. For self-injecting patients ensure appropriate training, follow-up and monitoring during treatment. ***Adults & Elderly:*** Patients ≤ 100kg, 45 mg at week 0 followed by a 45 mg dose at week 4, then every 12 weeks. Patients >100 kg, 90 mg at week 0 followed by a 90 mg dose at week 4, then every 12 weeks (45 mg was less effective in these patients). Consider discontinuation if no response after 28 weeks. ***Children <18 years:*** Not recommended. ***Renal & Hepatic impairment:*** Not studied. **CONTRAINDICATIONS:** Hypersensitivity to product; clinically important, active infection. **SPECIAL WARNINGS & PRECAUTIONS:** ***Infections:*** Potential to increase risk of infections and reactivate latent infections. Caution in patients with a chronic infection or history of recurrent infection, particularly TB. Patients should be evaluated for tuberculosis prior to initiation of STELARA. Consider anti-tuberculosis therapy prior to initiation of STELARA in patients with past history of latent or active tuberculosis. Patients should seek medical advice if signs or symptoms suggestive of an infection occur. If a serious infection develops, they should be closely monitored and STELARA should not be administered until infection resolves. ***Malignancies:*** Potential to increase the risk of malignancy. No studies in patients with a history of malignancy or in patients who develop malignancy while receiving STELARA. Monitor all patients, in particular those older than 60, patients with a medical history of prolonged immunosuppressant therapy or those with a history of PUVA treatment for non-melanoma skin cancer. ***Concomitant immunosuppressive therapy:*** Caution, including when changing immunosuppressive biologic agents. ***Hypersensitivity reactions:*** Serious hypersensitivity reactions (anaphylaxis and angioedema) reported, in some cases several days after treatment. If these occur, discontinue STELARA immediately and institute appropriate therapy. ***Immunotherapy:*** Not known whether STELARA affects allergy immunotherapy. **Latex sensitivity:** Needle cover contains natural rubber (latex), may cause allergic reactions. **SIDE EFFECTS:** ***Serious side effects:*** Serious infections, malignancies. ***Very common:*** upper respiratory tract infection, nasopharyngitis. ***Common:*** hypersensitivity reactions (rash, urticaria), cellulitis, viral upper respiratory tract infection, depression, dizziness, headache, pharyngolaryngeal pain, nasal congestion, diarrhoea, pruritus, back pain, myalgia, arthralgia, fatigue, injection site erythema, antibodies to ustekinumab. ***Uncommon:*** herpes zoster infection, injection site reactions. ***Rare:*** serious hypersensitivity reactions (including anaphylaxis, angioedema), facial palsy **Refer to SmPC for other side effects. FERTILITY:** The effect of ustekinumab has not been evaluated. **PREGNANCY:** Should be avoided. Women of childbearing potential: Use effective contraception during treatment and for at least 15 weeks post-treatment. **LACTATION:** Limited data in humans. **INTERACTIONS:** *In vitro*, STELARA had no effect on CYP450 activities. ***Vaccinations:*** Live vaccines should not be given concurrently with STELARA, and should be witheld for at least 15 weeks after last dose of STELARA. STELARA can resume at least 2 weeks after such vaccinations. No data on secondary transmission of infection by live vaccines in patients receiving STELARA. ***Concomitant immunosuppressive therapy:*** The safety and efficacy of STELARA in combination with other immunosuppressants, including biologics, or phototherapy have not been evaluated. **LEGAL CATEGORY:** POM **PRESENTATIONS, PACK SIZES, PRODUCT LICENCE NUMBERS & BASIC NHS COSTS:** STELARA 45mg: 1 x 0.5ml pre-filled syringe. EU/1/08/494/003. £2147 **MARKETING AUTHORISATION HOLDER:** JANSSEN-CILAG INTERNATIONAL NV, Turnhoutseweg 30, B-2340 Beerse, Belgium. **FURTHER INFORMATION IS AVAILABLE FROM:** Janssen-Cilag Ltd, 50 – 100 Holmers Farm Way, High Wycombe, Buckinghamshire, HP12 4EG UK. © Janssen-Cilag Ltd 2013
Prescribing information last revised: 17/01/2013
PIVER: 170113

Adverse events should be reported. Reporting forms and information can be found at www.mhra.gov.uk/yellowcard. Adverse events should also be reported to Janssen-Cilag Ltd on 01494 567447.

Reference:
1. Stelara® (ustekinumab) Summary of product characteristics. Date: March 2013.

*4 = number of maintenance doses per year after 2 induction doses.

Date of preparation: March 2013 PHGB/STE/0313/0012

COME JOIN THE DEBATE!

IS TNF-α THE CENTRAL CYTOKINE IN PSORIATIC DISEASE?

An AbbVie symposium to be held at

INTERNATIONAL INVESTIGATIVE DERMATOLOGY (IID) EDINBURGH 2013

Saturday 11 May, 13:00 – 14:00
Fintry Room, Level 3, Edinburgh International Conference Centre (EICC)

Agenda

13:00	Welcome to the debate! Richard Langley
13:08	TNF-α IS the central cytokine in psoriatic disease Frank Nestle and Dennis McGonagle
13:24	TNF-α is NOT the central cytokine in psoriatic disease Richard Warren and Filip van den Bosch
13:40	Rebuttals and discussion All
13:55	Summary and close Richard Langley

Faculty

Richard Langley (Symposium Chair)
Division of Dermatology, Dalhousie University, Halifax, Nova Scotia, Canada

Frank Nestle (Dermatologist)
Division of Genetics and Molecular Medicine, St John's Institute of Dermatology, King's College London, UK

Dennis McGonagle (Rheumatologist)
Experimental Rheumatology & Inflammatory Mechanisms, Section of Musculoskeletal Disease, Chapel Allerton Hospital, Leeds, UK

Richard Warren (Dermatologist)
The University of Manchester & Salford Royal Foundation Hospital, Manchester, UK

Filip van den Bosch (Rheumatologist)
Department of Rheumatology, Ghent University Hospital, Ghent, Belgium

This satellite symposium has been approved by the Federation of the Royal Colleges of Physicians UK for 1 CPD credit (code: 80897)

This is an AbbVie scientific symposium.
Date of preparation: April 2013. AXHUD130489s

abbvie

SATURDAY 11 MAY 2013				
TIME	SESSION DETAIL	ROOM LOCATION	FLOOR	INFORMATION
07:30 – 08:30	Sponsored Symposium: Galderma	Tinto	0	Page 97
07:30 – 08:30	Sponsored Symposium: Lilly	Kilsyth	0	Page 98
08:45 – 10:00	Plenary Session 5	Pentland	3	Page 99
10:00 – 10:30	Albert M. Kligman/Phillip Frost Leadership Lecture: Elaine Fuchs	Pentland	3	Page 100
11:00 – 12:30	Plenary Session 6	Pentland	3	Page 101
13:00 – 14:00	Sponsored Symposium: Abbvie	Fintry	3	Page 102
13:00 – 14:00	Sponsored Symposium: Janssen	Sidlaw	3	Page 103
14:15 – 14:45	Tanioku Kihei Memorial Lecture: Mark Udey	Pentland	3	Page 104
14:45 – 15:15	ESDR Guest Lecture: Andreas Trumpp	Pentland	3	Page 105
15:15 – 16:15	Poster Session 3	Lennox & Mezzanine	-1	Page 106
16:15 – 18:00	Concurrent 12: Adaptive Immunity	Pentland	3	Page 107
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16:15 – 18:00	Concurrent 14: Human Clinical Research & Therapeutics II	Fintry	3	Page 109
16:15 – 18:00	Concurrent 15: Photobiology	Tinto	0	Page 110
16:15 – 18:00	Concurrent 16: Growth Factors	Kilsyth	0	Page 111
18:00 – 18:30	Closing Remarks	Pentland	3	Page 112

Date: Saturday 11 May 2013
Time: 07:30-08:30
Room: Tinto
Floor: 0

GALDERMA
Committed to the future of dermatology

Searching for the underlying mechanisms of rosacea: How complex is the puzzle?

PROGRAM	
Chairs	**Diane Thiboutot (USA) & Kenshi Yamasaki (Japan)**
07:30-07:45	**Demodex and Rosacea: What is the evidence?** D Thiboutot (USA)
07:45-08:00	**Insights into the vascular changes in rosacea** J Schauber (Germany)
08:00-08:10	**Research models to study the vascular pathologies in rosacea** D Piwnica (Galderma)
08:10-08:25	**Innate immune defense, cathelicidins and future directions in rosacea research** K Yamasaki (Japan)
08:25-08:30	**Q & A**

NOTES

Sponsored Symposium: Lilly

Date: Saturday 11 May 2013
Time: 07:30-08:30
Room: Kilysth
Floor: 0

Psoriasis: Uncovering the Systemic Implications of a Chronic Inflammatory Condition

PROGRAM

07:30-07:40	**Welcome and Introduction** Christopher Griffiths (Manchester, UK)
07:40-08:00	**Psoriasis and Cardiovascular Disease** Joel M Gelfand (Philadelphia, USA)
08:00-08:20	**Psoriasis and Metabolic Syndrome** Giampiero Girolomoni (Verona, Italy)
08:20-08:30	**Panel Discussion** All faculty

NOTES

Plenary Session 5

Date: Saturday 11 May 2013
Time: 08:45-10:00
Room: Pentland
Floor: 3

PROGRAM

Chairs	**Kenji Kabashima (Japan), Carien Neissen (Germany), Julie Segre (USA)**
08:45-08:57	**PL5-01 (Poster 1177): Regulation of cutaneous inflammation by skin-resident type 2 innate lymphoid cells** Ben Roediger[1], Ryan Kyle[2], Kwok Ho Yip[3], Thomas Victor Guy[1], Nital Sumaria[1], Andrew Mitchell[1], Rohit Jain[1], Elizabeth Forbes-Blom[2], Xi Chen[4], Philip L. Tong[1], Holly Bolton[1], William E. Paul[4], Barbara Fazekas de St. Groth[1], Michele A. Grimbaldeston[3], Graham Le Gros[2], Wolfgang Weninger[1, 5, 6]; 1. Centenary Institute, Sydney, NSW, Australia; 2. Malaghan Institute of Medical Research, Wellington, New Zealand; 3. Centre for Cancer Biology, Adelaide, SA, Australia; 4. National Institutes of Health, Bethesda, MD, USA; 5. Discipline of Dermatology, University of Sydney, Sydney, NSW, Australia; 6. Department of Dermatology, Royal Prince Alfred Hospital, Sydney, NSW, Australia.
08:57-09:09	**PL5-02 (Poster 484) Polycomb subunits Ezh1 and Ezh2 regulate the Merkel cell differentiation program in skin stem cells** Elena Ezhkova, Evan Bardot, Julian Valdes; Department of Developmental and Regenerative Biology, Mount Sinai School of Medicine, New York, NY, USA.
09:09-09:21	**PL5-03 (Poster 1243): Prostaglandin E2 promotes UV radiation-induced immune suppression via DNA hypermethylation** Santosh Katiyar[1, 2], Ram Prasad[1]; 1. Dermatology, University of Alabama at Birmingham, Birmingham, AL, USA; 2. Birmingham VA Medical Center, Birmingham, AL, USA.
09:21-09:33	**PL5-04 (Poster 506): MicroRNA-214 controls skin and hair follicle development by targeting beta-catenin and modulating the activity of Wnt signaling pathway** Mohamed Ahmed[1], Majid Alam[1], Vladimir Emelyanov[2], Andrey Sharov[2], Andrei Mardariev[1], Natalia Botchkareva[1]; 1. Centre for Skin Sciences, University of Bradford, Bradford, United Kingdom; 2. Department of Dermatology, Boston University, Boston, MA, USA.
09:33-09:45	**PL5-05 (Poster 519): Dense genotyping of six atopic dermatitis and 180 autoimmune risk loci in 2,425 atopic dermatitis patients** Hansjoerg Baurecht[1], Elke Rodríguez[1], David Ellinghaus[2], Jorge Esparza-Gordillo[3, 4], Christian Gieger[5], Stefan Schreiber[2], Young-AE Lee[3, 4], Andre Franke[2], Stephan Weidinger[1]; 1. Department of Dermatology, Allergology, and Venerology, University Hospital Schleswig-Holstein, Kiel, Germany; 2. Institute of Clinical Molecular Biology, Christian-Albrechts-University, Kiel, Germany; 3. Pediatric Pneumology and Immunology, Charité, Berlin, Germany; 4. Max-Delbrück-Centrum (MDC) for Molecular Medicine, Berlin, Germany; 5. Institute of Genetic Epidemiology, Helmholtz Centre Munich, Neuherberg, Germany
09:45-09:57	**PL5-06 (Poster 141) GARP modifies T cell activation and differentiation *in vitro* and *in vivo*** Susanne Hahn[1], Heiko Stahl[2], Helmut Jonuleit[1], Andrea Tuettenberg[1]; 1. Department of Dermatology, University Medical Center of the Johannes Gutenberg University, Mainz, Germany; 2. Boehringer Ingelheim Pharma GmbH & Co. KG, Research Germany, Biberach an der Riss, Germany

NOTES

Albert M. Kligman/Phillip Frost Leadership Lecture & Award Winner

Date: Friday 10 May 2013
Time: 10:00-10:30
Room: Pentland
Floor: 3
Introduced by: Irene Leigh (ESDR)

PROGRAM

10:00-10:30

Albert m. Kligman/Phillip Frost leadership lecture & award winner

Skin stem cells in silence, action and cancer
Elaine Fuchs (USA)

Elaine Fuchs is presently the Rebecca C. Lancefield Professor in Mammalian Cell Biology and Development at The Rockefeller University. She is also an Investigator, Howard Hughes Medical Institute. Fuchs received her bachelor's degree in chemistry in 1972, graduating with highest honors from the University of Illinois in Champaign-Urbana. Fuchs transitioned to Princeton University to pursue an interest in biomedical science, where she focused on bacterial sporulation. After receiving her PhD in biochemistry in 1977, she moved to MIT, where she conducted postdoctoral training with Professor Howard Green, who elucidated the methods of culturing human epidermal stem cells and developed their application for burn therapy. Fuchs recognized the importance of understanding the basic biology underlying this tissue as a prerequisite to unearthing more clinical applications and she began moving in this direction as a Damon Runyon Postdoctoral fellow. After three years and with three major first-authored Cell papers in hand, she moved to The University of Chicago to join the Biochemistry Department as an Andrew Mellon Fellow and Assistant Professor in 1980. During her Assistant Professorship, she was a Searle Scholar and the recipient of a Presidential Young Investigator Award and an NIH Career Development Award. After six more major Cell papers, she received tenure in 1985. She was also invited to the White House as one of the Nation's outstanding scientists, and she was identified as among the top 100 scientists under the age of 40. In 1988, she was appointed to the Howard Hughes Medical Institute, a position she has maintained ever since. She was promoted to full professor by 1989 and Amgen Professor of Basic Science shortly thereafter. Her work on keratins culminated in the 90's when she worked out the genetic bases of a variety of human genetic disorders involving intermediate filament proteins. Her additional honors while at the University of Chicago included election to the American Academy of Arts and Sciences (1994), Institute of Medicine (1994), National Academy of Sciences (1996), Montagna Award from the Society for Investigative Dermatology ('95), Senior Women's Career Achievement Award ('97) from the American Society for Cell Biology, and the Richard Lounsbery Award from the National Academy of Sciences ('01).

In 2002, Fuchs relocated to The Rockefeller University. Her interests shifted to skin stem cells and cancers where she has had major contributions. Since moving to Rockefeller, her honors include Honorary Doctorates from Mt Sinai-New York University School of Medicine ('03) and The University of Illinois ('06); the Novartis Award in Biomedical Research ('03); Dickson Prize in Medicine ('04); FASEB Award for Scientific Excellence ('06); Beering Award ('06), the National Medal of Science ('09, the highest scientific award in the US; awarded by the US President, Barak Obama), the L'Oreal UNESCO Award ('10), the Madison Medal ('10), the Albany Prize (largest award in Medicine in the US, awarded with Shinya Yamanaka and James Thompson, '11), the Passano Award ('11) and the March of Dimes Prize ('12, with Howard Green). Fuchs was also elected to the American Philosophical Society ('08) and EMBO (European equivalent of the National Academy of Sciences; '10).

Fuchs has played major leadership roles in her University, nationally and internationally. She is a past President of the American Society of Cell Biology, the Harvey Society and the International Society for Stem Cell Research. She served on the Scientific Advisory Board of the Director of the National Institutes of Health, and participated in many different scientific review panels for the government. She served on the Council of the National Academy of Sciences, and has been a Visiting Professor at the College de France, the Curie Institute and the government of Singapore. She is an Editor of the Journal of Cell Biology, and has served on many Editorial Boards, including Cell, Cell Stem Cell, Developmental Cell and Genes and Development. She is on the Board of Directors of the Damon Runyon Foundation, the International Society for Stem Cell Research, and the New York Academy of Sciences. She has served on the Scientific Advisory Boards of the Whitehead Institute, MIT, Jane Coffin Childs Foundation, Searle Scholars Program, Burroughs Wellcome and Harvard Immune Disease Institute, and will begin on the Scientific Advisory Board of the IMB in Vienna in 2013.

Selected Publications:

Lu CP, Polak L, Rocha AS, Pasolli A, Chen S-C, Sharma N, Blanpain C, Fuchs E. Identification of stem cell populations in sweat glands and ducts: Roles in homeostasis and wound repair. Cell 150:136-50 (2012).

Chen T, Heller E, Beronja S, Oshimori N, Stokes N, Fuchs E. An RNAi screen unveils a new player in stem cell self-renewal and long-term regeneration. Nature, 485:104-108 (2012).

Schober M, Fuchs E. Tumor-Initiating stem cells of squamous cell carcinomas and their control by TGFβ and Integrin/FAK signaling. Proc Natl Acad Sci USA, 108,10544-9 (2011).

Williams SE, Beronja S, Pasolli HA, Fuchs E. Asymmetric cell divisions promote Notch-dependent epidermal differentiation. Nature 470, 353-58 (2011). [highlighted in Nature Rev Genetics 12, 226, 2011]

Wu, X, Shen Q, Oristien D, Lu C, Zheng Q, Wang H-W, Fuchs E. Skin stem cells orchestrate directional migration by regulating microtubule-ACF7 connections through GSK3β. Cell, 144 (3),341-52 (2011). [leading edge preview in Cell. 2011 144,319-21].

Hsu YC, Pasolli HA, Fuchs E. Dynamics between stem cells, niche and progeny. Cell 144,92-105 (2011). [highlighted in Cell Stem Cell 8,8-9, 2011]

Beronja, B., Livshits G, Williams S, Fuchs E. Rapid functional dissection of genetic networks via non-invasive, tissue-specific transduction of mouse embryos. Nat.Medicine 16,821-7(2010). [cover article]

Ezhkova E, Pasolli HA, Stokes N, Su I, Tarakhovsky A, Fuchs E. Polycomb protein Ezh2 balances proliferation and differentiation in developing epidermal stem cells. Cell 136,1122-1135 (2009).

Greco V, Chen T, Rendl M, Schober M, Pasolli HA, Stoke N, de la Cruz-Racelis J, Fuchs E. A two step mechanism for stem cell activation during hair regeneration. Cell Stem Cell, 4,155-169 (2009)

Yi R, Fuchs E A skin microRNA promotes differentiation by repressing stemness. Nature 454, 225-229 (2008).

Plenary Session 6

Date: Saturday 11 May 2013
Time: 11:00-12:30
Room: Pentland
Floor: 3

PROGRAM

Chairs	**Paul Bergstresser (USA), Vincent Piguet (France), Yoshiki Tokura (Japan)**
11:00-11:12	**PL6-01 (Poster 234): Development of a mouse model for linear IgA bullous dermatosis** Peng Geng[1], Lin Lin[1], Moohe Park[1], Ning Li[1], Kayla Shumate[1], M. Marinkovich[2], Russell Hall[3], Luis Diaz[1], Zhi Liu[1]; 1. Dermatology, University of North Carolina, Chapel Hill, NC, USA; 2. Dermatology, Stanford University, Stanford, CA, USA; 3. Dermatology, Duke University, Durham, NC, USA.
11:12-11:24	**PL6-02 (Poster 819): Aquaporin 5 (AQP5), a water channel protein, is mutated in autosomal dominant diffuse non-epidermolytic palmoplantar keratoderma** Diana Blaydon[1], Lisbet Lind[2], Vincent Plagnol[3], Kenneth Linton[1], Andrew South[4], Irene Leigh[4], Edel O'Toole[1], Anita Lundstrom[5], David Kelsell[1]; 1. Blizard Institute, QMUL, London, United Kingdom; 2. Department of Clinical Genetics, University Hospital, Umeå, Sweden; 3. UCL Genetics Institute, UCL, London, United Kingdom; 4. Division of Cancer Research, University of Dundee, Dundee, United Kingdom; 5. Department of Public Health and Clinical Medicine, Umeå University, Umeå, Sweden.
11:24-11:36	**PL6-03 (Poster 342): Stat1-signaling in cancer cells critically controls senescence and metastases spreading** Ellen Brenner, Heidi Braumüller, Karin Schielbach, Thomas Wieder, Martin Röcken; Dermatology, University Tübingen, Tübingen, Germany
11:36-11:48	**PL6-04 (Poster 869): Modulation of a locus control region in the EDC chromatin architecture is required for epidermal differentiation** Inez Oh, Danielle Albea, Ashley Quiggle, Breeana Baker, Ann Guggisberg, Grace Kroner, Cristina de Guzman Strong; Washington University School of Medicine, Saint Louis, MO, USA.
11:48-12:00	**PL6-05 (Poster 1058): Phase II trial of Brentuximab vedotin (SGN-35) for CD30+ cutaneous T-cell lymphomas and lymphoproliferative disorders** M. Duvic[1], M. Tetzlaff[2], P. Gangar[1], Audra Clos[1], R. Talpur[1]; 1. Dermatology, UT MD Anderson Cancer Center, Houston, TX, USA; 2. Dermatopathology, UT MD Anderson Cancer Center, Houston, TX, USA.
12:00-12:12	**PL6-06 (Poster 1516): Generation of 3D full-thickness skin equivalents exclusively from human induced pluripotent stem cell (iPSC)-derived keratinocytes and fibroblasts** Zongyou Guo, Munenari Itoh, Noriko Umegaki, Angela Christiano; Columbia University, New York, NY, USA.
12:12-12:24	**PL6-07 (Poster 1149): IL-33 KO mice exhibit the reduced immediate type contact hypersensitivity** Yasutomo Imai[1], Takashi Haneda[1], Koubun Yasuda[2], Tomohiro Yoshimoto[3], Kenji Nakanishi[2], Kiyofumi Yamanishi[1]; 1. Dermatology, Hyogo College of Medicine, Nishinomiya, Japan; 2. Immunology and Medical Zoology, Hyogo College of Medicine, Nishinomiya, Japan; 3. Laboratory of Allergic Diseases, Institute for Advanced Medical Sciences, Hyogo College of Medicine, Nishinomiya, Japan

NOTES

Sponsored Symposium: Abbvie

Date: Saturday 11 May 2013
Time: 13:00-14:00
Room: Fintry
Floor: 3

Is TNF-a the central cytokine in psoriatic disease?

- Discuss the role of TNF-a and other cytokines in both psoriasis and psoriatic arthritis and demonstrate the importance of understanding the pathophysiology of disease in the clinical management of psoriatic diseases
- Discuss the importance of considering psoriatic arthritis as part of the clinical management plan for psoriasis

PROGRAM	
13:00-13:08	**Welcome to the debate!** Richard Langley – Chair (Canada)
13:10-13:24	**Arguments FOR the motion:** **TNF-a IS the central cytokine in psoriatic disease** *Panel:* - Dermatologist: Frank Nestle (UK) - Rheumatologist: Dennis McGonagle (UK)
13:24-13:40	**Arguments AGAINST the motion:** **TNF-a is NOT the central cytokine in psoriatic disease** *Panel:* - Dermatologist: Richard Warren (UK) - Rheumatologist: Filip van den Bosch (Belgium)
13:40-13:55	**Rebuttals and discussion** Facilitated by Richard Langley (Canada)
13:55-14:00	**Summary & Close** Richard Langley (Canada)

NOTES

Sponsored Symposium: Janssen

Date: Saturday 11 May 2013
Time: 13:00-14:00
Room: Sidlaw
Floor: 3

PEARLS symposium at the International Investigative Dermatology meeting
New Images of Psoriasis

PROGRAM	
13:00-13:10	**Welcome and Introduction** Christopher Griffiths (Manchester, UK)
13:10-13:30	**Visualising systemic inflammation in psoriasis** James Krueger (New York, USA)
13:30-13:50	**Mapping the brain-skin axis** Elise Kleyn (Manchester, UK)
13:50-14:00	**Questions and closing remarks** Christopher Griffiths and James Krueger

NOTES

Tanioku Kihei Memorial Lecture

Date: Saturday 11 May 2013
Time: 14:15-14:45
Room: Pentland
Floor: 3
Introduced by: Masayuki Amagai(JSID)

PROGRAM

14:15-14:45

Tanioku Kihei Memorial Lecture

Serendipity and Studies of Langerhans Cell Biology
Mark Udey (USA)

Mark Udey was born and raised in a small town in the Midwestern United States (Fort Atkinson, Wisconsin). After graduating from the University of Wisconsin-Madison with a major in Chemistry, Dr. Udey moved to St. Louis, Missouri to enter the Medical Scientist Training Program at Washington University. He was awarded M.D and Ph.D. degrees from Washington University and remained at that institution to complete his clinical training in Dermatology and continue his research in Immunology as a post-doctoral fellow. After several years as an Assistant Professor in Dermatology at Washington University, Dr. Udey was recruited to the Dermatology Branch of the National Cancer Institute in Bethesda, Maryland. Dr. Udey is now a Senior Investigator and has served as Chief of the Dermatology Branch for more than 10 years. He is also one of several Deputy Directors in NCI's Center for Cancer Research.

Dr. Udey's research interests include skin immunology, dendritic cell biology and epithelial biology more globally. He is best known for his studies of epidermal Langerhans cells. At NIH, Dr. Udey has worked with many talented young people from Asia, Europe and the United States who have subsequently gone on to become accomplished independent investigators.

Dr. Udey has had editorial responsibilities for the Journal of Investigative Dermatology, the Journal of Immunology and the Journal of Clinical Investigation. He has also served on the Board of Directors of the Society of Investigative Dermatology. In recognition of his accomplishments, Dr. Udey has been elected to the American Society for Clinical Investigation and the American Association of Physicians, and he is a Fellow of the American Association for the Advancement of Science.

Selected Publications:

Udey MC, Chaplin DD, Wedner HJ and Parker CW. Early activation events in lectin-stimulated human lymphocytes: Evidence that wheat germ agglutinin and mitogenic lectins cause similar early changes in lymphocyte metabolism. ***J. Immunol.* 125:** 1544-1150, 1980.

Fischman CM, **Udey MC**, Kurtz M and Wedner HJ. Inhibition of lectin-induced lymphocyte activation by 2-cyclohexene-1-one: Decreased intracellular glutathione inhibits an early event in the activation sequence. ***J. Immunol.* 127:** 2257-2262,1981.

Udey MC and Parker CW. Effect of inhibitors of arachidonic acid metabolism on aminoisobutyric acid transport in human lymphocytes. ***Biochem. Pharmacol.* 31:** 337-345, 1982.

Tang A and **Udey MC**. Inhibition of epidermal Langerhans cell function by low dose UVB radiation: UVB radiation selectively modulates ICAM-1 (CD54) expression by murine Langerhans cells. ***J. Immunol.* 146:** 3347-3355, 1991.

Udey MC, Peck RD, Pentland AP, Schriener GF and Lefkowith JB. Antigen presenting cells in essential fatty acid deficient murine epidermis: Keratinocytes bearing class II MHC (Ia) antigens may potentiate the accessory cell function of Langerhans cells. ***J. Invest. Dermatol.* 96:** 950-958, 1991.

Tang A and **Udey MC**. Differential sensitivity of freshly isolated and cultured murine Langerhans cells to ultraviolet B radiation and chemical fixation. ***Eur. J. Immunol.* 22:** 586-586, 1992.

Tang A, Amagai M, Granger LC, Stanley JR and **Udey MC**. Adhesion of epidermal Langerhans cells to keratinocytes mediated by E-cadherin. ***Nature* 361:** 82-85, 1993.

Amagai M, Karpati S, Klaus-Kovtun V, **Udey MC** and Stanley JR. The extracellular domain of pemphigus vulgaris antigen (desmoglein 3) mediates weak homophilic adhesion. ***J. Invest. Dermatol.* 103:** 609-615, 1994.

Udey MC. In this issue - Oncogenes, tumor suppressor genes and melanocytic lesions. ***J. Invest. Dermatol.* 122**: vii-viii, 2004.

Udey MC and Nagao K. Characteristics and functions of murine cutaneous dendritic cells: A synopsis of recent developments. ***Mucosal Immunol.* 1:** 470-474, 2008.

Udey MC. Commentary – Epidermal Langerhans cells tune skin reactivity to contact allergens. ***J. Clin. Invest. 122*:** 1602-1605, 2012.

ESDR Guest Lecture II

Date: Saturday 11 May 2013
Time: 14:45-15:15
Room: Pentland
Floor: 3
Introduced by: Alexander Enk (ESDR)

PROGRAM

14:45-15:15

ESDR Guest Lecture II

Circulating Tumor Cells and Metastasis
Andreas Trumpp (Germany)

Prof. Andreas Trumpp received his PhD at EMBL in Heidelberg. After his postdoctoral work with J. Michael Bishop and Gail R. Martin at UCSF he started the Genetics and Stem Cell Laboratory at the Swiss Institute for Experimental Research (ISREC) in 2000 and became Professor at the Swiss Federal Institute of Technology Lausanne (EPFL) in 2005. Since 2008, he heads the Division of Stem Cells and Cancer at the German Cancer Research Center (DKFZ), and is Founding Managing Director of the Heidelberg Institute for Stem Cell Technology and Experimental Medicine (HI-STEM) in Heidelberg, Germany. One of the goals of his team is to elucidate the molecular and cellular basis of hematopoietic stem cell self-renewal and differentiation as well as to characterize the complex dynamic interactions within the stem cell-niche unit.

In addition, the group has recently established a program to functionally characterize malignant stem cells of leukemias and carcinomas at various levels. Analysis of model systems in combination with primary patient derived samples is used to develop innovative strategies to detect and target cancer and metastasis stem cells in clinical settings.

Selected Publications:

Marieke A.G. Essers, Sandra Offner, William E. Blanco-Bose, Zoe Waibler, Ulrich Kalinke, Michel A. Duchosal and **Andreas Trumpp** (2009). **IFNa activates dormant HSCs *in vivo*. *Nature* (2009) - 458(7240):904-8.**

Wilson A., Laurenti E., Oser G.M., van der Wath R.C., Blanco-Bose W.E., Dunant C., Bockamp E., Liò P., MacDonald H.R. and Trumpp A. (2008). **Hematopoietic stem cells reversibly switch from dormancy to self-renewal during homeostasis and repair. *Cell* (2008), 135: 1118-1129. Published online Dec. 4th, 2008.**

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Poster Session 3

Date: Saturday 11 May 2013
Time: 15:15-16:15
Room: Lennox Suite and Mezzanine
Floor: -1

Poster #'s 501-999 ODD & #'s 1002-1522 EVEN

Poster walks will take place during all official poster viewing sessions. The walks are guided thematic tours of selected posters accompanied by a senior investigator.

Each poster presenter will be asked to briefly describe their work and a short group discussion will be held.

If your poster has been selected for a Poster Walk, please join the appropriate group in the Poster Area (Poster desk on the mezzanine level).

All other delegates are welcome to join the walk/s of their choice.

The poster walk leaders and subject areas are:

David Kelsell	Genetics
Tanya Shaw	Tissue regeneration
Akemi Yamamoto	Clinical Research
Christina Zielinski	Autoimmunitiy II

NOTES

Adaptive Immunity - Concurrent Minisymposium 12

Date: Saturday 11 May 2013
Time: 16:15-18:00
Room: Pentland
Floor: 3

PROGRAM

Chairs	**Dan Kaplan (USA), Min-Geol Lee (South Korea), Karstan Mahnke (Germany)**
16:15-16:25	**CM12-01 (Poster 035): TACE/ADAM17 deficiency in epidermis leads to IL-17A-associated inflammation with atopic dermatitis-like phenotype** Tetsuro Kobayashi[1], Keisuke Horiuchi[2], Takeya Adachi[1], Hiroshi Kawasaki[1], Masayuki Amagai[1], Keisuke Nagao[1]; 1. Dermatology, Keio University School of Medicine, Tokyo, Japan; 2. Orthopedic Surgery, Keio University School of Medicine, Tokyo, Japan.
16:25-16:35	**CM12-02 (Poster 090): Tissue resident and central memory T cells share a single clonal origin but play distinct and non-overlapping roles in long-term memory responses in skin** Olivier Gaide[1], Xiaodong Jiang[1], Suzanne Nizza[1], Cindy Desmarais[2], Rachael Clark[1], Thomas Kupper[1]; 1. Harvard Skin Disease Research Center, Department of Dermatology, Brigham and Women's Hospital, Boston, MA, USA; 2. Adaptive Biotech, Seattle, WA, USA.
16:35-16:45	**CM12-03 (Poster 041): Newly identification of a migratory subset of dermal $\gamma\delta$ T cells that initiate contact hypersensitivity by producing TNF-alpha in the draining lymph nodes** Satoshi Nakamizo[1], Gyhei Egawa[1], Michio Tomura[2], Yoshiki Miyachi[1], Kenji Kabashima[1]; 1. Dermatology, Kyoto University, Kyoto, Japan; 2. Center for Innovation in Immunoregulative and Therapeutics, Kyoto University, Kyoto, Japan.
16:45-16:55	**CM12-04 (Poster 045): Langerhans cell derived IL-6 is required for the differentiation of Th17 during skin infection with Candida albicans** Botond Igyarto[1], Elizabeth Jarrett[1], Aleh Bobr[1], Maryam Gerami-Nejad[2], Judith Berman[2], Daniel Kaplan[1]; 1. Department of Dermatology, Center for Immunology, University of Minnesota, Minneapolis, Minneapolis, MN, USA; 2. Department of Molecular and Cellular Biology, University of Minnesota, Minneapolis, Minneapolis, MN, USA.
16:55-17:05	**CM12-05 (Poster 042): Single cell tracking reveals the segregation of slow cycling memory CD8 T cells from the effector pool at the peak of the immune response** Ichiko Kinjyo[1], Jim Qin[1], Paulus Mrass[1], Cameron Wellard[2], Michio Tomura[3], Osami Kanagawa[3], Atsushi Miyawaki[4], Phil Hodgkin[2], Wolfgang Weninger[1]; 1. Centenary Institute, Sydney, NSW, Australia; 2. Walter and Eliza Hall Institute of Medical Research, Melbourne, VIC, Australia; 3. Research Center for Allergy and Immunology, RIKEN, Yokohama, Japan; 4. Brain Science Institute, RIKEN, Kobe, Japan.
17:05-17:15	**CM12-06 (Poster 078): Dermal $\gamma\delta$ T cells and their role in contact hypersensitivity** Xiaodong Jiang, Jenna Geddes, Olivier Gaide, Min Jae Yoo, Thomas Kupper; Dermatology, Brigham and Women's Hospital, Boston, MA, USA.
17:15-17:25	**CM12-07 (Poster 036): Inhibition of STAT6 signals exacerbates IgE-mediated, basophil-dependent prurigo-like reactions** Takashi Hashimoto[1, 2], Takahiro Satoh[1, 2], Hiroo Yokozeki[2]; 1. Department of Dermatology, National Defense Medical College, Saitama, Japan; 2. Department of Dermatology, Graduate School, Tokyo Medical and Dental University, Tokyo, Japan
17:25-17:35	**CM12-08 (Poster 046): Langerhans cell and CD103+ dermal dendritic cell promote Tfh in the steady-state** Elizabeth Jarrett[1], Sandra Zurawski[2], Gerard Zurawski[2], Daniel Kaplan[1], Botond Igyártó[1]; 1. University of Minnesota, Minneapolis, MN, USA; 2. Baylor Institute, Dallas, TX, USA.
17:35-17:45	**CM12-09 (Poster 044): New role of IL-17A as an inducer for Th2 in murine atopic dermatitis** Saeko Nakajima, Yoshiki Miyachi, Kenji Kabashima; Dermatology, Kyoto University Graduate School of Medicine, Kyoto, Japan.
17:45-17:55	**CM12-10 (Poster 093): Diverse cutaneous dendritic cell subsets play distinct roles in the transport of soluble proteins to draining nodes and subsequent cross-presentation to naïve CD8 T cells** Suzanne Nizza, James Campbell; Dermatology, Brigham and Women's Hospital, Boston, MA, USA.

Carcinogenesis & Cancer Genetics - Concurrent Minisymposium 13

Date: Saturday 11 May 2013
Time: 16:15-18:00
Room: Sidlaw
Floor: 3

PROGRAM

Chairs	**Antonio Costanzo (Italy), Makoto Sugaya (Japan), Xiao-Jing Wang (USA)**
16:15-16:25	**CM13-01 (Poster 392): ΔNp63α drives mutagen-induced skin tumor initiation and progression to malignancy** Michael Devos[1, 2], Geertrui Denecker[1, 2], Barbara Gilbert[1, 2], Kirsten Leurs[1, 2], Kelly Lemeire[1, 2], Tino Hochepied[1, 2], Jody Haigh[1, 2], Geert Berx[1, 2], Saskia Lippens[1, 2], Peter Vandenabeele[1, 2], Wim Declercq[1, 2]; 1. DMBR, VIB, Ghent, Belgium; 2. DMB, Ghent University, Ghent, Belgium.
16:25-16:35	**CM13-02 (Poster 402): Gene expression profiling demonstrates that the effects of PTCH1 suppression are not fully reversed upon pharmacological inhibition of SMOOTHENED in human keratinocytes** Muhammad Rahman[1], Joanne Selway[2], Dimalee Herath[1], Allon Hazan[1], Avarjit Roy[2], Kenneth Langlands[2], Scott Edmunds[1], David Kelsell[1], Catherine Harwood[1], Michael Philpott[1], Graham Neill[1]; 1. Centre for Cutaneous Research, Queen Mary University of London, London, United Kingdom; 2. Clore Laboratory, University of Buckingham, Buckingham, United Kingdom.
16:35-16:45	**CM13-03 (Poster 340): MicroRNA-9 causes expansion of cancer stem cells in skin squamous cell carcinoma metastasis** Anand Reddi[1, 2], Ruth White[2], Jill Neiman[2], Gangwen Han[2], Dennis Roop[1], Xiao-Jing Wang[1, 2]; 1. Dermatology, University of Colorado School of Medicine, Denver, CO, USA; 2. Pathology, University of Colorado School of Medicine, Denver, CO, USA.
16:45-16:55	**CM13-04 (Poster 381): Conditional Cyld mutation induces epidermal cell lineage-specific abnormalities due to deregulation of NF-kB and c-Myc gene regulators** Jane Jin[1], Sally Wang[1], Joshua Cho[1], George Mosiolas Mosiolas[2], Jennifer Zhang[1]; 1. Dermatology, Duke University, Durham, NC, USA; 2. Aristotle University of Thessaloniki, Thessaloniki, Greece.
16:55-17:05	**CM13-05 (Poster 332): GLI2 induces genomic instability in human keratinocytes by inhibiting apoptosis** Eleni Pantazi[1], Emilios Gemenetzidis[1], Giuseppe Trigiante[1], Gary Warnes[2], Ling Shan[3], Echo Mao[3], Mohammed Ikram[3], Graham Neill[1], Muy-Teck Teh[4], Yong-Jie Lu[3], Michael Philpott[1]; 1. Centre for Cutaneous Research, Institute of Cell and Molecular Science,Barts and The London School of Medicine and Dentistry, Queen Mary University of London, LONDON, United Kingdom; 2. Imaging and Flow Cytometry Core facilities, Institute of Cell and Molecular Science,Barts and The London School of Medicine and Dentistry, Queen Mary University of London, LONDON, United Kingdom; 3. Centre for Molecular Oncology, Barts Cancer Institute, Barts and The London School of Medicine and Dentistry, Queen Mary University of London, LONDON, United Kingdom; 4. Department of Diagnostic and Oral Sciences, Institute of Cell and Molecular Science, Barts and The London School of Medicine and Dentistry, Queen Mary University of London, LONDON, United Kingdom.
17:05-17:15	**CM13-06 (Poster 401): Suppression of autophagy is associated with enhanced regression of skin tumors in mice** Caterina Barresi[1], Johannes Pammer[2], Irene Steiner[3], Maria Buchberger[1], Heidemarie Rossiter[1], Leopold Eckhart[1], Erwin Tschachler[1]; 1. Research Division of Biology and Pathobiology of the Skin, Department of Dermatology, Medical University of Vienna, Vienna, Austria; 2. Institute of Clinical Pathology, Medical University of Vienna, Vienna, Austria; 3. Center for Medical Statistics, Informatics, and Intelligent Systems, Section for Medical Statistics, Medical University of Vienna, Vienna, Austria.
17:15-17:25	**CM13-07 (Poster 446): ΔNp63α in squamous cancer pathogenesis** Kathryn King[1], Linan Ha[1], Roshini Ponnamperuma[1], Steve Jay[2], Wendy Weinberg[1]; 1. Laboratory of Molecular Oncology, Division of Monoclonal Antibodies, Center for Drug Evaluation and Research/FDA, Bethesda, MD, USA; 2. SAIC Frederick, Inc., Frederick, MD, USA.
17:25-17:35	**CM13-08 (Poster 385): Enhanced MET signaling in mouse epidermis activates EGFR and initiates squamous carcinogenesis** Stuart Yuspa, Fan Liu, Lisa Wright, Anne Zhuang, Glenn Merlino, Christophe Cataisson; Laboratory of Cancer Biology and Genetics, National Cancer Institute, Bethesda, MD, USA.
17:35-17:45	**CM13-09 (Poster 441): Oncogene addiction distinguishes malignant from benign skin tumors caused by deregulated Hedgehog signaling** M. Grachtchouk, D. Wilbert, J. Pero, K. Fiehler, J. Crowley, A. Photenhauer, A. Ermilov, A. Dlugosz; University of Michigan, Ann Arbor, MI, USA.
17:45-17:55	**CM13-10 (Poster 376): Diverse roles for laminin 332 subunits in squamous cell carcinoma** Matthew Caley, Vera Martins, Kate Moore, John Marshall, Edel O'Toole; Barts and the London SMD, Queen Mary University of London, London, United Kingdom.

Human Clinical Research & Therapeutics II - Concurrent Minisymposium 14

Date: Saturday 11 May 2013
Time: 16:15-18:00
Room: Fintry
Floor: 3

PROGRAM

Chairs	**Anthony Gaspari (USA), Hiroyuki Matsue (Japan), Nick Reynolds (UK)**
16:15-16:25	**CM14-01 (Poster 996): CD164 and FCRL3 are highly expressed on CD4+CD26-T cells in Sézary syndrome patients** Maria Wysocka[1], Andrew Kossenkov[3], Bernice Benoit[1], Andrea Troxel[2], Elisha Singer[1], Andras Schaffer[1], Satoshi Nagata[4], Tomoko Ise[4], Brian Kim[1], Tzvete Dentchev[1], Louise Showe[3], Alain Rook[1]; 1. Dermatology, University of Pennsylvania, Philadelphia, PA, USA; 2. Department of Biostatistics and Epidemiology, University of Pennsylvania, Philadelphia, PA, USA; 3. The Wistar Institute, Philadelphia, PA, USA; 4. Cancer Biology Research Center, Sanford Research/USD, Sioux Falls, SD, USA.
16:25-16:35	**CM14-02 (Poster 1087): The diagnosis of sezary syndrome established by T-plastin, twist, CD158k/KIR3DL2 and NKp46 gene expression** Laurence Michel, Francette Jean-Louis, Elodie Begue, Armand Bensussan, Martine Bagot; Dermatology Hôpital Saint-Louis, Inserm U976, Paris, France.
16:35-16:45	**CM14-03 (Poster 1035): Macrophages are critical for tumor formation in a xenograft model of CTCL** Xuesong Wu[1], Brian Schulte[1], Dipica Haribhai[2], Calvin Williams[2], Sam Hwang[1]; 1. Dermatology, Med College WI, Milwaukee, WI, USA; 2. Rheumatology, Med College WI, Milwaukee, WI, USA.
16:45-16:55	**CM14-04 (Poster 937): Multiple congenital melanocytic naevi and neurocutaneous melanosis are caused by post-zygotic activating mutations in codon 61 of *NRAS*, increasing the risk of melanoma in affected tissues** Veronica Kinsler[1, 2], Anna Thomas[2], Miho Ishida[2], Neil Bulstrode[3], Philip Stanier[4], Eugene Healy[5], Neil Sebire[6], Gudrun Moore[2]; 1. Paediatric Dermatology, Great Ormond St Hospital for Children, London, United Kingdom; 2. Clinical and Molecular Genetics Unit, UCL Institute of Child Health, London, United Kingdom; 3. Paediatric Plastic Surgery, Great Ormond St Hospital for Children, London, United Kingdom; 4. Neural Development Unit, UCL Institute of Child Health, London, United Kingdom; 5. Dermatopharmacology, University of Southampton, Southampton, United Kingdom; 6. Paediatric Pathology, Great Ormond St Hospital for Children, London, United Kingdom.
16:55-17:05	**CM14-05 (Poster 1046): Soluble DC-HIL protein is a novel and useful blood marker for melanoma** Jake Turrentine, Kyoichi Tamura, Kaveh Nezafati, Jin-Sung Chung, Ponciano Cruz, Kiyoshi Ariizumi; Dermatology, UT Southwestern Medical Center, Dallas, TX, USA.
17:05-17:15	**CM14-06 (Poster 984): The immunosuppressive role of dendritic cell subsets in untreated stage IV melanoma patients** Rahul Chavan, Daniela Salvador, Michael Gustafson, Allan Dietz, Mark Pittelkow, Svetomir Markovic; Mayo Clinic, Rochester, MN, USA.
17:15-17:25	**CM14-07 (Poster 1045): Vismodegib as an adjuvant to surgery for basal cell carcinomas** Mina Ally, Sumaira Aasi, Anne Chang, Claudia Teng, Erik Anderson, Irene Bailey, Ashley Wysong, Jinah Kim, Jean Tang; Dermatology, Stanford University, Redwood City, CA, USA.
17:25-17:35	**CM14-08 (Poster 958): Oral omega-3 PUFA apparently abrogates solar simulated radiation-induced immunosuppression in a randomised controlled clinical study** Suzanne Pilkington[1], Karen Massey[2], Susan Bennett[1], Naser Al-Aasswad[2], Khaled Roshdy[1], Neil Gibbs[1], Peter Friedmann[3], Anna Nicolaou[2], Lesley Rhodes[1]; 1. Institute of Inflammation and Repair, University of Manchester, Manchester, United Kingdom; 2. School of Pharmacy and Centre for Skin Sciences, University of Bradford, Bradford, United Kingdom; 3. Faculty of Medicine, University of Southampton, Southampton, United Kingdom
17:35-17:45	**CM14-09 (Poster 1007): Toll-like receptor signaling induces serum amyloid A and IL-6 expression in patients with recessive dystrophic epidermolysis bullosa** Shin Morizane, Tetsuya Takiguchi, Kazuko Ikeda, Yumi Aoyama, Keiji Iwatsuki; Dermatology, Okayama University Graduate School of Medicine, Dentistry and Pharmaceutical Sciences, Okayama, Japan.
17:45-17:55	**CM14-10 (Poster 936): Allogeneic fibroblast cell therapy accelerates wound healing in recessive dystrophic epidermolysis bullosa (RDEB)** Gabriela Petrof[1], Magdalena Martinez-Queipo[1], Jemima Mellerio[1], Paul Kemp[2], John McGrath[1]; 1. King's College London, London, United Kingdom; 2. Intercytex Group Ltd, Manchester, United Kingdom.

Photobiology - Concurrent Minisymposium 15

Date: Saturday 11 May 2013
Time: 16:15-18:00
Room: Tinto
Floor: 0

PROGRAM

Chairs	**Jin Ho Chung (South Korea), Neil Gibbs (UK), Thomas Rünger (USA)**
16:15-16:25	**CM15-01 (Poster 1265): Activation of the glucocorticoid-induced leucine zipper in human dendritic cells: Implications for immuno-modulation after extracorporeal photochemotherapy** Jeffrey Futterleib, Robert Tigelaar, Jaehyuk Choi, Richard Edelson; Dermatology, Yale University School of Medicine, New Haven, CT, USA.
16:25-16:35	**CM15-02 (Poster 1279): Toll-like receptor-4 promotes ultraviolet radiation induced cutaneous tumor development** Eva Simanyi, Israr Ahmad, Heba Rihan, Tahseen Nasti, Craig Elmets, Nabiha Yusuf; Dermatology, University of Alabama at Birmingham, Birmingham, AL, USA.
16:35-16:45	**CM15-03 (Poster 1281): Toll-like receptor-4 deficiency enhances repair of ultraviolet radiation induced DNA damage in skin** Hillary delaRosa[1], Israr Ahmad[1], Eva Simanyi[1], Iman Tamimi[1], Craig Elmets[1, 2], Nabiha Yusuf[1, 2]; 1. Dermatology, University of Alabama at Birmingham, Birmingham, AL, USA; 2. Skin Disease Research Center, University of Alabama at Birmingham, Birmingham, AL, USA.
16:45-16:55	**CM15-04 (Poster 1258): The aryl hydrocarbon receptor (AHR) suppresses UVB-induced apoptosis in human keratinocytes** Thomas Haarmann-Stemmann[1], Katrin Frauenstein[1], Ulrich Sydlik[1], Julia Tigges[1], Marc Majora[1], Helmut Hanenberg[2], Charlotte Esser[1], Ellen Fritsche[1], Jean Krutmann[1]; 1. IUF - Leibniz Research Institute for Environmental Medicine, Duesseldorf, Germany; 2. Otorhinolaryngology, Heinrich Heine University, Duesseldorf, Germany.
16:55-17:05	**CM15-05 (Poster 1231): UVA induces the aging-associated progerin through formation of oxidative damage and subsequent alternative splicing of LMNA** Hirotaka Takeuchi[1, 2], Thomas Ruenger[1]; 1. Dermatology, Boston University School of Medicine, Boston, MA, USA; 2. Dermatological R&D Skin Research Department, POLA Chemical Industries, Inc., Yokahama, Japan.
17:05-17:15	**CM15-06 (Poster 1288): Ultraviolet B (UVB) radiation-mediated loss of p38α mitogen-activated protein kinase (MAPK) facilitates oxidative stress and drives skin tumorigenesis** Arianna Kim[1], Liang Liu[1], Hamid Rezvani[2], Walid Mahfouf[2], Mohammad Athar[3], David Bickers[1]; 1. Dermatology, Columbia University, New York, NY, USA; 2. INSERM U1035 Université Bordeaux, Bordeaux, France; 3. Dermatology, University of Alabama at Birmingham, Birmingham, AL, USA.
17:15-17:25	**CM15-07 (Poster 1232): Prostaglandin E2-EP4 signaling mediates the development of a newly established niacin deficiency-induced pellagra model** Kazunari Sugita[1, 2], Takashi Nomura[2], Motonobu Nakamura[1], Yoshiki Miyachi[2], Yoshiki Tokura[3], Kenji Kabashima[2]; 1. Department of Dermatology, University of Occupational and Environmental Health, Kitakyushu, Japan; 2. Department of Dermatology, Kyoto University Graduate School of Medicine, Kyoto, Japan; 3. Department of Dermatology, Hamamatsu University School of Medicine, Hamamatsu, Japan.
17:25-17:35	**CM15-08 (Poster 1255): Repetitive irradiation of infrared-A does not promote ultraviolet induced skin tumor formation in black, yellow, and white K14-SCF mice** Shizuka Okazaki, Yoko Funasaka, Satomi Oyama, Seiji Kawana; dermatology, Nippon Medical School, Tokyo, Japan
17:35-17:45	**CM15-09 (Poster 1275): Immediate HIF-1α downregulation following UVB irradiation is triggered by NOX1-mediated ROS generation** Ghida Harfouche[1, 2], Mohsen Hosseini[1, 2], Walid Mahfouf[1, 2], Hubert de Verneuil[1, 2], Alain Taieb[1, 2], Frederic Mazurier[1, 2], Hamid Rezvani[1, 2]; 1. Inserm U1035, BORDEAUX, France; 2. University of Bordeaux, BORDEAUX, France.
17:45-17:55	**CM15-10 (Poster 1286): UVB-induced p53 mutations are associated with enhanced tumor formation in CHOP/gadd153 knockout mouse skin** Sanjay Anand[1, 2], Kishore Rollakanti[1], Nikoleta Brankov[1], Edward Maytin[2, 1]; 1. Biomedical Engineering, Cleveland Clinic, Cleveland, OH, USA; 2. Dermatology, Cleveland Clinic, Cleveland, OH, USA.

Growth Factors - Concurrent Minisymposium 16

Date: Saturday 11 May 2013
Time: 16:15-18:00
Room: Kilsyth
Floor: 0

PROGRAM

Chairs	**Johann Bauer (Austria), Mitch Denning (USA), Manabu Fujimoto (Japan)**
16:15-16:25	**CM16-01 (Poster 906): Stabilization of integrin-linked kinase by the Hsp90-CHIP axis regulates cellular force generation, migration and the fibrotic response** Korana Radovanac[1], Jessica Morgner[2], Jan-Niklas Schultz[3], Katrin Blumbach[3], Cam Patterson[4], Tamar Geiger[5], Matthias Mann[5], Thomas Krieg[3], Beate Eckes[3], Reinhard Fässler[1], Sara Wickström[2]; 1. Department of Molecular Medicine, Max Planck Institute for Biochemistry, Martinsried, Germany; 2. Max Planck Institute for Biology of Ageing, Cologne, Germany; 3. Department of Dermatology, University of Cologne, Cologne, Germany; 4. Carolina Cardiovascular Biology Center and the Departments of Medicine, Cell and Developmental Biology, and Pharmacology, University of North Carolina, Chapel Hill, NC, USA; 5. Department of Proteomics and Signal Transduction, Max Planck Institute for Biochemistry, Martinsried, Germany.
16:25-16:35	**CM16-02 (Poster 878): The spontaneous development of dermal fibrosis in mice with double heterozygous deficiency of *Klf5* and *Fli1*** Shinji Noda, Yoshihide Asano, Katsuhito Fujiu, Ichiro Manabe, Ryozo Nagai, Shinichi Sato; The University of Tokyo, Tokyo, Japan.
16:35-16:45	**CM16-03 (Poster 915): Reduced fibrotic response in COMP-deficient mice** J. Schulz[1], P. Agarwal[1], K. Blumbach[1], M. Koch[2], T. Krieg[1], B. Eckes[1]; 1. Dermatology, University of Cologne, Cologne, Germany; 2. Oral Biology, University of Cologne, Cologne, Germany.
16:45-16:55	**CM16-04 (Poster 923): Epidermal EGFR signalling controls cutaneous host defense and prevents inflammation** Beate Maria Lichtenberger[1], Peter Arne Gerber[2, 3], Martin Holcmann[1], Bettina Alexandra Buhren[2, 3], Viktoria Smolle[1], Holger Schrumpf[2], Edwin Boelke[4], Parinaz Ansari[2], Colin Mackenzie[5], Andreas Wollenberg[6], Jens Fischer[7], Juergen Harder[8], Jens Michael Schroeder[8], Bernhard Homey[2], Maria Sibilia[1]; 1. Institute for Cancer Research, Medical University of Vienna, Vienna, Austria; 2. Dermatology, University of Duesseldorf, Duesseldorf, Germany; 3. Physiology & Biophysics, University of California, Irvine, CA, USA; 4. Radiation-Oncology, University of Duesseldorf, Duesseldorf, Germany; 5. Institute of Medical Microbiology, University of Duesseldorf, Duesseldorf, Germany; 6. Dermatology and Allergy, Ludwig-Maximilian University, Munich, Germany; 7. Institute of Pharmacology and Clinical Pharmacology, University of Duesseldorf, Duesseldorf, Germany; 8. Dermatology, University Hospital Schleswig-Holstein, Kiel, Germany.
16:55-17:05	**CM16-05 (Poster 645): Human β-defensin-3 improves the epithelial tight junction (TJ) barrier through activation of glycogen synthase kinase-3 (GSK-3) and protein kinase C (PKC)** Chanisa Kiatsurayanon[1, 2], François Niyonsaba[1], Rithee Smithrithee[1, 2], Toan The Nguyen[1, 2], Toshihiro Akiyama[1, 2], Hiroko Ushio[1], Shigaku Ikeda[1, 2], Ko Okumura[1], Hideoki Ogawa[1]; 1. Atopy (Allergy) Research Center, Juntendo University Graduate School of Medicine, Tokyo, Japan; 2. Department of Dermatology, Juntendo University Graduate School of Medicine, Tokyo, Japan.
17:05-17:15	**CM16-06 (Poster 718): Flightless I overexpression impairs skin barrier development, function and recovery post-blistering** Zlatko Kopecki[1, 2], Gink Yang[2], Ruth Arkell[3], Jessica Jackson[2], Hioraki Iwata[4], Ralf Ludwig[4], Detlef Zillikens[4], Dedee Murrell[5], Allison Cowin[1, 2]; 1. Centre for Regenerative Medicine, Mawson Institute, University of South Australia, Adelaide, SA, Australia; 2. Women's and Children's Health Research Institute, North Adelaide, SA, Australia; 3. Research School of Biological Sciences, Australian National University, Canberra, ACT, Australia; 4. Department of Dermatology, University of Lubeck, Lubeck, Germany; 5. Department of Dermatology, St George Hospital, Sydney, NSW, Australia.
17:15-17:25	**CM16-07 (Poster 734): Role of kindlin-2 in epidermal homeostasis** Yinghong He[1], Tanja Sonnenwald[2], Gudula Schmidt[2], Anja Fritsch[1], Leena Bruckner-Tuderman[1], Cristina Has[1]; 1. Dermatology, University, Freiburg, Germany; 2. Pharmacology, University, Freiburg, Germany.
17:25-17:35	**CM16-08 (Poster 926): Loss of type VII collagen in cutaneous SCC increases angiogenesis** Vera Martins[1], Matthew Caley[1], Kate Moore[2], Zsofia Szentpetery[1], Dedee Murrell[3], Min-Hee Kim[3], John McGrath[4], Rino Cerio[1], Mei Chen[5], John Marshall[2], Edel O'Toole[1]; 1. Centre for Cutaneous Research, Blizard Institute, Queen Mary University of London, London, United Kingdom; 2. Institute of Cancer, Queen Mary University of London, London, United Kingdom; 3. Dermatology, University of NSW, Sydney, NSW, Australia; 4. Guy's, King's College & St Thomas' School of Med, London, United Kingdom; 5. Dermatology, USC, Los Angeles, CA, USA.
17:35-17:45	**CM16-09 (Poster 909): Keratinocyte motility is regulated by ganglioside GM3-induced suppression of insulin-like growth factor-1 signaling** Amy Paller[1], Desmond Shipp[1], Jianyun Lu[1], Heather Wilson[1], Pratik Randeria[2], Chad Mirkin[2], Xiaoqi Wang[1]; 1. Dermatology, Northwestern Univ., Chicago, IL, USA; 2. Chemistry, Northwestern Univ., Evanston, IL, USA.
17:45-17:55	**CM16-10 (Poster 967): Mitochondrial generation of reactive oxygen species promotes epidermal differentiation and hair follicle development** Robert Hamanaka[1], Andrea Glasauer[1], Paul Hoover[2], Shuangni Yang[2], Hanz Blatt[2], Spiro Getsios[2], Cara Gottardi[1], Robert Lavker[2], Navdeep Chandel[1]; 1. Medicine, Northwestern University, Chicago, IL, USA; 2. Dermatology, Northwestern University, Chicago, IL, USA

Closing Remarks

Date: Saturday 11 May 2013
Time: 18:00-18:30
Room: Pentland
Floor: 3

Contributors:	**Masayuki Amagai (Japan), Alexander Enk (Germany), Tom Kupper (USA)**

NOTES

Posters

Adaptive Immunity

All orals designated with an asterisk (*) below are presented in a Concurrent Session (see code). Orals designated with two asterisks (**) will be presented during a Plenary Session (see code).

001.The antimycotics suppress thymic stromal lymphopoietin production in human keratinocytes Carren Hau, Naoko Kanda, Shinichi Watanabe; Dermatology, Teikyo University School of Medicine, Tokyo, Japan.

002.The possibility of having the same pathogenesis of mycosis fungoides, large-and small plaque parapsoriasis Akmal Sidikov, Denis Zaslavsky, Ruslan Nasyrov, Zarrab Zouli; Dermatology and Venerology, Saint-Petersburg Pediatric Medical University, Saint-Petersburg, Russian Federation.

003.Reduced CD18 levels drive Treg conversion into Th17 cells in the CD18hypo PL/J mouse model of psoriasis Kamayani Singh[1], Martina Gatzka[1], Lisa Borkner[1, 3], Thorsten Peters[1], Heidi Hainzl[1], Hongling Wang[1, 2], Anca Sindrilaru[1], Karin Scharffetter-Kochanek[1]; 1. Dermatology and Allergic Diseases, Ulm University, Ulm, Germany; 2. Shanghai Jiao Tong University School of Medicine, Shanghai, China; 3. HZI, Braunschweig, Germany.

004*(CM6-02). Programmed cell death1 (PD-1) regulates the effector function of autoimmune CD8 T cells and protects against immune-related disease Naoko Okiyama, Stephen Katz; Dermatology Branch, CCR, NCI, NIH, Bethesda, MD, USA.

005.Anti-inflammatory effect of a traditional Chinese medicine Qingpeng ointment on induced atopic dermatitis in mice Yunzhu Li, Xueyan Lu, Linfeng Li; Dermatology, Peking University Third Hospital, Beijing, China.

006.Human Langerhans' cell migration can be inhibited by blocking β1 integrin function Faisal Ali[1], Rebecca Dearman[2], Stephanie Ogden[1], Kieran Mellody[2], Martin Humphries[2], Ian Kimber[2], Christopher Griffiths[1]; 1. Dermatology Centre, University of Manchester, Manchester, United Kingdom; 2. Faculty of Life Sciences, University of Manchester, Manchester, United Kingdom.

007.Low numbers of memory T cells correlate with minor CCL27 expression in prenatal human skin Michael Mildner[1], Marion Prior[1], Maria Gschwandtner[1], Christopher Schuster[1], Erwin Tschachler[1, 2], Adelheid Elbe-Bürger[1]; 1. Dermatology, Medical University of Vienna, Vienna, Austria; 2. CE.R.I.E.S., Neuilly, France.

008.Calcitonin gene-related peptide (CGRP) and norepinephrine (NE) each bias Langerhans cell (LC) antigen presentation towards generation of Th17 cells via actions on endothelial cells (ECs) Richard Granstein, John Wagner, Wanhong Ding; Weill Cornell Medical College, New York, NY, USA.

009.IFN-α abrogates the regulatory function of human CD4+CD25+FOXP+ Treg via MAPK/PDE4 pathway-regulated cAMP repression Verena Raker[1], Nicole Bacher[1], Claudia Hofmann[1], Edith Graulich[1], Melanie Schwenk[1], Ria Baumgrass[2], Tobias Bopp[3], Ulrich Zechner[4], Luzie Merten[4], Christian Becker[1], Kerstin Steinbrink[1]; 1. University Medical Center, Dermatology, Mainz, Germany; 2. German Rheumatism Research Centre (DRFZ), Berlin, Germany; 3. Johannes Gutenberg-University, Institute of Immunology, Mainz, Germany; 4. University Medical Center, Institute of Human Genetics, Mainz, Germany.

010.Accumulation of varicella zoster specific CD4+Foxp3+Tregs after cutaneous Ag challenge in humans Daisy Sandhu[1, 2], Milica Vukmanovic-Stejic[1], Toni Sobande[1], Elaine Agius[1, 2], Graham Ogg[3], Malcolm Rustin[2], Arne Akbar[1]; 1. Infection and Immunity, UCL, London, United Kingdom; 2. Dermatology, Royal Free Hospital, London, United Kingdom; 3. MRC Human Immunology Unit, University of Oxford, Oxford, United Kingdom.

011.TNF inhibitors directly target Th17 cells in psoriasis Takeo Shiga[1], Kenji Sato[1], Masahito Tarutani[1], Sayo Kataoka[2], Shigetoshi Sano[1]; 1. Dermatology, Kochi University, Nankoku, Japan; 2. Science Research Center, Kochi University, Nankoku, Japan.

012.Early defect in cutaneous immune responses to varicella zoster virus challenge in old individuals Milica Vukmanovic-Stejic[1], Judilyn Fuentes-Duculan[3], Daisy Sandhu[1, 2], Toni Sobande[1], Mayte Suarez-Farinas[3], Elaine Agius[1, 2], Hiroshi Mitsui[3], James Krueger[3], Malcolm Rustin[2], Arne Akbar[1]; 1. Infection and Immunity, UCL, London, United Kingdom; 2. Dermatology, Royal Free Hospital, London, United Kingdom; 3. Investigative Dermatology, Rockefeller University, New York, NY, USA.

013.Imiquimod with dacarbazine diferentiates B7H1-expressing MDSC into IFN-γ producing macrophages in B16F10 melanoma Taku Fujimura[1], Yumi Kambayashi[1], Sadanori Furudate[1], Naoto Ishii[2], Setsuya Aiba[1]; 1. Department of Dermatology, Tohoku University, Graduate School of Medicine, Sendai, Japan; 2. Department of Immunology, Tohoku University, Graduate School of Medicine, Sendai, Japan.

014.Induction of CD163+ M2 macrophages in the lesional skin of eosinophilic pustular folliculitis Sadanori Furudate, Taku Fujimura, Yumi Kambayashi, Setsuya Aiba; Department of Dermatology, Tohoku University Graduate School of Medicine, Sendai, Japan.

015.Involvement of IL17 positive T cells in acne vulgaris Béatrice Bertino[1], Isabelle Carlavan[1], Manon Roquet[1], Bruno Mehul[1], Sophie Déret[1], Philippe Grundt[1], Pascale Reiniche[1], Florence Joly[1], Béatrice Gauthier[1], Jérôme Aubert[1], André Jomard[1], Philippe Martel[1], Carine Marty[1], Ulrike Blume-Peytavi[2], Johannes Voegel[1]; 1. Galderma R&D, Sophia Antipolis, France; 2. Department of Dermatology, Charité-Universitätsmedizin, Berlin, Germany.

016.A new model for evaluating topical treatments for Th17 mediated diseases using *ex vivo* human skin Heather Aloor, Carlos Peredo, Hans Hofland, Susan Smith, Jean-Philippe Therrien, Javier Cote-Sierra; Center for Skin Biology, Stiefel, a GSK company, Research Triangle Park, NC, USA.

017.Expression of IL-23/Th17 pathway in early inflamed acne lesions Hanna-Leena Kelhälä[1], Riitta Palatsi[1], Sari Lehtimäki[2], Nanna Fyhrquist[2], Matti Kallioinen[3], Minna Kubin[1], Kaisa Tasanen[1], Harri Alenius[2], Antti Lauerma[4]; 1. Department of Dermatology, University of Oulu, Oulu, Finland; 2. Control of Hypersensitivy Diseases, Finnish Institute of Occupational Health, Helsinki, Finland; 3. Department of Pathology, University of Oulu, Oulu, Finland; 4. Department of Dermatology, University of Helsinki, Helsinki, Finland.

018.Development of a novel immunotherapy for melanoma which inhibits interaction between CD155 on melanoma cells and TIGIT on activated CTL Takashi Inozume[1], Junpei Furuta[1], Kazutoshi Harada[1], Tomonori Yaguchi[2], Yutaka Kawakami[2], Shinji Shimada[1]; 1. Dermatology, University of Yamanashi, Yamanashi, Japan; 2. Division of Cellular Signaling, Institute for Advanced Medical Research, Keio University, Tokyo, Japan.

019.Interferon-and tumor necrosis factor control human cancer by induction of cellular senescence Thomas Wieder[1], Heidi Braumüller[1], Karin Schilbach[2], Kilian Braungart[1], Frank Essmann[3], Ellen Brenner[1], Susanne Weidemann[1], Rupert Handgretinger[2], Klaus Schulze-Osthoff[3], Martin Röcken[1]; 1. Dermatology, University of Tübingen, Tübingen, Germany; 2. General Pediatrics, University of Tübingen, Tübingen, Germany; 3. Biochemistry, University of Tübingen, Tübingen, Germany.

020.Casein kinase II regulates the intracellular routing of the dendritic cell receptor DEC205 to MHC class II+ compartments and it's recycling to the cell surface Rainer Koch, Sabine Ring, Alexander Enk, Karsten Mahnke; Ruprecht Karls University, Heidelberg, Germany.

021.The amino acid sequence EDExxL in the intracellular domain of the DEC205 receptor mediates antigen uptake in dendritic cells by interaction with adaptin-2 Sabine Ring, Anna Pushkarevskaya, Rainer Koch, Alexander Enk, Karsten Mahnke; Ruprecht Karls University, Heidelberg, Germany.

022*(CM6-07).GILT expression in medullary thymic epithelial cells is required for presentation of tissue-specific self antigens and deletion of autoreactive T cells Matthew Rausch[1], Todd Metzger[2], Mark Anderson[2], Karen Hastings[1]; 1. University of Arizona College of Medicine, Phoenix, AZ, USA; 2. University of California, San Francisco, CA, USA.

023.Pathodynamics of CD8 T-cell trafficking in a murine model of graft-versus-host disease (GvHD), implicate the CXCR3 axis as a crucial organizer of cutaneous inflammation and injury Vadim Villarroel, Naoko Okiyama, Gaku Tsuji, Jay Linton, Stephen Katz; Derm Branch, CCR, NCI, NIH, Beth, MD, USA.

024.Characterization of house dust mite specific T cells in atopic dermatitis at the single cell level Lennart Rösner[1], Annice Heratizadeh[1], Christian Hennig[2], Gesine Hansen[2], Philippe Moingeon[3], Thomas Werfel[1]; 1. Department of Dermatology and Allergy, Division of Immundermatology and Allergy Research, Hannover Medical School, Hannover, Germany; 2. Department of Pediatric Immunology, Allergology and Pneumology, Hannover Medical School, Hannover, Germany; 3. Stallergenes SA, Antony, France.

025(PL2-05).Anaphylaxis triggered by innate immune signals as co-factors is mediated by basophils independent of IgE** Florian Wölbing[1], Susanne Kaesler[1], Wolfgang Kempf[1], Balasaheb Siraskar[2], Priscila Eckstein[1], Martin Köberle[1], Yuliya Skabytska[1], Florian Lang[2], Philipp Yu[3], David Voehringer[4], Martin Röcken[1], Tilo Biedermann[1]; 1. Department of Dermatology, Eberhard Karls University, Tübingen, Germany; 2. Department of Physiology, Eberhard Karls University, Tübingen, Germany; 3. Institute of Immunology, Philipps-University, Marburg, Germany; 4. Department of Infection Biology, Friedrich-Alexander-University, Erlangen, Germany.

026.Nanpoarticle based intradermal formulation targeting DC skin subsets to increase vaccine potency against HIV-1 John Mitchell[1], Sachiko Hirosue[2], Gary Dolton[1], Andrew Sewell[1], Jeffrey Hubbell[2], Fabien Blanchet[1], Vincent Piguet[1]; 1. Cardiff University, Cardiff, United Kingdom; 2. EPFL, Lausanne, Switzerland.

027.The specific IgE against sweat antigen in sera of patients with allergic diseases Makiko Hiragun[1], Kaori Ishii[1], Takaaki Hiragun[1, 2], Hidenori Suzuki[3], Yuhki Yanase[1], Shoji Mihara[1], Michihiro Hide[1]; 1. Department of Dermatology, Integrated Health Sciences, Institute of Biomedical and Health Sciences,Hiroshima University, Hiroshima, Japan; 2. Natural Science Center for Basic Research and Development, Hiroshima University, Hiroshima, Japan; 3. Faculty of Human Science, Hiroshima Bunkyo Women's University, Hiroshima, Japan.

028(PL4-01).Identification of inducible lymph node-like structures in the skin: A key site to elicit contact hypersensitivity responses** Yohei Natsuaki[1, 2], Gyohei Egawa[1], Satoshi Nakamizo[1], Sho Hanakawa[1], Takashi Hashimoto[2], Yoshiki Miyachi[1], Kenji Kabashima[1]; 1. Dermatology, Kyoto University Graduate School of Medicine, Kyoto, Japan; 2. Dermatology, Kurume University School of Medicine, Kurume, Japan.

029.Therapeutic potential of B and T lymphocyte attenuator expressed on CD8+ T cells for contact hypersensitivity Daiki Nakagomi[1, 2], Kotaro Suzuki[1], Hiroyuki Matsue[2], Shinji Shimada[3], Hiroshi Nakajima[1]; 1. Allergy and Clinical Immunology, Graduate School of Medicine, Chiba University, Chiba, Japan; 2. Dermatology, Graduate School of Medicine, Chiba University, Chiba, Japan; 3. Dermatology, Graduate School of Medicine, Yamanashi University, Yamanashi, Japan.

030.IL-6 and IL-10 secreted from B16 melanoma cells initiate the differentiation of CD4+/ CD8+ T cells in cancer microenvironment: Inhibition of STAT3-signaling cascades is prerequisite to cancer immunotherapies Fumieh Hanawa, Takashi Okamoto, Naotaka Shibagaki, Shinji Shimada; Dept of Dermatology, University of Yamanashi, Faculty of Medicine, Yamanashi, Japan.

031.The expressions of T cell immunoglobulin and mucin domain molecules on peripheral blood mononuclear cells and skin lesions of sarcoidosis patients Kana Mizuno, Wakako Inoue, Chiori Miyake, Manabu Osawa, Hirotsugu Tanimura, Fumikazu Yamazaki, Hiroyuki Okamoto; Dermatology, Kansai Medical University, Moriguchi, Japan.

032.CXCR3 deficiency prolongs Th1-type contact hypersensitivity Makoto Sugaya[1], Hiraku Suga[1], Tomomitsu Miyagaki[1], Hanako Ohmatsu[1], Hitoshi Okochi[2], Shinichi Sato[1]; 1. Department of Dermatology, Faculty of Medicine, University of Tokyo, Tokyo, Japan; 2. Department of Regenerative Medicine, Research Institute, National Center for Global Health and Medicine, Tokyo, Japan.

033.Opposing immune reactions drive psoriasis and eczema Maria Quaranta[1], Stefanie Eyerich[1], Andrea Cavani[2], Carsten Schmidt-Weber[1], Johannes Ring[3], Kilian Eyerich[3]; 1. Center of Allergy and Environment (ZAUM), Technische Universität and Helmholtz Center Munich, Munich, Germany; 2. Laboratory of experimental immunology, IDI-IRCCS, Rome, Italy; 3. Department of Dermatology and Allergy, Technische Universität Munich, Munich, Germany.

034.Anti-inflammatory effect of cholecystokinin in skin disorders Kazuki Tatsuno, Jun-ichi Sakabe, Kazuyo Nishida, Hayato Yamaguchi, Satoshi Hirakawa, Yoshiki Tokura; Dermatology, Hamamatsu University School of Medicine, Hamamatsu, Japan.

035*(CM12-01).TACE/ADAM17 deficiency in epidermis leads to IL-17A-associated inflammation with atopic dermatitis-like phenotype Tetsuro Kobayashi[1], Keisuke Horiuchi[2], Takeya Adachi[1], Hiroshi Kawasaki[1], Masayuki Amagai[1], Keisuke Nagao[1]; 1. Dermatology, Keio University School of Medicine, Tokyo, Japan; 2. Orthopedic Surgery, Keio University School of Medicine, Tokyo, Japan.

036*(CM12-07).Inhibition of STAT6 signals exacerbates IgE-mediated, basophil-dependent prurigo-like reactions Takashi Hashimoto[1, 2], Takahiro Satoh[1, 2], Hiroo Yokozeki[2]; 1. Department of Dermatology, National Defense Medical College, Saitama, Japan; 2. Department of Dermatology, Graduate School, Tokyo Medical and Dental University, Tokyo, Japan.

037.Regulation of Claudin-1 expression in Langerhans cells by EpCAM Takeshi Ouchi, Mark Udey; Dermatology Branch, National Cancer Institute, NIH, Bethesda, MD, USA.

038.Mechanistic correlations between two itch biomarkers, cytokine interleukin-31 and neuropeptide β-endorphin, via STAT3/calcium axis in atopic dermatitis Chien-Hui Hong[1, 2, 3], Chih-Hung Lee[3], Wei-Tai Yu[3], Hung-Yi Chuang[4], Gwo-Shing Chen[3], Hsin-Su Yu[3]; 1. Dermatology, National Yang-Ming Univeristy, Taipei, Taiwan; 2. Dermatology, Kaohsiung Veterans General Hospital, Kaohsiung, Taiwan; 3. Dermatology, Kaohsiung Medical University, Kaohsiung, Taiwan; 4. Public Health, Kaohsiung Medical University, Kaohsiung, Taiwan.

039(PL3-01).Epidermotropic resident memory T cells require hair follicle-derived cytokines to reside in epidermis** Takeya Adachi, Tetsuro Kobayashi, Masayuki Amagai, Keisuke Nagao; Dermatology, Keio University School of Medicine, Tokyo, Japan.**040.Antigen-presenting dendritic cells maintain immunological tolerance in the oral cavity by inducing Foxp3+ regulatory T cells** Sayuri Yamazaki, Akimichi Morita; Department of Geriatric and Environmental Dermatology, Nagoya City University Graduate School of Medical Sciences, Nagoya, Japan.

041*(CM12-03).Newly identification of a migratory subset of dermal $\gamma\delta$ T cells that initiate contact hypersensitivity by producing TNF-alpha in the draining lymph nodes Satoshi Nakamizo[1], Gyhei Egawa[1], Michio Tomura[2], Yoshiki Miyachi[1], Kenji Kabashima[1]; 1. Dermatology, Kyoto University, Kyoto, Japan; 2. Center for Innovation in Immunoregulative and Therapeutics, Kyoto University, Kyoto, Japan.

042*(CM12-05).Single cell tracking reveals the segregation of slow cycling memory CD8 T cells from the effector pool at the peak of the immune response Ichiko Kinjyo[1], Jim Qin[1], Paulus Mrass[1], Cameron Wellard[2], Michio Tomura[3], Osami Kanagawa[3], Atsushi Miyawaki[4], Phil Hodgkin[2], Wolfgang Weninger[1]; 1. Centenary Institute, Sydney, NSW, Australia; 2. Walter and Eliza Hall Institute of Medical Research, Melbourne, VIC, Australia; 3. Research Center for Allergy and Immunology, RIKEN, Yokohama, Japan; 4. Brain Science Institute, RIKEN, Kobe, Japan.

043.A system for differentiating human monocytes into antigen presenting cells D. Khalil, S. Saluja, J. Futterleib, H. Feng, E. Robinson, D. Hanlon, R. Tigelaar, R. Edelson; Dermatology, Yale University, New Haven, CT, USA.

044*(CM12-09).New role of IL-17A as an inducer for Th2 in murine atopic dermatitis Saeko Nakajima, Yoshiki Miyachi, Kenji Kabashima; Dermatology, Kyoto University Graduate School of Medicine, Kyoto, Japan.

045*(CM12-04).Langerhans cell derived IL-6 is required for the differentiation of Th17 during skin infection with Candida albicans Botond Igyarto[1], Elizabeth Jarrett[1], Aleh Bobr[1], Maryam Gerami-Nejad[2], Judith Berman[2], Daniel Kaplan[1]; 1. Department of Dermatology, Center for Immunology, University of Minnesota, Minneapolis, Minneapolis, MN, USA; 2. Department of Molecular and Cellular Biology, University of Minnesota, Minneapolis, Minneapolis, MN, USA.

046*(CM12-08).Langerhans cell and CD103+ dermal dendritic cell promote Tfh in the steady-state Elizabeth Jarrett[1], Sandra Zurawski[2], Gerard Zurawski[2], Daniel Kaplan[1], Botond Igyártó[1]; 1. University of Minnesota, Minneapolis, MN, USA; 2. Baylor Institute, Dallas, TX, USA.

047.RNase7 regulates TH2 cytokine production by activated human T-cells Verena Kopfnagel[1], Jürgen Hader[2], Michael Kleine[3]; 1. Department of Dermatology and Allergy, Hannover Medical School, Hannover, Germany; 2. Department of Dermatology, University Hospital Schleswig-Holstein, Kiel, Germany; 3. PLANTON GmbH, Kiel, Germany.

048.A study on the heterogeneity of CD16+ myeloid cells in human blood that serve as precursors of inflammatory dermal dendritic cells Priscila Eckstein[1], Thomas Döbel[1], Anja Kunze[1], Alexander Enk[1], Michael Bachmann[2], Knut Schäkel[1]; 1. Department of Dermatology, Ruprecht-Karls-Universität, Heidelberg, Germany; 2. Institute of Immunology, Technische Universität, Dresden, Germany.

049.Human Th9 cells: A novel skin homing T cell subset with potent autocrine and paracrine proinflammatory properties Christoph Schlapbach[1, 2], Chao Yang[2], Rei Watanabe[2], Ahmed Gehad[2], Emmanuella Guenova[2], Jessica Teague[2], Nikhil Yawalkar[1], Thomas Kupper[2], Rachael Clark[2]; 1. Department of Dermatology, University of Bern, Bern, Switzerland; 2. Department of Dermatology, Brigham and Women's Hospital, Harvard Medical School, Boston, MA, USA.

050.IRF8 and IRF4 may work cooperatively in CD8 T cell effector differentiation Fumi Miyagawa[1, 2], Hong Zhang[2], Stephen Katz[2], Hideo Asada[1]; 1. Dermatology, Nara Medical University, Kashihara, Japan; 2. Dermatology, NCI/NIH, Bethesda, MD, USA.

051.HIV infection predisposes skin to toxic epidermal necrolysis via depletion of skin-directed CD4(+) T cells Chao Yang, Arturo Saavedra; Dermatology, Brigham and Women's Hospital, Boston, MA, USA.

052.Characterisation of epidermal and dermal T cells in healthy human skin Stanley Cheuk, Liv Eidsmo, Mona Ståhle; Department of Medicine Solna, Karolinska Institutet, Stockholm, Sweden.

053.Beta arrestin-2 signalling attenuates contact allergic inflammation and inhibits proinflammatory chemokine production by keratinocytes Evelyn Gaffal[1], Mira Cron[1], Nicole Glodde[1], Ralf Schroeder[2], Evi Kostenis[2], Thomas Tueting[1]; 1. Dep. of Dermatology and Allergy, University of Bonn, Bonn, Germany; 2. Institute for Pharmaceutical Biology, University of Bonn, Bonn, Germany.

054.Time course effects of topical Dermatophagoides farinae applications on the progression of atopic dermatitis-like symptoms in NC/Nga mice Ji-Yun Kim, Mi Sook Jeong, Kui Young Park, Mi-Kyung Lee, Seong Jun Seo; Department of Dermatology, Chung Ang University College of Medicine, Seoul, Republic of Korea.

055.Human Langerhans cells potently induce Th1 cytokines in the presence of poly(I:C), but are less responsive than dendritic cells towards bacterial stimuli André Said, Monika Schäfer-Korting, Günther Weindl; Institute of Pharmacy (Pharmacology and Toxicology), Freie Universität Berlin, Berlin, Germany.

056.Effect of topical application of Quercetin on atopic dermatitis in NC/Nga mice Sun Young Choi[1], Mi Sook Jeong[1], Ji-Yun Kim[1], Kui Young Park[1], Mi-Kyung Lee[2], Seong Soo Joo[3], Seong Jun Seo[1]; 1. Dermatology, Institute of Atopic Dermatitis, Department of Dermatology, Chung-Ang University College of Medicine, Seoul, Republic of Korea; 2. Laboratory Medicine, College of Medicine, Department of Laboratory Medicine, Chung-Ang University College of Medicine, Seoul, Republic of Korea; 3. Marine Molecular Biotechnology, Gangneung-Wonju National University, Gangneung, Republic of Korea.

057.Induction of regulatory T cells by human antimicrobial peptides Agatha Schwarz, Anika Bruhs, Thomas Schwarz; Department of Dermatology, University Clinics Schleswig-Holstein, Kiel, Germany.

058.Molecular characterization of ECP-induced monocyte-derived dendritic cells Kristina Liu, Eve Robinson, Renata Filler, Julia Lewis, Robert Tigelaar, Richard Edelson, Michael Girardi; Dermatology, Yale University School of Medicine, New Haven, CT, USA.

059.CD8 T cell epitopes in large and small T antigens of merkel cell polyoma virus exclusively elicit anti-viral T-cell responses in merkel cell carcinoma patients Rikke Lyngaa[1], Charlotte Thrue[1], Per thor Straten[1], Paul Nghiem[2], Jürgen Becker[3], Sine Hadrup[1]; 1. Center for Cancer Immune Therapy, University Hospital Herlev, Herlev, Denmark; 2. University of Washington Dermatology, Fred Hutchinson Cancer Research Center, Seattle, WA, USA; 3. General Dermatology, Medical University of Graz, Graz, Austria.

Posters

060.The PD-1 pathway is a potential drug target for squamous cell carcinoma in solid organ transplant recipients Claire Wang[1], Valerie Yanofsky[3], Hiroshi Mitsui[2], James Krueger[1], Diane Felsen[2], John Carucci[3]; 1. Laboratory for Investigative Dermatology, The Rockefeller University, New York, NY, USA; 2. Department of Urology, Weill Cornell Medical College, New York, NY, USA; 3. Department of Dermatology, NYU Langone Medical Center, New York, NY, USA.

061.Modulation of CD81 by hypersensitivity reaction inducer drugs Claire Boulard[1, 2], Maud Vaillant[1, 2], Damien Picard[1, 2], Kim Perichon[1], Bassam Sabbah[1], Baptiste Janela[3], Florence Tetart[1, 2], Pascal Joly[1, 2], Sebastien Calbo[1], Frederique Caillot[1], Philippe Musette[1, 2]; 1. INSERM U905, Normandie Univ, IRIB, Rouen University Hospital, Department of Dermatology, Rouen, France; 2. Department of Dermatology, Rouen University Hospital, Rouen, France; 3. Singapore Immunology Network, Agency for Science, Technology and Research (A*STAR), Singapore, Singapore.

062.Genetic variations in IL6 and IL12B as protective markers for psoriasis Andreea Boca[1], Marina Talamonti[2], Marco Galluzzo[2], Elisabetta Botti[2], Anca Buzoianu[1], Antonio Costanzo[2]; 1. Department of Pharmacology, Toxicology and Clinical Pharmacology, Iuliu Hatieganu University of Medicine and Pharmacy, Cluj-Napoca, Romania; 2. Department of Dermatology, University of Rome Tor Vergata, Rome, Italy.

063.Human CD141+ dermal dendritic cells integrate danger signals to modulate their function Barry Flutter, Niwa Ali, Guillermo Barinaga, Isabella Tosi, Ekaterina Semenova, Frank Nestle; St John's Institute of Dermatology, King's College London, London, United Kingdom.

064.*In vivo* induction of human cutaneous inflammation results in the accumulation of neutrophils expressing RORγ and IL-17, while IL-17+RORγ+ T cells are absent Romy Keijsers[1, 2], Piet van Erp[1], Hans Koenen[2], Irma Joosten[2], Peter van de Kerkhof[1]; 1. Department of Dermatology, Radboud University Nijmegen Medical Centre, Nijmegen, Netherlands; 2. Department of Laboratory Medicine, Laboratory of Medical Immunology, Radboud University Nijmegen Medical Centre, Nijmegen, Netherlands.

065.Differential migration of Langerhans' cells from patients with early- and late-onset psoriasis L. Eaton[1], L. Chularojanamontri[2], E. Theodorakopoulou[2], R. Warren[2], R. Dearman[1], I. Kimber[1], C. Griffiths[2]; 1. The Faculty of Life Sciences, University of Manchester, Manchester, United Kingdom; 2. The Dermatology Centre, University of Manchester, Manchester, United Kingdom.

066.Tubacin, a histone deacetylase 6 inhibitor, suppresses contact sensitivity via impairment of the immune synapse Gaku Tsuji, Naoko Okiyama, Vadim Villarroel, Stephen Katz; Dermatology Branch, NCI, NIH, Bethesda, MD, USA.

067.The regulatory T cell population is altered in atopic dermatitis Verena Martinz[1], Christoph Tripp[1], Robert Gruber[1], Daniela Finke[2], Christine Heufler-Tiefenthaler[1], Heidelinde Fiegl[3], Matthias Schmuth[1], Sandrine Dubrac[1]; 1. Department of Dermatology and Venereology, Innsbruck Medical University, Innsbruck, Austria; 2. Developmental Immunology, Department of Biomedicine, University of Basel, Basel, Switzerland; 3. Department of Gynecology and Obstetrics, Innsbruck Medical University, Innsbruck, Austria.

068.The role of reactive oxygen species produced in XS-106 dendritic cells by the irritant, benzalkonium chloride Dae Suk Kim[1], Jeong Hwan Je[1], Dashlkhumbe Byamba[1], Sung Hee Kim[1], Dong Yoon Shin[1], Hyunjoong Jee[1], Jin-Ok Baek[2], Han Kyoung Cho[3], Min-Geol Lee[1]; 1. Department of Dermatology and Cutaneous Biology Research Institute, Yonsei University College of Medicine, Seoul, Republic of Korea; 2. Department of Dermatology, Gil Medical Center, Gachon University, Incheon, Republic of Korea; 3. Department of Dermatology, Kwandong University College of Medicine, Goyang, Republic of Korea.

069.Human intraepidermal T cells: A phenotypically and functionally distinct population of skin resident T cells Rei Watanabe[1], Ahmed Gehad[1], Chao Yang[1], Jessica Teague[1], Julien Seneschal[2], Thomas Kupper[1], Rachael Clark[1]; 1. Department of Dermatology, Brigham and Women's Hospital, Boston, MA, USA; 2. Department of Dermatology, Saint-André Hospital, Bordeaux University, Bordeaux, France.

070.Deciphering the role of Langerin+ Dermal DC in the immune response inducing by skin scarification (S.S.) with vaccinia virus (VACV) Julien Seneschal[1, 2], Xiaodong Jiang[1], Thomas Kupper[1]; 1. Dermatology, Brigham and Women's Hospital, Boston, MA, USA; 2. Dermatology and Pediatric Dermatology, National Center for Rare Skin Diseases, INSERM U 1035, Bordeaux, France.

071.Merkel cell carcinoma-specific T cells fluctuate with tumor burden and express therapeutically targetable PD-1 and Tim-3 exhaustion markers Olga Afanasiev[1], Lola Yelistratova[1], Natalie Miller[1], Kotaro Nagase[1], Kelly Paulson[1], Jayasri Iyer[1], Dafina Ibrani[1], David Koelle[1, 2], Paul Nghiem[1]; 1. Medicine/Dermatology/Pathology, University of Washington, Seattle, WA, USA; 2. Fred Hutchinson Cancer Research Center, Seattle, WA, USA.

072.Propionibacterium acnes induced IL-17 response in acne vulgaris: A potential inflammatory response targeted by all trans retinoic acid and vitamin D3 George Agak[1], Min Qin[1], Jennifer Nobe[1], Myung-Hwa Kim[2], Stephan Krutzik[1], Garban Hermes[1], Jenny Kim[1]; 1. Department of Medicine, Division of Dermatology, David Geffen School of Medicine, UCLA, Los Angeles, CA, USA; 2. Department of Medicine, Dankook University, Dankook, Republic of Korea.

073.Efficacy of RG1-VLP vaccination against genital and cutaneous human papillomaviruses *in vitro* and *in vivo* Christina Schellenbacher[1], Kihyuck Kwak[2], Saeed Shafti-Keramat[1], Bettina Huber[1], Christoph Jindra[1], Richard Roden[2], Reinhard Kirnbauer[1]; 1. Dermatology, Medical University Vienna, Vienna, Austria; 2. Pathology, Johns Hopkins, Baltimore, MD, USA.

074.Endothelial activation in localized oedema with sclerodermatous evolution in skin chronic graft versus host disease Mathilde Tardieu[1], Jean-David Bouaziz[1], Regis Peffault de La Tour[2], Helene Le Buanec[1], Marie Robin[2], Adele de Masson[1], Anne Bergeron[3], Michel Rybojad[1], Armand Bensussan[1], Gerard Socie[2], Martine Bagot[1]; 1. Dermatology and Immunology, Saint Louis Hospital and INSERM U976, Paris, France; 2. Bone Marrow Transplant Unit, Saint Louis Hospital, Paris, France; 3. Pneumology, Saint Louis Hospital, Paris, France.

075.Development and functional competence of dermal dendritic cells in the human fetus Muzlifah Haniffa[1], Amanda Shin[2], Donovan Low[2], Naomi McGovern[1], Pavandip Wasan[2], Michael Poidinger[2], Anis Larbi[2], Matthew Collin[1], Christopher Schuster[3], Adelheid Elbe-Burger[3], Mahesh Choolani[4], Jerry Chan[4], Florent Ginhoux[2]; 1. Institute of Cellular Medicine, Newcastle University, Newcastle upon Tyne, United Kingdom; 2. Singapore Immunology Network, Singapore, Singapore; 3. Medical University of Vienna, Vienna, Austria; 4. National University of Singapore, Singapore, Singapore.

076.Microanatomical dissection of the human dermis: The relationship between antigen presenting cells, lymphatic and blood vessels Xiao-nong Wang[1], Naomi McGovern[1], Martin Windebank[1], Sarah Pagan[1], Venetia Bigley[1], Amanda Shin[2], Florent Ginhoux[2], Hwee Ying Lim[3], Veronique Angeli[3], Matthew Collin[1], Muzlifah Haniffa[1]; 1. Newcastle University, Newcastle upon Tyne, United Kingdom; 2. Singapore Immunology Network, SIngapore, Singapore; 3. National University of Singapore, SIngapore, Singapore.

077.The protective capacity of CD8+ T_{RM} cells in distant skin after cutaneous virus infection Xiaodong Jiang, Thomas Kupper; Dermatology, Brigham and Women's Hospital, Boston, MA, USA.

078*(CM12-06).Dermal γδ T cells and their role in contact hypersensitivity Xiaodong Jiang, Jenna Geddes, Olivier Gaide, Min Jae Yoo, Thomas Kupper; Dermatology, Brigham and Women's Hospital, Boston, MA, USA.

079.IL-22 single-producing CD4+ T lymphocytes: Candidate effector cells in acute cutaneous graft-versus-host disease Charlotte Bruggen[1], Irene Klein[1], Hildegard Greinix[2], Wolfgang Bauer[1], Zoya Kuzmina[2], Werner Rabitsch[2], Robert Knobler[3], Georg Stingl[1], Georg Stary[1]; 1. Dept. of Dermatology, DIAID, Med. Univ. of Vienna, Vienna, Austria; 2. Dept. of Internal Medicine 1, Bone Marrow Transplantation, Med. Univ. of Vienna, Vienna, Austria; 3. Dept. of Dermatology, Div. of General Dermatology, Med. Univ. of Vienna, Vienna, Austria.

080.Global circulating CD4+ and CD8+ T cells are more differentiated in old melanoma patients compared to healthy controls Judith Seidel[1], Natalie Riddell[1], Sian Henson[1], Milica Vukmanovic-Stejic[1], Malcolm Rustin[2], Frank Nestle[3], Katie Lacy[3], Arne Akbar[1]; 1. Infection and Immunity, University College London, London, United Kingdom; 2. Dermatology, Royal Free Hospital, London, United Kingdom; 3. Genetics and Molecular Medicine, Kings College London, London, United Kingdom.

081.TIM-3 does not act as a receptor for galectin-9 Judith Leitner[1], Katharina Grabmeier-Pfistershammer[3], Armin Rieger[3], Winfried F Pickl[2], Gerhard Zlabinger[2], Peter Steinberger[1]; 1. Division of Immune Receptors and T cell activation, Institute of Immunology, Center for Pathophysiology, Infectiology and Immunology, Medical University of Vienna,, Vienna,, Austria; 2. Institute of Immunology, Center for Pathophysiology, Infectiology and Immunology, Medical University of Vienna,, Vienna, Austria; 3. Division of Immunology, Allergy and Infectious Diseases, Department of Dermatology, Medical University of Vienna, Viena, Austria.

082.DEC-205 targeted nanoparticles for improved DC-based antigen delivery and cross-presentation Sandeep Saluja[1], David Khalil[1], Eve Robinson[1], Fiona Sharp[2], Tarek Fahmy[2], Robert Tigelaar[1], Richard Edelson[1], Douglas Hanlon[1]; 1. Dermatology, Yale, New Haven, CT, USA; 2. Biomedical Engineering, Yale, New Haven, CT, USA.

083.Subcutaneous immunization to HIV gag is potentiated by Flt3L and develops through classical rather than migratory dendritic cells Niroshana Anandasabapathy[1, 2, 3], Rachel Feder[2], Maria Longhi[2, 3], Saurabh Mehandru[2, 3], Shamim Mollah[4], Cheolho Cheong[2, 3], Darren Ruane[2], Luke Brane[2], Angela Teixiera[2], Joseph Dobrin[2], Olga Mizenina[2], Bjorn Clausen[5], Ralph Steinman[2, 3]; 1. Dermatology, Brigham and Women's Hospital, Boston, MA, USA; 2. Laboratory of Cellular Physiology and Immunology, Rockefeller University, New York, NY, USA; 3. Christopher H. Browne Center for Immunology and Immune Diseases, Rockefeller University, New York, NY, USA; 4. Hospital Informatics, Rockefeller University, New York, NY, USA; 5. Immunology, Erasmus MC, University Medical Center, Rotterdam, Netherlands.

084.The dual RAR and RXR agonist alitretinoin modulates leukocyte recruitment pathways and suppresses dendritic cell functions *in vitro* and *in vivo* Andreas Kislat[1], Stephan Meller[1], Rodrigo Mota[1], Bettina Buhren[1], Peter Gerber[1], Erich Bünemann[1], Ulrike Wiesner[1], Thomas Ruzicka[2], Bernhard Homey[1]; 1. Dermatology, Heinrich-Heine University Hospital, Düsseldorf, Germany; 2. Dermatology, Ludwig-Maximilians-University Munich, München, Germany.

085.Granzyme B plays a central role in delineating subsets and functional differences in human Tregs in blood and skin Clare Baecher-Allan[1, 2], Monali Manohar[1], Siddeshvar Bhela[2], Christine Kempsell[1], Margerite Dominguez-Villar[3], Robert Fuhlbrigge[1], Rachael Clark[1], Thomas Kupper[1], Howard Weiner[2]; 1. Dermatology, Brigham and Women's Hospital, Boston, MA, USA; 2. Neurology, Brigham and Women's Hospital, Boston, MA, USA; 3. Neurology, Yale, New Haven, CT, USA.

086.Impaired CCR7-mediated migration of MUTZ-3-derived Langerhans-like cells in response to pro-inflammatory stimuli Stephanie Bock, André Said, Günther Weindl; Institute of Pharmacy (Pharmacology and Toxicology), Freie Universität Berlin, Berlin, Germany.

087.Assessment of nickel sensitivity using a T-cell immune function assay Golara Honari[1], Belinda Yen-Lieberman[2], James Taylor[1]; 1. Dermatology, Cleveland Clinic, Cleveland, OH, USA; 2. Clinical pathology, Cleveland Clinic, Cleveland, OH, USA.

088.Genetic or chemical RORγ blockade profoundly suppresses hapten mediated contact hypersensitivity responses Rahul Purwar[1], Laura Solt[2], Anton Jetton[3], Thomas Burris[2], Vijay Kuchroo[1], Rachael Clark[1], Thomas Kupper[1]; 1. Brigham and Women's Hospital/Harvard Medical School, Boston, MA, USA; 2. The Scripps Research Institute, Jupiter, FL, USA; 3. NIEHS, NIH, Triangle Research Park, NC, USA.

089.Melanoma-silencing through $CD4^+$ T helper (Th1) cell cytokine-induced senescence Cristina Boss[1], Simone Kayser[2], Tobias Feuchtinger[2], Martin Röcken[1]; 1. Dermatology Hospital, University of Tübingen, Tübingen, Germany; 2. Children's Hospital, University of Tübingen, Tübingen, Germany.

090*(CM12-02).Tissue resident and central memory T cells share a single clonal origin but play distinct and non-overlapping roles in long-term memory responses in skin Olivier Gaide[1], Xiaodong Jiang[1], Suzanne Nizza[1], Cindy Desmarais[2], Rachael Clark[1], Thomas Kupper[1]; 1. Harvard Skin Disease Research Center, Department of Dermatology, Brigham and Women's Hospital, Boston, MA, USA; 2. Adaptive Biotech, Seattle, WA, USA.

091.Systems analysis of pneumococcal vaccine response in psoriasis patients Gerlinde Obermoser[1], Caitriona Ryan[2], Emily Ruchaud[1], Bobbak Mansouri[1], Mahir Patel[2], Esperanza Anguiano[1], Derek Blankenship[1], Karolina Palucka[1], Alan Menter[2]; 1. Baylor Institute for Immunology Reserache, Dallas, TX, USA; 2. Baylor Research Institute, Dallas, TX, USA.

092.Induction of a long-lived protective mucosal T cell response by inactivated Chlamydia trachomatis coupled to a TLR7 agonist by nanoparticles Georg Stary[1], Aleksandar Radovic-Moreno[2], David Gondek[1], Andrew Olive[1], Pamela Basto[2], Omid Farokhzad[3], Robert Langer[2], Michael Starnbach[1], Ulrich H von Andrian[1]; 1. Division of Immunology, Department of Microbiology and Immunobiology, Harvard Medical School, Boston, MA, USA; 2. Department of Chemical Engineering, Massachusetts Institute of Technology, Cambridge, MA, USA; 3. Laboratory of Nanomedicine and Biomaterials, Department of Anesthesiology, Brigham & Women's Hospital, Harvard Medical School, Boston, MA, USA.

093*(CM12-10).Diverse cutaneous dendritic cell subsets play distinct roles in the transport of soluble proteins to draining nodes and subsequent cross-presentation to naïve CD8 T cells Suzanne Nizza, James Campbell; Dermatology, Brigham and Women's Hospital, Boston, MA, USA.

094.Transcriptional and functional conservation between human Langerhans cells and mouse thymic DCs Maxim Artyomov, Adiel Munk, Marina Cella, Thomas Tung, Samuel S.K. Lam, Robert D. Schreiber, Eynav Klechevsky; Department of Pathology and Immunology, Washington University School of Medicine, Saint Louis, MO, USA.

095.Longitudinal characterization of an antigen-specific T cell response Yoko Ono[1, 2], Itzel Bustos Villalobos[1], Alina Marusina[1], Jennifer Bergstrom[1], Amilcar Rizzo[1], Kayo Kondo[1], Yoshinori Miyamura[1], Emanual Maverakis[1, 2]; 1. Dermatology, University of California, Davis, Sacramento, CA, USA; 2. Department of Veteran Affairs, Northern California VA Heath Care System, Mather, CA, USA.

096.Next generation T cell receptor sequencing for the identification and monitoring of pathogenic T cells in alopecia areata Annemieke de Jong[1], Ali Jabbari[1], Zhenpeng Dai[1], Luzhou Xing[2], Mazen Kurban[1], Bobbye Thompson[1], Megan Furniss[1], Julian Mackay-Wiggan[1], Angela Christiano[1], Raphael Clynes[2, 1]; 1. Dermatology, Columbia University, New York, NY, USA; 2. Pathology, Columbia University, New York, NY, USA.

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All orals designated with an asterisk (*) below are presented in a Concurrent Session (see code). Orals designated with two asterisks (**) will be presented during a Plenary Session (see code).

097.The expression and role of KLF4 in psoriasis Kwang Ho Kim, Heung Yeol Kim, Jong Hyun Yoon; Department of Dermatology, Hallym University Sacred Heart Hospital, Anyang, Republic of Korea.

098.IL-17 expression in dermatitis herpetiformis and bullous pemphigoid Agnieszka Zebrowska[1], Malgorzata Wagrowska-Danilewicz[2], Marian Danilewicz[2], Olga Stasikowska-Kanicka[2], Anna Cynkier[1], Anna Sysa-Jedrzejowska[1], Elzbieta Waszczykowska[1]; 1. Department of Dermatology and Venereology, Medical University of Lodz, Lodz, Poland; 2. Laboratory of Nephropathology, Medical University of Lodz, Lodz, Poland.

099*(CM6-01).Inflammatory gammadelta T cells collaborate with Th17 cells to maintain psoriasiform dermatitis in the CD18hypo PL/J mouse model Martina Gatzka[1], Heidi Hainzl[1], Thorsten Peters[1], Kamayani Singh[1], Alpaslan Tasdogan[2], Meinhard Wlaschek[1], Karin Scharffetter-Kochanek[1]; 1. Dept. of Dermatology and Allergic Diseases, Ulm University, Ulm, Germany; 2. Dept. of Immunology, Ulm University, Ulm, Germany.

100(PL3-04).Autoimmunity against epidermal antigen by Th17 cells induces psoriasis-like skin inflammation** Shuhei Nishimoto[1, 2], Hayato Takahashi[2], Masayuki Amagai[2], Akihiko Yoshimura[1]; 1. Department of Microbiology and Immunology, Keio University School of Medicine, Tokyo, Japan; 2. Department of Dermatology, Keio University School of Medicine, Tokyo, Japan.

101.Blocking von Willebrand factor (VWF) attenuates cutaneous immune-complex (IC)-vasculitis Carina Hillgruber[1], Annika Steingräber[1], Birgit Pöppelmann[1], Stefan Schneider[2], Tobias Goerge[1]; 1. Dept. of Dermatology, University of Münster, Münster, Germany; 2. Dept. of Dermatology, University of Heidelberg, Mannheim, Germany.

102.Tofacitinib has no clinically significant effects on cells controlling chronic viral infection and reactivation F. Valenzuela[1], K. Papp[2], D. Pariser[3], S. Tyring[4], R. Wolk[5], M. Buonanno[5], H. Valdez[5]; 1. University of Chile, Santiago, Chile; 2. Clinical Res. Inc. and Probity Medical Res. Inc, Waterloo, ON, Canada; 3. Pariserderm, Norfolk, VA, USA; 4. CCS, Webster, TX, USA; 5. Pfizer Inc, Groton, CT, USA.

103.Analysis on spatio-temporal distribution of platelets in cutaneous inflamed sites of mouse contact dermatitis Junko Daito[1], Yoshinori Harada[2], Risa Tamagawa-Mineoka[1], Ping Dai[2], Tetsuro Takamatsu[2], Norito Katoh[1]; 1. Department of Dermatology, Kyoto Prefectural University of Medicine, Kyoto, Japan; 2. Department of Pathology and Cell Regulation, Kyoto Prefectural University of Medicine, Kyoto, Japan.

104.Decreased expression of IL-17 pathway genes in blood in patients with plaque psoriasis treated with the anti-IL-17A monoclonal antibody, ixekizumab J. Krueger[1], E. Dow[2], E. Nantz[2], W. Komocsar[2], P. Banerjee[2], C. Leonardi[3], G. Cameron[2], S. Banerjee[2], R. Hoffman[2]; 1. The Rockefeller University, New York, NY, USA; 2. Eli Lilly & Company, Indianapolis, IN, USA; 3. St. Louis University School of Medicine, St. Louis, MO, USA.

105(PL1-06).Germline autoreactivity of VH1-46 antibodies to desmoglein 3 may explain their predominance in pemphigus vulgaris** Michael Cho[1], Agnes Lo[3], Eun Choi[1], Arielle Nagler[1], Xuming Mao[1], Courtney Rubin[1], Marshall Posner[2], Lisa Cavacini[3], Aimee Payne[1]; 1. Univ. of Pennsylvania, Philadelphia, PA, USA; 2. Mt. Sinai School of Med., New York, NY, USA; 3. Harvard Med. School, Boston, MA, USA.

106.The total antioxidant capacity in pemphigus vulgaris patients is decreased compared to healthy controls and bullous pemphigoid patients Amit Shah, Kristina Seiffert-Sinha, Animesh Sinha; Dermatology, University at Buffalo and Roswell Park Cancer Institute, Buffalo, NY, USA.

107.Memory regulatory T cells require IL-7 and not IL-2 for their maintenance in skin Iris Gratz, Hong-An Truong, Abul Abbas, Michael Rosenblum; UCSF, San Francisco, CA, USA.

108.Epitope mapping of Tcell responses to NC16a in bullous pemphigoid shows strong association with Th2 responses with specific IL-4 responses and IgE to NC16a Anthony Ormerod[1], Wendy Pickford[1], Venkat Gudi[1], Anne Haggart[1], Barry Lewis[1], Richard Herriot[2], Robert Barker[1]; 1. Division of Applied Medicine, University of Aberdeen, Aberdeen, United Kingdom; 2. Aberdeen Royal Infirmary, Aberdeen, United Kingdom.

109.The α7 nicotinic acetylcholine receptor - An emerging target for anti-inflammatory and antifibrotic treatment strategies in dermatology Agatha Stegemann[1], Anca Sindrilaru[2], Sergei Grando[3], Karin Scharffetter-Kochanek[2], Thomas Luger[1], Markus Böhm[1]; 1. University of Münster, Münster, Germany; 2. University of Ulm, Ulm, Germany; 3. University of California, Irvine, CA, USA.

110.TLR2-ligands promote Th2-mediated dermatitis through IL-4 mediated suppression of IL-10 Susanne Kaesler, Thomas Volz, Yuliya Skabytska, Ko-Ming Chen, Ulrike Hein, Emmanuella Guenova, Martin Röcken, Tilo Biedermann; Dermatology, Eberhard Karls University Tuebingen, Tuebingen, Germany.

111.Inhibitors TrkA, TrkB and TrkC are effective in models of atopic dermatitis and allergic skin disease Steven Andrews, Dale Wright, Karyn Bouhana, Patrice Lee, Laurence Burgess; Array BioPharma, Boulder, CO, USA.

112.Oral Streptococcus is one of immunopathological trigerring factors in aphthous ulceration including Behcet's disease Fumio Kaneko[1], Ari Togashi[2], Erika Nomura[3], Koichiro Nakamura[4]; 1. Dermatology, Southern TOHOKU Research Institute for Neuroscience, Koriyama, Japan; 2. Dermatology, Southern TOHOKU Research Institute for Neuroscience, Koriyama, Japan; 3. Dermatology, Southern TOHOKU Research Institute for Neuroscience, Koriyama, Japan; 4. Dermatology, Saitama Medical University, Irumagun, Japan.

113.IgG4 is the dominant subclass in Egyptian pemphigus vulgaris sera Marwah Saleh[1, 2], Masayuki Amagai[1], Jun Yamagami[1]; 1. Dermatology, Keio University School of Medicine, Tokyo, Japan; 2. Dermatology, Cairo University School of Medicine, Cairo, Egypt.

Posters

114*(CM1-09).Characterization of inflammation in keratinocyte Dlx3-deficient murine skin Jin-Chul Kim[1], Youichi Ogawa[2], Elisabetta Palazzo[1], Mark Udey[2], Maria Morasso[1]; 1. Developmental Skin Biology Unit, NIAMS/NIH, Bethesda, MD, USA; 2. Dermatology Branch, NCI/NIH, Bethesda, MD, USA.

115.Mechanisms of keratinocyte mitochondrial damage in pemphigus vulgaris Mina Kalantari-Dehaghi, Yumay Chen, Wu Deng, Pinh Wang, Sergei Grando; University of California, Irvine, CA, USA.

116.Pemphigus vulgaris autoantibody profiling by proteomic technique Mina Kalantari-Dehaghi[1], Grant Anhalt[2], Michael Camilleri[3], Philip Felgner[1], Kristin Leiferman[4], Mark Pittelkow[3], John Zone[4], Sergei Grando[1]; 1. University of California, Irvine, CA, USA; 2. Johns Hopkins University, Baltimore, MD, USA; 3. Mayo Clinic, Rochester, MN, USA; 4. University of Utah, Salt Lake City, UT, USA.

117.Impaired Notch-MKP-1 signalling in hidradenitis suppurativa: An approach to pathogenesis by evidence from translational biology Bodo Melnik; University of Osnabrück, Dermatology, Environmental Medicine and Health Theory, Osnabrück, Germany.

118.The role of M1/M2 macrophages in HSV-induced Behçet's disease mouse model Seonghyang Sohn[1, 2], Mostafa Anower[1], Ju A Shim[1, 2], Bunsoon Choi[1], Hyuk Jae Kwon[1], Dongsik Bang[3]; 1. Lab Cell Biol Inst Med Sci, Ajou University, Suwon, Republic of Korea; 2. Brain Korea Program, Ajou University, Suwon, Republic of Korea; 3. Dept Dermatol, Yonsei University, Seoul, Republic of Korea.

119*(CM6-08).Detection of pathological cleavage sites and neoepitopes on collagen XVII, a major autoantigen for bullous pemphigoid Wataru Nishie, Hideyuki Ujiie, Kentaro Izumi, Hiroshi Shimizu; Department of Dermatology, Hokkaido University Graduate School of Medicine, Sapporo, Japan.

120.Selective blocking of the interaction of extracellular cyclophilins with CD147 reduces recruitment of leukocytes during inflammation Cordelia Schiene-Fischer[2], Miroslav Malesevic[2], Danny Gutknecht[1], Jan Simon[1], Anja Saalbach[1]; 1. Dermatology, University Leipzig, Leipzig, Germany; 2. Unit for Enzymology of Protein Folding, Max-Planck-Institut, Halle/Saale, Germany.

121*(CM1-08).CX3CL1/fractalkine and its receptor CX3CR1 regulate atopic dermatitis by controlling effector T cell retention in inflamed skin Delphine Staumont-Sallé[1, 2, 3], Nicolas Hornez[3], Céline Lavogiez[3], Akira Kanda[2], Cyrille Mionnet[4], Janne Prawitt[1, 2], Sébastien Fleury[1, 2], Emmanuel Bouchaert[1, 2], Anne Lazzari[4], Emmanuel Delaporte[2, 3], Nicolas Glaichenhaus[4], Bart Staels[1, 2], Valérie Julia[4], David Dombrowicz[1, 2]; 1. U1011, Inserm, Lille, France; 2. University of Lille 2, Lille, France; 3. Dermatology, University Hospital of Lille, Lille, France; 4. UMR 6097, CNRS, Nice, France.

122.Psoriasis and metabolism: A physiopathological link? Coralie Becquart[1, 2, 3], Cédric Dewas[1], Jonathan Vanhoutte[1], Olivier Molendi-Coste[1], Emmanuel Delaporte[2, 3], Bart Staels[1, 2], David Dombrowicz[1], Delphine Staumont-Sallé[1, 2, 3]; 1. U1011, Inserm, Lille, France; 2. Department of Dermatology, University Hospital of Lille, Lille, France; 3. University of Lille 2, Lille, France.

123*(CM1-10).A novel mouse model for a blistering skin disease Tiina Hurskainen[1, 2], Nina Kokkonen[1, 2], Joanna Jackow[3], Raija Sormunen[4], Jyri Moilanen[1, 2], Stefanie Löffek[3], Raija Soininen[4], Claus Franzke[3], Leena Bruckner-Tuderman[3], Kaisa Tasanen[1, 2]; 1. Dermatology, University of Oulu, Oulu, Finland; 2. Clinical Research Center, Oulu University Hospital, Oulu, Finland; 3. Dermatology, University of Freiburg, Freiburg, Germany; 4. Biocenter Oulu, University of Oulu, Oulu, Finland.

124.Microbial diversity and cutaneous inflammation are predictive for the clinical course of experimental epidermolysis bullosa acquisita Christoph Ellebrecht[1, 2, 3], Girish Srinivas[4], Katja Bieber[2], David Banczyk[1], Sven Künzel[4], Kathrin Kalies[1], Christoph Hammers[1, 2, 3], John Baines[4, 5], Detlef Zillikens[2], Ralf Ludwig[2], Jürgen Westermann[1]; 1. Anatomy, University of Lübeck, Lübeck, Germany; 2. Dermatology, University of Lübeck, Lübeck, Germany; 3. Dermatology, University of Pennsylvania, Philadelphia, PA, USA; 4. Max Planck Institute for Evolutionary Biology, Plön, Germany; 5. Institute for Experimental Medicine, Christian-Albrechts-University, Kiel, Germany.

125.Aryl hydrocarbon receptor deficiency in skin exacerbates psoriatic inflammation Paola Di Meglio[1], Joao Duarte[1], Helena Ahlfors[1], Nick Owens[2], Heike Müller[1], Ying Li[1], Federica Villanova[3], Isabella Tosi[3], Keiji Hirota[1], Mike Gilchrist[2], Frank Nestle[3], Ulrich Mrowietz[4], Brigitta Stockinger[1]; 1. Molecular Immunology, NIMR, London, United Kingdom; 2. Systems Biology, NIMR, London, United Kingdom; 3. St. John's Institute of Dermatology, King's College London and NIHR Biomedical Research Centre, London, United Kingdom; 4. Psoriasis-Center, University Medical Center Schleswig-Holstein, Kiel, Germany.

126.Th17, Th22 and regulatory T cell responses in early atopic dermatitis lesions and atopic patch tests Barry Lewis[1], Fiona Meredith[2], Linda Lawson[2], Robert Barker[1], Anthony Ormerod[1]; 1. Division of Applied Medicine, University of Aberdeen, Aberdeen, United Kingdom; 2. Dermatology, Aberdeen Royal Infirmary, Aberdeen, United Kingdom.

127.TL0-1 phototherapy in psoriasis increases the ratio of Th1:Th2 cells, and the numbers of regulatory T cells, in lesions and peripheral blood Iman Kotb[1, 2], Barry Lewis[1], Nora Darwish[2], Hanan Salem[2], Shaymaa El-Mongy[2], Robert Barker[1], Anthony Ormerod[1]; 1. Division of Applied Medicine, University of Aberdeen, Aberdeen, United Kingdom; 2. Department of Dermatology, Andrology and STDs, Mansoura University, Mansoura, Egypt.

128.Challenges of systemic IL-17A quantification in patients treated with secukinumab, an anti-IL-17A antibody C. Calonder, R. Helbaj, S. Spindeldreher, P. Lloyd; Preclinical Safety, Novartis Institutes for BioMedical Research, Basel, Switzerland.

129.Treatment with clodronate liposomes or cyclosporine have minor effects on imiquimod-induced skin inflammation in mice Edward Hsia, Emily Santori, Kathy Held, Katherine Manley, Lydia Andrews-Jones, Michael Stern; Allergan, Irvine, CA, USA.

130.Role of the SDF-1/CXCR4 axis in two different mouse models of chronic skin inflammation Silvana Zgraggen[1], Reto Huggenberger[1], Alexandra Ochsenbein[1], Steven Proulx[1], Katrin Kerl[2], David Aebischer[1], Michael Detmar[1]; 1. ETH Zurich, Zurich, Switzerland; 2. University Hospital Zurich, Zurich, Switzerland.

131.Efficacy of targeting Janus kinase pathways by tofacitinib in a human psoriatic lesional skin xenograft transplantation model Hak-Ling Ma[1], Karin Stenderup[2], Cecilia Rosada[2], Lee Napierata[1], Katherine Masek-Hammerman[3], Martin Hegen[1], Tomas Dam[4], James Clark[1]; 1. Immunoscience Research Unit, Pfizer Inc, Cambridge, MA, USA; 2. Department of Dermatology, Aarhus University Hospital, Aarhus, Denmark; 3. Drug Safety Research & Development, Pfizer Inc, Cambridge, MA, USA; 4. Department of Dermatology, Roskilde Hospital, Roskilde, Denmark.

132.Cytokine-induced insulin resistance in endothelial cells contributes to the pathogenesis of psoriasis and its co-morbidities Kathrin Woth[1], Sandra Diehl[1], Victoria Lang[1], Wolf-Henning Boehncke[2], Claudia Buerger[1]; 1. Department of dermatology, Universityhospital, Frankfurt a.M., Germany; 2. Service de dérmatologie, Hôpital Universitaire, Geneva, Switzerland.

133.Integration of lyoplate based flow cytometry and computational analysis for standardized biomarker discovery in inflammatory skin diseases Federica Villanova[1, 2], Paola Di Meglio[1, 2, 3], Margaret Inokuma[4], Nima Aghaeepour[5], Esperanza Perucha[6], Jennifer Mollon[7], Laurel Nomura[4], Maria Hernandez-Fuentes[6, 2], Andrew Cope[8], Susanne Heck[2], Vernon Maino[4], Graham Lord[6, 2], Ryan Brinkman[5, 9], Frank Nestle[1, 2]; 1. St. John's Institute of Dermatology, King's College London, London, United Kingdom; 2. NIHR GSTT/KCL Comprehensive Biomedical Research Centre, Guy's & St. Thomas' NHS Foundation Trust, London, United Kingdom; 3. Molecular Immunology, National Institute for Medical Research, London, United Kingdom; 4. Biological Research & Development, BD Biosciences, San Jose, CA, USA; 5. Terry Fox Laboratory, BC Cancer Agency, Vancouver, BC, Canada; 6. MRC Centre for Transplantation, King's College London, London, United Kingdom; 7. Division of Genetics and Molecular Medicine, King's College London, London, United Kingdom; 8. Academic Department of Rheumatology, King's College London, London, United Kingdom; 9. Department of Medical Genetics, University of British Columbia, Vancouver, BC, Canada.

134.The lipohormesis: A new concept to fight aging by a lipostructure-like activity Carine Bezivin[1], Estelle Loing[2]; 1. R&D, Lucas Meyer Cosmetics, Champlan, France; 2. R&D, Lucas Meyer Cosmetics, Québec, QC, Canada.

135.Development of an ELISA for detection of soluble Thy-1 and its application in evaluation of pulmonary involvement in patients with systemic sclerosis Manuela Schmidt[1], Anja Saalbach[1], Danny Gutknecht[1], Sophie Christoph[2], Florian Kollert[2]; 1. Department of Dermatology, Venerology and Allergology, Medical Faculty of the Leipzig University, Leipzig, Germany; 2. Department of Rheumatology and Clinical Immunology, University Medical Center, Freiburg, Germany.

136.Serum IgA reactivity against GroEL of *Streptococcus sanguinis* and human hnRNP A2/B1 in patients with Behçet's disease Sung Bin Cho[1], Zhenlong Zheng[1], Keun Jae Ahn[2], Min Ju Choi[1], Suhyun Cho[1], Do-Young Kim[1], Hye Sun Lee[3], Dongsik Bang[1]; 1. Department of Dermatology and Cutaneous Biology Research Institute, Yonsei University College of Medicine, Seoul, Republic of Korea; 2. Specialization Research Center, Hallym University Hangang Sacred Heart Hospital, Seoul, Republic of Korea; 3. Department of Biostatistics, Yonsei University College of Medicine, Seoul, Republic of Korea.

137*(CM1-06).Contact of Treg to dendritic cells (DC) is guided by Treg-derived adenosine, inducing directed migration and recruitment of adhesion molecules in DC via adenosine A2A receptors Sabine Ring, Anna Pushkarevskaya, Alexander Enk, Karsten Mahnke; Ruprecht Karls University, Heidelberg, Germany.

138.Vasoconstriction and anti-inflammatory properties of the alpha adrenergic receptor agonist brimonidine David Piwnica, Carine Rosignoli, Séverine Cazareth, Marlène Schuppli-Nollet, André Jomard, Jérôme Aubert; Research, Galderma, Sophia Antipolis, France.

139.Herpes simplex virus 1 antibodies in patients with pemphigus vulgaris are increased compared to healthy controls Philip Senger[1], Melissa Hoffman[1], Guneet Singh[1], Diana Murro[2], Kristina Seiffert-Sinha[1], Animesh Sinha[1]; 1. Dermatology, University at Buffalo and Roswell Park Cancer Institute, Buffalo, NY, USA; 2. Georgia Health Sciences University, Augusta, GA, USA.

140.Over-expression of AIRE and lack of Dsg1 expression in thymoma associated with a PF patient: An implication for novel mechanisms of autoimmune development Atsunari Tsuchisaka[1], Sakae Kaneko[2], Minao Furumura[1], Takashi Hashimoto[1]; 1. Dermatology, Kurume University, Kurume, Japan; 2. Dermatology, Shimane University, Izumo, Japan.

141(PL5-06).GARP modifies T cell activation and differentiation *in vitro* and *in vivo*** Susanne Hahn[1], Heiko Stahl[2], Helmut Jonuleit[1], Andrea Tuettenberg[1]; 1. Department of Dermatology, University Medical Center of the Johannes Gutenberg University, Mainz, Germany; 2. Boehringer Ingelheim Pharma GmbH & Co. KG, Research Germany, Biberach an der Riss, Germany.

142.Genetic support for a role for the NLRP1 inflammasome in psoriasis Anna-Karin Ekman[1], Deepti Verma[1], Cecilia Bivik[1], Mats Fredrikson[2], Charlotta Enerbäck[1]; 1. Ingrid Asp Psoriasis Research Center, Division of Cell biology and Dermatology, Department of Clinical and Experimental Medicine, Faculty of Health Science, Linköping University, Linköping, Sweden; 2. Division of Occupational and Environmental Medicine, Department of Clinical and Experimental Medicine,, Faculty of Health Science, Linköping University, Linköping, Sweden.

143.The role of PPARγ in the control of sebogenesis *in vitro*. Prospective for novel treatment of acne Arianna Mastrofrancesco[1], Monica Ottaviani[1], Daniela Kovacs[1], Matteo Ludovici[1], Christos Zouboulis[2], Emanuela Camera[1], Mauro Picardo[1]; 1. S Gallicano Dermatologic Institute, Cutaneous Physiopathology, Rome, Italy; 2. Dessau Medical Center, Depts. of Dermatology, Venereology, Allergology and Immunology, Dessau, Germany.

144.Apoptosis has a role in the disturbed homeostasis of epidermal keratinocytes in psoriasis Cecilia Bivik, Maria Carlström, Charlotta Enerbäck; Ingrid Asp Psoriasis Research Center, Department of Clinical and Experimental Medicine, Faculty of Health Sciences, Linköping University, Linköping, Sweden.

145.Keratinocytes from patients with atopic dermatitis express high levels of histamine 4 receptor which mediate histamine induced proliferation Franziska Glatzer[1], Maria Gschwandtner[1, 2], Susanne Mommert[1], Thomas Werfel[1], Ralf Gutzmer[1]; 1. Dermatology and Allergy, Medical School Hannover, Hannover, Germany; 2. Dermatology, Medical University of Vienna, Vienna, Austria.

146.GATA-3 cleavage by DNAzymes as therapeutic approach for the treatment of allergic skin diseases Ulrich Purath[1], Rouba Ibrahim[2], Agnieszka Turowska[1], Ursula Homburg[1], Frank Runkel[3], Thomas Schmidts[3], Dorota Dobler[3], Harald Renz[2], Holger Garn[2], Anke Mueller[1]; 1. sterna biologicals GmbH & Co. KG, Marburg, Germany; 2. Research Division of Clinical Chemistry and Molecular Diagnostics, Hospital of the University, Marburg, Germany; 3. University of Applied Sciences, Giessen, Germany.

147.From the skin to the bone: Pro-osteoclastogenesis inflammatory march Anna Balato, Annunziata Raimondo, Serena Lembo, Maria Schiattarella, Martina Mattii, Roberta Di Caprio, Nicola Balato, Fabio Ayala; Dermatology, University Federico II, Naples, Italy.

148.IL-33 effects in psoriasis: The induction of pro-inflammatory cytokines via keratinocyte and mast cell activation Anna Balato, Serena Lembo, Martina Mattii, Maria Schiattarella, Roberta Di Caprio, Luisa Di Costanzo, Nicola Balato, Fabio Ayala; Dermatology, University Federico II, Naples, Italy.

149.Anti-inflammatory and anti-pruritic effects of topical kappa-opioid receptor agonist WOL071-007 in murine models of skin inflammation Michael Soeberdt, Ulrich Knie, Christoph Abels; Dr. August Wolff GmbH & Co. KG Arzneimittel, Bielefeld, Germany.

150.Dermal CARD14 expression in psoriasis Jamie Harden[1], Kate Pierson[1], Mayte Suárez-Fariñas[1], Andrea Chiricozzi[1, 2], Raphaela Goldbach-Mansky[3], Anne Bowcock[4], Michelle Lowes[1]; 1. Department for Investigational Dermatology, The Rockefeller University, New York, NY, USA; 2. Department of Dermatology, University of Rome Tor Vergata, Rome, Italy; 3. Translational Autoinflammatory Disease Section, NIH/NIAMS, Bethesda, MD, USA; 4. Department of Genetics, Division of Human Genetics, Washington University School of Medicine, St. Louis, MO, USA.

151.An IL-1β inhibitor diacerein blocks the pro-inflammatory and atherogenic effects of IL-1β on epidermal and endothelial cells Huayi Zhang[1], L. Bao[1], L. Chan[1, 2]; 1. Dermatology, UIC, College of Medicine, Chicago, IL, USA; 2. Medical Service, JB VA Medical Center, Chicago, IL, USA.

152.FOXP3 promotes the degradation of EZH2 methyltransferase: A novel mechanism for FOXP3 as a suppressor gene in lymphoid malignancies? Zhu Shen[1], Ling Chen[2]; 1. Department of Dermatology, Southwest Hospital, Third Military Medical University, Chongqing, China; 2. Department of Dermatology, Daping Hospital, Third Military Medical University, Chongqing, China.

153.Key immune modulatory effects exerted by calcipotriol in combination with corticosteroid on human immune cells Paola Lovato, Hanne Norsgaard, Mads Røpke; LEO Pharma, Ballerup, Denmark.

154.Recombinant anti-collagen VII Fab fragments which compete against autoantibodies in patients with epidermolysis bullosa acquisita Hongjiang Qiao[1, 2], Hideyuki Ujiie[2], Riichiro Abe[2], Qiang Li[1, 2], Reine Moriuchi[2], James McMillan[2], Hiroshi Shimizu[2], Gang Wang[1]; 1. Department of Dermatology, Xijing Hospital, Fourth Military Medical University, Xi'an, China; 2. Department of Dermatology, Hokkaido University Graduate School of Medicine, Sapporo, Japan.

155.CD22 expression is required for development of pristane-induced lupus model in mice Yasuhito Hamaguchi[1], Takashi Matsushita[1], Minoru Hasegawa[1], Kazuhiko Takehara[1], Thomas Tedder[2], Manabu Fujimoto[1]; 1. Dermatology, Kanazawa University, Kanazawa, Japan; 2. Immunology, Duke University Medical Center, Durham, NC, USA.

156.IMO-3100, an antagonist of Toll-like receptor (TLR) 7 and TLR9, demonstrates clinical activity in psoriasis patients with 4 weeks of treatment in a phase 2a trial A. Kimball[1], J. Krueger[2], T. Sullivan[3], R. Arbeit[3]; 1. Dermatology, Massachusetts General Hospital, Boston, MA, USA; 2. The Rockefeller University, New York, NY, USA; 3. Idera Pharmaceuticals, Inc., Cambridge, MA, USA.

157.Eccrine sweat stimulates the release of IL-8 via IL-1 from epidermal keratinocytes as a danger signal Hidenori Okazaki, Xiuju Dai, Masamoto Murakami, Yasushi Hanakawa, Mikiko Tohyama, Yuji Shirakata, Koji Sayama; Dermatology, Ehime University Graduate School of Medicine, Toon, Japan.

158.Genetic modification of HLA-DR linked with the *PSMB8* mutation in Nakajo-Nishimura syndrome Kayo Kunimoto[1], Fukumi Furukawa[1], Hiroaki Ida[2], Nobuo Kanazawa[1]; 1. Dermatology, Wakayama Medical University, Wakayama, Japan; 2. Medicine, Kurume University School of Medicine, Kurume, Japan.

159.Leucine-rich α-2 glycoprotein is an innovative biomarker for psoriasis Hideki Nakajima, Kimiko Nakajima, Mikirou Takaishi, Masahito Tarutani, Shigetoshi Sano; Kochi Medical School, Nankoku, Japan.

160.New mouse model to investigate the neurogenic facial flush associated with subtypes I and II of rosacea Christelle Nonne, Sandie Wise, André Jomard, Michel Rivier; Research, Galderma R&D, Sophia-Antipolis, France.

161.Development of endogenous cannabinoid receptor modulating compounds as anti-inflammatory agents for skin disease Bongwoo Kim[1], Buman Park[1], Jeongeun Jeon[1], Hyunjung Kim[2], Sungku Ahn[3], Seungphil Hong[4], Sekyoo Jeong[1], Seung Hun Lee[5]; 1. Division of Applied Research, NeoPharm Co., Ltd., Daejeon, Republic of Korea; 2. Department of Dermatology/Atopy and Asthma center, Seoul Medical Center, Seoul, Republic of Korea; 3. Department of Dermatology, Wonju College of Medicine, Yonsei University, Wonju, Republic of Korea; 4. Department of Dermatology, College of Medicine, Dankook University, Cheonan, Republic of Korea; 5. Department of Dermatology, Yonsei University College of Medicine, Seoul, Republic of Korea.

162.TGF-β under non-inflammatory cytokine milieu converts naive CD4+ T cells into thymic-type Helios+ regulatory T cells Takashi Nomura[1], Kazunari Sugita[2], Norihito Hayatsu[3], Kazutoshi Saitou[1], Akihiko Kitoh[1], Yoshiki Miyachi[1], Kenji Kabashima[1]; 1. Department of Dermatology, Kyoto University, Kyoto, Japan; 2. Department of Dermatology, University of Occupational and Environmental Health, Kitakyushu, Japan; 3. RCAI, RIKEN, Yokohama, Japan.

163.Molecular mechanisms of *Sema3A* gene regulation in human epidermal keratinocytes Yayoi Kamata[1], Mitsutoshi Tominaga[1], Atsuko Kamo[1], Kenji Takamori[1, 2]; 1. Institute for Environmental and Gender Specific Medicine, Juntendo University Graduate School of Medicine, Urayasu, Japan; 2. Department of Dermatology, Juntendo University Urayasu Hospital, Urayasu, Japan.

164.Histamine H_4 receptor antagonists exhibit insufficient anti-pruritic and anti-inflammatory effects on mite extract ointment-induced mouse model of atopic dermatitis Mitsutoshi Tominaga[1], Atsuko Kamo[1], Osamu Negi[1, 2], Suhandy Tengara[1], Yayoi Kamata[1], Atsushi Noguchi[1], Kenji Takamori[1, 2]; 1. Institute for Environmental and Gender Specific Medicine, Juntendo University Graduate School of Medicine, Urayasu, Japan; 2. Department of Dermatology, Juntendo University Urayasu Hospital, Urayasu, Japan.

165.CISH suppresses IL-17-induced CCL20 production from epidermal keratinocytes via inhibition of the Src/MEK/ERK pathway Mikiko Tohyama, Yuji Shirakata, Yasushi Hanakawa, Xiuju Dai, Hidenori Okazaki, Masamoto Murakami, Koji Hashimoto, Koji Sayama; Department of Dermatology, Ehime University Graduate School of Medicine, Ehime, Japan.

166.Low frequency of IgG autoantibodies specific to the precursor form of desmoglein 1 and 3 in patients with sporadic pemphigus Jun Yamagami[1], Marwah Saleh[1, 2], Manabu Ohyama[1], Takahisa Hachiya[3], Keiko Kuroda[3], Masayuki Amagai[1]; 1. Dermatology, Keio University, Tokyo, Japan; 2. Dermatology, Cairo University, Cairo, Egypt; 3. Medical Biological Laboratories Co. Ltd., Nagoya, Japan.

167.Th17-induced CXCL10 sustains proteases release during early blistering in bullous pemphigoid Sebastien Le Jan[1], July Plee[1, 4], David Vallerand[1], Aurélie Dupond[2], Elodie Delanez[1], Anne Durlack[3], Philippe Bernard[1, 4], Frank Antonicelli[1]; 1. Dermatology, University of Reims, Reims, France; 2. Biochemistry, University of Reims, Reims, France; 3. Histopathology, University hospital, Reims, France; 4. Dermatology, University hospital, Reims, France.

168(PL2-07).A novel necroptosis pathway of annexin A1/ FPR1 interaction in severe cutaneous adverse drug reactions** Nao Saito, Hongjiang Qiao, Teruki Yanagi, Satoru Shinkuma, Asuka Suto, Yasuyuki Fujita, Shotaro Suzuki, Toshifumi Nomura, Hideki Nakamura, Hiroshi Shimizu, Riichiro Abe; Dermatology, Hokkaido University Graduate School of Medicine, Sapporo, Japan.

169.Keratinocyte-specific loss of Phospholipase C δ1 results in aberrant activation of IL-23/IL-17 axis and skin inflammation Yoshikazu Nakamura, Kaori Kanemaru, Kiyoko Fukami; Laboratory and Genome and Biosignals, School of Life Sciences, Tokyo University of Pharmacy and Life Sciences, Tokyo, Japan.

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170.Serine protease inhibitor attenuates PAR-2 triggered inflammatory response and keratin 1 expression in human primary keratinocytes Chieko Okamura[1], Yoko Niki[1], Seiji Takeuchi[1, 3], Chikako Nishigori[3], Lieve Declercq[2], Daniel Yarosh[2], Naoaki Saito[1]; 1. Kobe Skin Research Department, Biosignal Research Center, Kobe University, Kobe, Japan; 2. Basic Science Research, Estée Lauder Companies, Melville, NY, USA; 3. Division of Dermatology, Kobe University Graduate School of Medicine, Kobe, Japan.

171.Activation of inflammasome is related to S100A9 induction and is involved in chronic inflammation of the skin with atopic dermatitis Mami Yamamoto[1, 2], Kaori Inoue[2], Mika Sawane[2], Tatsuo Maeda[1], Ryoji Tsuboi[1], Toshihiko Hibino[2]; 1. Department of Dermatology, Tokyo Medical University, Tokyo, Japan; 2. Shiseido Innovative Science Research & Development Center, Yokohama, Japan.

172*(CM1-03).Bullous pemphigoid autoantibodies induce skin fragility in neonatal mice in a complement-independent manner Tetsumasa Sasaoka, Hideyuki Ujiie, Wataru Nishie, Akihiko Shibaki, Hideki Nakamura, Hiroshi Shimizu; Depertment of Dermatology, Hokkaido University Graduate School of Medicine, Sapporo, Japan.

173*(CM6-10).CD4, but not CD8, T cells are required for induction of experimental epidermolysis bullosa acquisita Hiroaki Iwata[1], Katja Bieber[1], Benjamin Tiburzy[2], Navina Chrobok[3], Kathrin Kalies[3], Atsushi Shimizu[4], Sarah Leineweber[5], Akira Ishiko[4], Enno Schmidt[1], Detlef Zillikens[1], Jürgen Westermann[3], Karsten Seeger[5], Rudolf Manz[2], Ralf J. Ludwig[1]; 1. Dermatology, University of Lübeck, Lübeck, Germany; 2. Systemic Inflammation Research, University of Lübeck, Lübeck, Germany; 3. Anatomy, University of Lübeck, Lübeck, Germany; 4. Dermatology, Toho University, Ota-ku, Japan; 5. Chemistry, University of Lübeck, Lübeck, Germany.

174.Activin A inhibits antigen-induced allergy in murine epicutaneous sensitization Magdalini Kypriotou[1], Dianelys Rivero[1], Marcel Huber[1], Hans Acha-Orbea[2], Sabine Werner[3], Daniel Hohl[1]; 1. Service of Dermatology, Beaumont Hospital CHUV, Lausanne, Switzerland; 2. Department of Biochemistry, University of Lausanne, Lausanne, Switzerland; 3. Department of Biology, Institute of Molecular Health Sciences, ETH Zurich, Zurich, Switzerland.

175.Increased sensitivity to stratum corneum neutralization favors the development of dermatitis in flaky-tail mice Takashi Sakai, Yutaka Hatano, Sakuhei Fujiwara; Dermatology, Oita University, Yufu, Japan.

176.The T regulatory cell/T helper 17 cell ratio is reduced in the gut of patients with dermatitis herpetiformis Emiliano Antiga[1], Ilaria Pierini[1], Gianna Baroni[2], Elena Del Bianco[1], Beatrice Bianchi[1], Daniela Renzi[3], Simonetta Di Lollo[2], Antonino Calabrò[3], Paolo Fabbri[1], Marzia Caproni[1]; 1. Department of Critical Care, Section of Dermatology, University of Florence, Florence, Italy; 2. Department of Critical Care, Section of Pathologic Anatomy, University of Florence, Florence, Italy; 3. Department of Clinical Pathophysiology, Section of Gastroenterology, University of Florence, Florence, Italy.

177.The loss of Piasy activates IL23 expression from keratinocyte in response to IL17 and TNFα, a positive feedback mechanism for Th17 activation in psoriasis Yuangang Liu, Danielle McClanahan, Stephanie Persaud, Yun Wang, Benjamin Ehst; Dermatology, Oregon Health & Science University, Portland, OR, USA.

178.Fumaric acid attenuates the eotaxin-1 expression in TNF-α-stimulated fibroblasts by suppressing p38 MAPK-dependent NF-κB signaling Kyung-Baeg Roh[1], Eunsun Jung[1], Jaeho Lee[1], Jongsung Lee[2], Deokhoon Park[1]; 1. Biospectrum LIfe Science Institute, Seongnam, Republic of Korea; 2. Dermatological Health Management, Eulji University, Seongnam, Republic of Korea.

179.Anti-alpha-2-macroglobulin-like-1 autoantibodies are detected frequently and may be pathogenic in paraneoplastic pemphigus Norito Ishii[1], Sanae Numata[1], Kwesi Teye[1], Daisuke Tsuruta[1], Ryosuke Sogame[1], Hiroshi Koga[1], Yohei Natsuaki[1], Atsunari Tsuchisaka[1], Takahiro Hamada[1], Tadashi Karashima[1], Takekuni Nakama[1], Minao Furumura[1], Chika Ohata[1], Tamihiro Kawakami[2], Isabelle Schepens[3], Luca Borradori[3], Takashi Hashimoto[1]; 1. Dermatology, Kurume University School of Medicine, and Kurume University Institute of Cutaneous Cell Biology, Fukuoka, Japan; 2. Dermatology, St. Marianna University School of Medicine, Kawasaki, Japan; 3. Dermatology, Inselspital, Bern University Hospital and University of Bern, Bern, Switzerland.

180.Indomethacin inhibits eosinophil migration to prostaglandin D2: Proposal of a mechanism of action for eosinophilic pustular folliculitis Aiko Hirai[1, 2], Naoko Kataoka[2], Takahiro Satoh[1], Hiroo Yokozeki[2]; 1. Department of Dermatology, National Defense Medical College, Tokorozawa city, Japan; 2. Department of Dermatology, Graduate School, Tokyo Medical and Dental University, Tokyo, Japan.

181*(CM6-03).Epicutaneous application of Toll-like receptor 7 agonists leads to systemic autoimmunity in wild-type mice: A new model of SLE Maki Yokogawa, Mikiro Takaishi, Kimiko Nakajima, Sayo Kataoka, Yoshio Terada, Shigetoshi Sano; Kochi University, Nankoku, Japan.

182.Drug induced EBV reactivation in DRESS syndrome triggers a B lymphocyte dependent IL-10 secretion Baptiste Janela[1], Damien Picard[2], Maud Vaillant[2], Pascal Joly[2], Sebastien Calbo[2], Philippe Musette[2]; 1. Singapore Immunology Network, Agency for Science, Technology and Research, Singapore, Singapore; 2. INSERM U905, Rouen University Hospital, Department of Dermatology, Rouen, France.

183.Continuous mechanical contraction induces inflammatory factors in human epidermal keratinocytes Takamasa Gomi, Toshihiro Hinokitani, Mayumi Shishido, Kazuyuki Yo; Dermatological R&D, POLA Chemical Industries, Inc., Yokohama, Japan.

184.GM-CSF modulates both innate and adaptive immune responses in autoantibody-mediated organ-specific autoimmune disease Unni Krishna SRL Samavedam[1], Hiroaki Iwata[1], Susen Müller[1], Franziska Schulze[1], Andreas Recke[1], Enno Schmidt[1, 2], Detlef Zillikens[1], Ralf Ludwig[1]; 1. Department of Dermatology, University of Lübeck, Lübeck, Germany; 2. Comprehensive Center for Inflammation Medicine, University of Lübeck, Lübeck, Germany.

185.Valrubicin reduces inflammation in activated human keratinocytes and leukocytes Sarah de Fønss[1], Eva Hauge[1], Louise Rottbøll[1], Stine Andersen[1], Elisabeth de Darkó[2], Karin Stenderup[1], Cecilia Rosada[1]; 1. Deparment of Dermatolgy, Aarhus University Hospital, Aarhus, Denmark; 2. Valderm ApS, Lyngby, Denmark.

186.Protective role of anti-inflammatory complex on human skin cells Monika Pasikowska, Renata Debowska, Barbara Marczak, Irena Eris; Cosmetic Laboratories Dr Irena Eris, Centre for Science and Research Dr Irena Eris, Warsaw, Poland.

187*(CM1-04).Epidermal cFLIP is a critical regulator of skin homeostasis and protects from TNF-induced keratinocyte apoptosis Diana Panayotova-Dimitrova[1], Maria Feoktistova[1], Beate Kellert[1], Michaela Ploesser[1], Alexander Marx[2], Stefan Porubsky[2], Mike Hupe[1], Federico Jensen[4], Ana Zenclussen[4], Peter Geserick[1], You-Wen He[3], Martin Leverkus[1]; 1. Section of Molecular Dermatology, Medical Faculty Mannheim, University Heidelberg, Mannheim, Germany; 2. Medical Faculty Mannheim, University Heidelberg, Mannheim, Germany; 3. Duke University Medical Center, Durham, NC, USA; 4. Medical Faculty, Otto-von-Guericke University, Magdeburg, Germany.

188.Clinical and immunologic prognostic factors of bullous pemphigoid: A multicenter, prospective study of 120 patients Fanny Fichel[1], Coralie Barbe[1], Pascal Joly[2], Christophe Bedane[3], Pierre Vabres[4], François Aubin[5], François Truchetet[6], Catherine Michel[7], Juliette Jegou[8], Florent Grange[1], Frank Antonicelli[9], Philippe Bernard[1]; 1. Reims University Hospital, Reims, France; 2. Rouen University Hospital, Rouen, France; 3. Limoges University Hospital, Limoges, France; 4. Dijon University Hospital, Dijon, France; 5. Besançon University Hospital, Besançon, France; 6. Metz-Thionville Hospital, Thionville, France; 7. Mulhouse Hospital, Mulhouse, France; 8. Chalons Hospital, Chalons, France; 9. Champagne Ardenne University, Reims, France.

189.Disease flare and progression in cutaneous lupus erythematosus: A longitudinal study of CLE Yunyoung Chang[1, 2], Kathleen Propert[3], Samantha Sirignano[4], Ben Chong[4], Victoria Werth[1, 2]; 1. Dermatology, Perelman School of Medicine at the University of Pennsylvania, Philadelphia, PA, USA; 2. Dermatology, Philadelphia Veterans Affairs Medical Center, Philadelphia, PA, USA; 3. Biostatistics, Hospital of the University of Pennsylvania, Philadelphia, PA, USA; 4. Dermatology, UT Southwestern, Dallas, TX, USA.

190.The limitations in measuring improvement in disease activity in patients with mild cutaneous lupus erythematosus Yunyoung Chang[1, 2], Kathleen Propert[3], Victoria Werth[1, 2]; 1. Dermatology, Perelman School of Medicine at the University of Pennsylvania, Philadelphia, PA, USA; 2. Dermatology, Philadelphia Veterans Affairs Medical Center, Philadelphia, PA, USA; 3. Biostatistics, Hospital of the University of Pennsylvania, Philadelphia, PA, USA.

191.Effects of topical rapamycin versus tacrolimus in atopic dermatitis-like mouse model Mostafa Abd el-latif[1], Mari Tanaka[2], Mari Wataya-Kaneda[2], Hiroyuki Murota[2], Ichiro Katayama[2]; 1. dermatology, Cairo University, Cairo, Egypt; 2. dermatology, Osaka University, Osaka, Japan.

192.Simvastatin decreases skin T-cell infiltration and prevents epidermal depigmentation in a mouse model of vitiligo Mehdi Rashighi[1], Priti Agarwal[1], Kingsley Essien[1], Michael Frisoli[1], Hamidreza Pazoki-Toroudi[2], John Harris[1]; 1. Department of Medicine, Division of Dermatology, University of Massachusetts Medical School, Worcester, MA, USA; 2. Center for Research & Training in Skin Diseases & Leprosy, Tehran University of Medical Sciences, Tehran, Islamic Republic of Iran.

193.Allelic and copy number variations in human Fcγ receptor genes are strongly associated with susceptibility to autoimmune blistering diseases (AIBD) Andreas Recke[1, 11], Gestur Vidarsson[2], Ralf Ludwig[1, 11], Miriam Freitag[1, 11], Steffen Möller[1, 11], Reinhard Vonthein[3], Julia Schellenberger[1], Ozan Haase[1, 11], Siegfried Görg[4], Almut Nebel[5], Stefan Schreiber[5], Regine Gläser[6, 11], Sandrine Benoit[7, 11], Miklós Sárdy[8, 11], Rüdiger Eming[9, 11], Michael Hertl[9, 11], Detlef Zillikens[1, 11], Inke König[3], Enno Schmidt[1, 10, 11], Saleh Ibrahim[1, 11]; 1. Dept. of Dermatol., Univ. Lübeck, Lübeck, Germany; 2. Sanquin Res. Inst., Amsterdam, Netherlands; 3. Inst. of Med. Biometry and Statistics, Univ. Lübeck, Lübeck, Germany; 4. Dept. of Transfusion Med., Univ. Lübeck, Lübeck, Germany; 5. Inst. of Clin. Mol. Biol., Univ. Kiel, Kiel, Germany; 6. Dept. of Dermatol., Univ. Kiel, Kiel, Germany; 7. Univ. Würzburg, Würzburg, Germany; 8. Univ. Munich (LMU), Munich, Germany; 9. Univ. Marburg, Marburg, Germany; 10. CCIM, Univ. Lübeck, Lübeck, Germany; 11. German AIBD Study Group, Germany, Germany.

194.T cells with an autoreactive phenotype and a deregulated production of reactive oxygen species occur as a feature of immunosenescence in old mice Sven Koellner, Jan Scheuermann, Seppe Vander Beeken, Johannes Weiss, Anca Sindrilaru, Karin Scharffetter-Kochanek, Thorsten Peters; Dermatology, Ulm University, Ulm, Germany.

195.Mast cell-deficient kitw-sh/w-sh mice as a photodermatosis model Nina Schweintzger[1, 2], Alexandra Gruber-Wackernagel[1], Eleonora Reginato[1, 2], Gerlinde Mayer[2], Isabella Bambach[2], Alberto Limon-Flores[3, 4], Stephen Ullrich[3], Scott Byrne[3, 5], Peter Wolf[1]; 1. Research Unit for Photodermatology, Department of Dermatology,, Medical University of Graz, Graz, Austria; 2. Center for Medical Research, Medical University of Graz, Graz, Austria; 3. Department of Immunology, UT MD Anderson Cancer Center, Houston, TX, USA; 4. Escuela Nacional de Ciencias Biológicas-IPN, Mexico City, Mexico; 5. Infectious Diseases and Immunology, Sydney Medical School,, The University of Sydney, Sydney, NSW, Australia.

196.Establishment of novel ELISA using full-length recombinant human collagen XVII Kentaro Izumi, Wataru Nishie, Hideyuki Ujiie, Hiroshi Shimizu; Department of Dermatology, Hokkaido University Graduate School of Medicine, Sapporo, Japan.

197.Neutrophils orchestrate their own recruitment in immune complex-induced inflammation by C5aR and FcγR signaling Christian Sadik[1, 2], Nancy Kim[1], Andrew Luster[1]; 1. Center for Immunology and Inflammatory Disease, Massachusetts General Hospital/Harvard Medical School, Boston, MA, USA; 2. 2Department of Dermatology, Allergy, and Venereology, UKSH, Lübeck, Germany.

198.The atopic skin microenvironment modulates the phenotype and T cell polarising capacity of myeloid dendritic cells as determined by laser scanning cytometry Georgina Nagy[1, 2], Anikó Kapitány[1, 2], Doan Minh[3], Krisztián Gáspár[1, 2], Gábor Mócsai[1, 2], Zsolt Bacsó[3], Tamás Bíró[4], Éva Remenyik[1], Andrea Szegedi[1, 2]; 1. Department of Dermatology, University of Debrecen, MHSC, Debrecen, Hungary; 2. Department of Dermatological Allergology, University of Debrecen, MHSC, Debrecen, Hungary; 3. Department of Biophysics and Cell Biology, University of Debrecen, MHSC, Debrecen, Hungary; 4. DE-MTA "Lendület" Cellular Physiology Research Group, University of Debrecen, MHSC, Debrecen, Hungary.

199.The effect of hydroxychloroquine on the lupus erythematosus-like skin lesions in MRL/lpr mice Tatsuya Shimomatsu[1, 2], Hong-jin Li[1], Takaharu Ikeda[1], Nobuo Kanazawa[1], Fukumi Furukawa[1]; 1. Department of Dermatology, Wakayama Medical University, Wakayama city, Japan; 2. Department of Dermatology, Wakayama Rosai Hospital, Wakayama city, Japan.

200.A GWAS analysis identifies non-HLA genes within the MHC locus as associated with pemphigus vulgaris Ofer Sarig[1], Dan Vodo[1], Saharon Rosset[2], Sivan Bercovici[3], Lilach Zoller[3], Ilan Goldberg[1], Margarita Indelman[4], Sharon Baum[5], Aviv Barzilai[5], Henri Trau[5], Emily Avitan-Hersh[4], Michael Hertl[10], Shai Rosenberg[6], Markus Noethen[7], Karl Skorecki[4], Enno Schmidt[8], Detlef Zillikens[8], Ariel Darvasi[6], Dan Geiger[3], Saleh Ibrahim[8], Eli Sprecher[1]; 1. Tel Aviv Medical Center, Tel Aviv, Israel; 2. Tel Aviv University, Tel Aviv, Israel; 3. Maccabi Health Care Services, Tel Aviv, Israel; 4. Rambam Medical Center, Haifa, Israel; 5. Sheba Medical Center, Tel Aviv, Israel; 6. Hebrew university, Jerusalem, Israel; 7. University of Bonn, Bonn, Germany; 8. University of Luebeck, Luebeck, Germany; 9. Technion, Haifa, Israel; 10. Philipps-University Marburg, Marburg, Germany.

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202.Adiponectin deficiency exacerbates psoriasiform skin inflammation by promoting IL-17 production from γδ T cells Sayaka Shibata[1], Yayoi Tada[1], Yoshihide Asano[1], Makoto Sugaya[1], Takafumi Kadono[1], Toshimasa Yamauchi[2], Naoto Kubota[2], Takashi Kadowaki[2], Shinichi Sato[1]; 1. Dermatology, Faculty of Medicine, University of Tokyo, Tokyo, Japan; 2. Metabolic Disease, Faculty of Medicine, University of Tokyo, Tokyo, Japan.

203.Human CD141+ dermal dendritic cells (DCs) and vitamin D3 induced CD141hi DCs are defined by common molecular signatures Niwa Ali[1, 2], Chrysanthi Ainali[3, 1], Barry Flutter[1], Chung-Ching Chu[1], Guillermo Barinaga[1], Isabella Tosi[1], Katarzyna Grys[1], Ehsan Sharif-Paghaleh[2], Sophia Tsoka[3], Giovanna Lombardi[2], Frank Nestle[1]; 1. NIHR, St Johns Institute of Dermatology, King's College London, London, United Kingdom; 2. MRC Centre for Transplantation, King's College London, London, United Kingdom; 3. Dept of Informatics, King's College London, London, United Kingdom.

204.Epigenetic modifications and altered mRNA stability cause a restricted expression of SOCS3 in human keratinocytes Jana Zeitvogel[1], Miriam Wittmann[2], Thomas Werfel[1]; 1. Department of Dermatology and Allergy, Hannover Medical School, Hannover, Germany; 2. Leeds Institute of Molecular Medicine, University of Leeds, Leeds, United Kingdom.

205.A Vγ4+ subset of IL-17-precommited dermal γδT cells contributes to skin inflammation in a murine model of psoriasis Francisco Ramirez-Valle[1, 2, 3], Elizabeth Gray[2, 3], Jason Cyster[2, 3]; 1. Dermatology, University of California San Francisco, San Francisco, CA, USA; 2. Microbiology and Immunology, University of California San Francisco, San Francisco, CA, USA; 3. Howard Hughes Medical Institute, University of California San Francisco, San Francisco, CA, USA.

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207.Inhibitory effect of mesenchymal stem cells on IL-23-induced psoriasis-like skin inflammation Yun Sang Lee, Tae-Yoon Kim; Dermatology, The Catholic University of Korea, Seoul, Republic of Korea.

208.Novel isonahocol E3 exhibits anti-inflammatory and anti-angiogenic effect in endothelin-1-stimulated human keratinocytes Shyam Sah, Tae-Yoon Kim; Dermatology, The Catholic University of Korea, Seoul, Republic of Korea.

209.Lack of skin Th17/Th22 CD4+ T cells and antimicrobial peptides in lesions of hidradenitis suppurativa leads to a vicious circle perpetuating chronic inflammation Claire Hotz[1], Aurélie Guguin[1], Mathieu Surenaud[1], Michele Boniotto[1], Nicolas Ortonne[2], Romain Bosc[2], Olivier Chosidow[2], Pierre Wolkenstein[2], Yves Lévy[1, 2], Sophie Hüe[1, 2]; 1. INSERM U955, Créteil, France; 2. Henri-Mondor Hospital, Créteil, France.

210.Carbamazepine-induced bullous pemphigoid with elevated IgE and peripheral eosinophilia Joanna Hooten, Adela Rambi Cardones; Dermatology, Duke University, Durham, NC, USA.

211.Genome wide association mapping of alopecia areata in 5 inbred strains of mice identifies novel and currently known genes for this disease John Sundberg[1, 2], Kathleen Silva[1], Victoria Kennedy[1], Lloyd King[2], Annerose Berndt[3]; 1. The Jackson Laboratory, Bar Harbor, ME, USA; 2. Vanderbilt University, Nashville, TN, USA; 3. University of Pitsburgh, Pittsburgh, PA, USA.

212.*In vitro* study of the effect of cutaneous sensory innervation in a tissue-engineered psoriatic skin Julien Ringuet, Roxane Pouliot, François Berthod; LOEX/CMDGT, Centre de recherche du CHU de Québec, Université Laval, Quebec, QC, Canada.

213.Involvement of necroptosis in the development of imiquimod-induced psoriasis-like dermatitis Tetsuya Honda, Teruasa Murata, Yuri Ueharaguchi, Natsuki Ishizawa, Yoshiki Miyachi, Kenji Kabashima; Dermatology, Kyoto University, Kyoto, Japan.

214.Prevalence and co-occurrence of autoantibodies in healthy blood donors W. Jung*[1, 2], J. Prüssmann*[1, 2], A. Recke[1, 2], K. Rentzsch[3], D. Juhl[4], R. Henschler[5], S. Müller[1, 2], P. Lamprecht[2, 6], E. Schmidt[1, 2, 7], E. Csernok[6], S. Görg[4], W. Stöcker[3], D. Zillikens[1, 2], S. Ibrahim*[1, 2], R. Ludwig*[1, 2]; 1. Dermatology, University of Lübeck, Lübeck, Germany; 2. Excellence Cluster "Inflammation at Interfaces", Schleswig-Holstein, Germany; 3. Euroimmun AG, Lübeck, Germany; 4. Transfusion Medicine, University Hospital of Schleswig-Holstein, Lübeck/Kiel, Germany; 5. Transfusion Medicine, Cellular Therapeutics & Hemostaseology, Ludwig-Maximilians-University, Munich, Germany; 6. Rheumatology, Universitiy of Lübeck, Lübeck, Germany; 7. Comprehensive Center of Inflammation Medicine, University of Lübeck, Lübeck, Germany.

215.Integrative approach combining human xenograft model with advanced computational analysis identifies PIM1 as a critical checkpoint in inflammation E. Semenova*[1], G. Perera*[1], C. Ainali*[1], C. Hundhausen[1], G. Barinaga[1], D. Kassen[1], A. Williams[1], M. Mirza[2], M. Balazs[3], R. Sanchez-Rodriguez[1], J. Barker[1], R. Trembath[1], S. Tsoka[4], W. Ouyang[3], F. Nestle[1]; 1. Division of Genetics and Molecular Medicine, Guy's, King's and St. Thomas' School of Medicine, King's College London, London, United Kingdom; 2. Genomics Core Facility Biomedical Research Centre, Guy's and St. Thomas' Hospital, London, United Kingdom; 3. Department of Immunology, Genentech Inc., South San Francisco, CA, USA; 4. Department of Informatics, School of Natural and Mathematical Sciences, King's College London, London, United Kingdom.

216.Determination of cutaneous dermatomyositis severity using the cutaneous dermatomyositis disease area and severity index Cynthia Anyanwu[1, 2], Kathleen Propert[3], Victoria Werth[1, 2]; 1. Department of Dermatology, Philadelphia Veterans Affairs Medical Center, Philadelphia, PA, USA; 2. Department of Dermatology, University of Pennsylvania, Philadelphia, PA, USA; 3. Department of Biostatistics and Epidemiology, University of Pennsylvania, Philadelphia, PA, USA.

217.Antibodies from patients with bullous pemphigoid and neurological disease bind to murine cortical and hippocampal neurons Kathy Taghipour[1], Ching-Chi Chi[2], Balbir Bhogal[3], Richard Groves[1, 3], Vanessa Venning[4], Fenella Wojnarowska[5]; 1. Genetics and Molecular Medicine, King's College London, London, United Kingdom; 2. College of Medicine, Chang Gung University, Taoyuan, Taiwan; 3. Immunodermatology, St John's Institute of Dermatology, London, United Kingdom; 4. Oxford University Hospitals, Oxford, United Kingdom; 5. Nuffield Department of Clinical Medicine, Oxford University, Oxford, United Kingdom.

218.Resveratrol and benzoyl peroxide activity against *propionibacterium acnes* Emma Taylor[1, 2], Jackson Champer[3], Jenny Kim[1, 2]; 1. Medicine, Division of Dermatology, UCLA, Los Angeles, CA, USA; 2. Dermatology, Greater Los Angeles Healthcare System Veteran's Affairs, Los Angeles, CA, USA; 3. City of Hope National Medical Center, Duarte, CA, USA.

219.The role of interleukin 17- induced receptor-interacting protein-4 in human keratinocytes Hyun Cheol Bae, Yoon Hee Park, Sang Hoon Jeong, Yeon Soo Jang, Hee Joo Kim, Woo-In Ryu, Jin Hee Kim, Ha Na Lee, Sang Wook Son; Laboratory of Cell Signaling and Nanomedicine, Department of Dermatology and Division of Brain Korea 21 Project for Biomedical Science, Korea University College of Medicine, Seoul, Republic of Korea.

220.CD11a, CD11c and CD18 gene polymorphisms and susceptibility to Behçet's disease in Korea Su Rim Park[1], Kyung Sook Park[1], Young Joon Park[2], Dongsik Bang[3], Eun-So Lee[2]; 1. Biology, School of Biological Science and Chemistry, Sungshin Women's University, Seoul, Republic of Korea; 2. Dermatology, Ajou University School of Medicine, Suwon, Republic of Korea; 3. Dermatology, Yonsei University College of Medicine, Seoul, Republic of Korea.

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221.The development and validation of the TABQOL, a tool to measure the quality of life impacts of treatments used in patients with autoimmune blistering disease Angelica Tjokrowidjaja[1, 2], Benjamin Daniel[1], John Frew[1], Deshan Sebaratnam[1], Anna Marie Hanna[1, 2], Shien-ning Chee[1, 2], Andrew Dermawan[1, 2], Charles Qian Wang[1, 2], Chris Lim[1, 2], Supriya Venugopal[1], Lesley Rhodes[3], Jackie Cochrane[3], Belinda Welsh[4], Tamar Nijsten[5], Dedee Murrell[1, 2]; 1. Department of Dermatology, St George Hospital, Gray St, Kogarah, Sydney, NSW, Australia; 2. University of New South Wales, Sydney, NSW, Australia; 3. Premier Specialists Research and Development, Sydney, NSW, Australia; 4. Department of Dermatology, St Vincent's Hospital, Melbourne, VIC, Australia; 5. Department of Dermatology, Erasmus MC, Rotterdam, Netherlands.

222.Psoriasin (S100A7) promote angiogenesis in psoriasis Jenny Vegfors, Anna-Karin Ekman, Cecilia Bivik, Charlotta Enerbäck; Ingrid Asp Psoriasis Research Center, Department of Clinical and Experimental Medicine, Linköping University, Linköping, Sweden.

223.Diagnostic criteria for erosive lichen planus affecting the vulva: An electronic-delphi consensus exercise Rosalind Simpson[1], Kim Thomas[1], Paul Leighton[2], Ruth Murphy[3]; 1. Centre of Evidence Based Dermatology, University of Nottingham, Nottingham, United Kingdom; 2. University of Nottingham, Nottingham, United Kingdom; 3. Nottingham University Hospitals NHS Trust, Nottingham, United Kingdom.

224.Calcipotriol counteracts betamethasone-induced decrease in biomarkers related to skin atrophy Hanne Norsgaard[1], Pascal Descargues[2], Sandrine Kurdykowski[2], Tatiana Gonzalez[1], Georg Duenstl[1], Mads Røpke[1]; 1. LEO Pharma, Ballerup, Denmark; 2. GenoSkin, Toulouse, France.

225.Gene mutation analysis of Korean patient with early onset and recalcitrant generalized pustular psoriasis Hyo Sang Song[1], Su Jin Yun[2], Sun Park[2], Yong-Sung Juhnn[3], Eun-So Lee[1]; 1. Dermatology, Ajou University School of Medicine, Suwon, Republic of Korea; 2. Microbiology and Immunology, Ajou University School of Medicine, Suwon, Republic of Korea; 3. Biochemistry and Molecular Biology, Seoul National University College of Medicine, Seoul, Republic of Korea.

226.Rituximab treatment for severe pemphigus Kara Heelan, Scott Walsh, Neil Shear; Division of Dermatology, Sunnybrook Health Sciences Centre, Toronto, ON, Canada.

227*(CM1-05).Reversal of long-standing alopecia areata in C3H/HeJ mice using topical JAK inhibitors Ali Jabbari[1], Zhenpeng Dai[1], Luzhou Xing[3], Annemieke de Jong[1], Angela Christiano[1, 4], Raphael Clynes[1, 2, 3]; 1. Dermatology, Columbia University, New York, NY, USA; 2. Medicine, Columbia University, New York, NY, USA; 3. Pathology, Columbia University, New York, NY, USA; 4. Genetics & Development, Columbia University, New York, NY, USA.

228.CD4+CD28null cells are not expanded but exhibit a cytotoxic profile in patients with psoriasis Xinaida Lima, Renata Magalhães, Fábio Téo, Ronei Mamoni, Maria Blotta; University of Campinas, Campinas, Brazil.

229.IL-4 down-regulation of involucrin expression in atopic dermatitis involves competitive binding of Stat6 to the coactivator CBP Lei Bao[1], Jaime Alexander[1], Huayi Zhang[1], Lawrence Chan[1, 2, 3]; 1. Dermatology, Univ Illinois, Chicago, IL, USA; 2. Microbiology/Immunology, UIC, Chicago, IL, USA; 3. Jesse Brown VA Med Center, Chicago, IL, USA.

230.Systemic VEGF inhibition decreases CD4+ T cells and Th17 cytokines improving psoriasis-like skin inflammation in KC-Tie2 mice Doina Diaconu, Yi Fritz, Sean Dawes, Candace Loyd, Nicole Ward; Dermatology, Case Western Reserve University, Cleveland, OH, USA.

231.Pharmacokinetic (PK) and pharmacodynamic (PD) correlation in topical drug formulation Jon Lenn, Heather Aloor, Javier Cote-Sierra, Leandro Santos, Steve Cook, Jean-Philippe Therrien, Hans Hofland; Center for Skin Biology, Stiefel, a GSK company, RTP, NC, USA.

232.Identification of heterogeneous human Treg cell subsets with implications in the pathogenesis of acne inversa Alexandra Heeseler, Rebecca Scheer, Christina Zielinski; Department of Dermatology, Charité-Universitätsmedizin Berlin, Berlin, Germany.

233.Psoriasis is associated with DC-HIL^{+} myeloid-derived suppressor cells that have defective suppressor function Jin-Sung Chung, Kyoichi Tamura, Kaveh Nezafati, Ponciano Cruz, Benjamin Chong, Kiyoshi Ariizumi; Dermatology, UT Southwestern Medical Center, Dallas, TX, USA.

234(PL6-01).Development of a mouse model for linear IgA bullous dermatosis** Peng Geng[1], Lin Lin[1], Moohe Park[1], Ning Li[1], Kayla Shumate[1], M. Marinkovich[2], Russell Hall[3], Luis Diaz[1], Zhi Liu[1]; 1. Dermatology, University of North Carolina, Chapel Hill, NC, USA; 2. Dermatology, Stanford University, Stanford, CA, USA; 3. Dermatology, Duke University, Durham, NC, USA.

235.Gene expression signature of TRAF3IP2-silenced keratinocytes reveals unexpected effects on KC differentiation and cytokine responses Sylviane Lambert[1], William Swindell[1], Lam Tsoi[2], Benjamin Drumright[1], Stefan Stoll[1], Rajan Nair[1], James Elder[1]; 1. Dermatology, University of Michigan, Ann Arbor, MI, USA; 2. Biostatistics, University of Michigan, Ann Arbor, MI, USA.

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237.Topical application of delphinidin reduces psoriasiform lesions in the flaky skin mouse by inducing epidermal differentiation and inhibiting proliferation and inflammation Harish Pal, Craig Elmets, Farrukh Afaq; Dermatology, University of Alabama at Birmingham, Birmingham, AL, USA.

238.Anti-BP180-type mucous membrane pemphigoid IgG induces endocytosis of BP180/collagen XVII less frequently than bullous pemphigoid IgG Akiko Naruse[1], Sho Hiroyasu[1], Hisayoshi Imanishi[1], Hiromi Kobayashi[1], Masamitsu Ishii[1], Hiroshi Koga[2], Takashi Hashimoto[2], Daisuke Tsuruta[1, 2]; 1. Dermatology, Osaka City University Graduate School of Medicine, Osaka, Japan; 2. Dermatology, Kurume University School of Medicine, and Kurume University Institute of Cutaneous Cell Biology, Kurume, Japan.

239.STAT2 expression and activation is increased in psoriatic skin Claus Johansen, Anne Hald, Lars Iversen; Depatment of Dermatology, Aarhus University Hospital, Aarhus C, Denmark.

240.Associations of pruritus severity, sleep problems, and work productivity in patients with moderate to severe psoriasis Alexa Kimball[1], Emily Edson-Heredia[2], Baojin Zhu[2], Jiaying Guo[3], Tomoko Maeda-Chubachi[2], Wei Shen[2]; 1. Harvard Medical School, Boston, MA, USA; 2. Lilly Research Labs, Indianapolis, IN, USA; 3. Pharmanet-i3, Indianapolis, IN, USA.

241.Interest of I-modulia, *Aquaphilus dolomiae* extract, in immune inflammatory response of atopic dermatitis pathology Marie-Françoise Aries, Clémence Vaissière, Hélène Delga, Marguerite Lévêque, Thien Nguyen, Sandrine Bessou-Touya, Nathalie Castex-Rizzi; Dermo Cosmetic Department, Pierre FABRE R&D Center, Toulouse Oncopole, France.

242.Opposing effects of the IL12B and IL23R psoriasis associated risk alleles on Th1 and Th17 responses in psoriatic skin Xianying Xing, Andrew Johnston, William Swindell, Philip Stuart, Rajan Nair, John Voorhees, James Elder, Johann Gudjonsson; Dermatology, Univ. of Michigan, Ann Arbor, MI, USA.

243.Bicyclic monoterpene diol modulates Th17 cytokine production in human keratinocytes Shelly Rivas, Yaping Ee, Susan Geen, Wei-Li Lee, Alan Shalita; Dermatology, SUNY Downstate Medical Center, Brooklyn, NY, USA.

244.Mechanisms of itch: Proteases activate Mas-related G-protein coupled receptors Vermuri Reddy, Sarina Elmariah, Ehsan Azimi, Tuanlian Luo, Ethan Lerner; Dermatology, Massachusetts General Hospital, Charlestown, MA, USA.

245.Cell permeable peptide-conjugated methotrexate attenuates imiquimod-induced psoriasiform dermatitis via decreasing IL-17 producing gamma delta T cells Dashlkhumbe Byamba[1, 2], Do Young Kim[1], Dae Suk Kim[1], Hyunjoong Jee[1], Sung Hee Kim[1], Soo Min Kim[3], Jin-Ok Baek[4], Sang-Kyou Lee[5], Min-Geol Lee[1]; 1. Department of Dermatology and Cutaneous Biology Research Institute, Yonsei University College of Medicine, Seoul, Republic of Korea; 2. Brain Korea 21 Project for Medical Science, Yonsei University College of Medicine, Seoul, Republic of Korea; 3. Department of Dermatology, National Health Insurance Corporation Ilsan Hospital, Goyang, Republic of Korea; 4. Department of Dermatology, Gil Medical Center, Gachon University, Goyang, Republic of Korea; 5. Department of Biotechnology, Yonsei University College of Life Science and Biotechnology, Seoul, Republic of Korea.

246.Molceular identification and characterization of rosacea as a Th1- and Th17-dominated disease Jörg Buddenkotte[1, 2], Ferda Cevikbas[1], Pawel Novak[2], Jérôme Aubert[3], Isabelle Carlavan[3], Cordula Kempkes[1], Timo Buhl[1], Sophie Déret[3], Pascale Reiniche[3], Mathias Sulk[1], Johannes Voegel[3], Martin Steinhoff[1]; 1. Depts. of Dermatology and Surgery, University of California San Francisco, San Francisco, CA, USA; 2. Dept of Dermatology, University Hospital Münster, Münster, Germany; 3. Galderma R&D, Sophia Antipolis, France.

247.CCL7 (macrophage chemotactic protein-3, MCP-3) is upregulated in lesional psoriatic skin dependent on TNF-alpha activity Patrick Brunner, Baerbel Reininger, Irene Klein, Frieder Koszik, Georg Stingl; Dpt. of Dermatology, Div. of Immunology, Allergy and Infectious Diseases, Vienna, Austria.

248.Dysregulated production of IL-23 and IL-10 by Langerhans cells in psoriasis Cheryl Sweeney[1], Karoline Adamzik[2], Anne-Marie Tobin[3, 2], Genevieve Kelly[1, 2, 3], Brian Kirby[1]; 1. Dermatology Research, St. Vincent's University Hospital, University College Dublin D, Dublin, Ireland; 2. Dermatology, St. Vincent's University Hospital, Dublin, Ireland; 3. Dermatology, Adelaide and Meath Hospital, Dublin, Ireland.

249*(CM6-05).Immune complexes recruit slanDCs and NK cells to the vascular interface Thomas Döbel, Anke Lonsdorf, Anja Kunze, Alexander Enk, Knut Schäkel; Department of Dermatology, Heidelberg University Hospital, Heidelberg, Germany.

250.Mice with heterozygous deficiency of manganese superoxide dismutase (SOD2) show features of inflamm-aging Jan Scheurmann, Nicolai Treiber, Christine Weber, Andreas Renkl, Denis Frenzel, Franziska Buback, Anne Ruess, Guido Schulz, Karin Scharffetter-Kochanek, Johannes Weiss; Dermatology and Allergology, Ulm University, Ulm, Germany.

251.Different mRNA expression profiles in subcutaneous adipose tissue derived from body areas with and without psoriatic skin manifestations Ane Langkilde-Lauesen Nielsen, Line Raaby, Claus Johansen, Lars Iversen; Department of Dermatology, Aarhus University Hospital, Aarhus, Denmark.

252.K14-directed Hoxb13 transgenic mice develop phorbol-induced and age-related hyperproliferative skin lesions characterized by enhanced inflammation and angiogenesis Judith Mack[1, 2], Edward Maytin[1, 2]; 1. Biomedical Engineering, Cleveland Clinic, Cleveland, OH, USA; 2. Dermatology, Cleveland Clinic, Cleveland, OH, USA.

253*(CM6-09).ΔNp63 is a key driver of inflammatory signaling in atopic dermatitis Rose-Anne Romano[1], Emma Guttman-Yassky[2], Satrajit Sinha[1]; 1. Biochemistry, State University of New York at Buffalo, Buffalo, NY, USA; 2. Dermatology, Rockefeller University, New York, NY, USA.

254.Relationship of patient reported outcome measures to changes in clinical status in patients with moderate to severe psoriasis Ping Wang[1], Emily Edson-Heredia[1], Baojin Zhu[1], Wei Shen[1], Subhashis Banerjee[1], Craig Leonardi[2]; 1. Lilly Research Labs, Indianapolis, IN, USA; 2. St. Louis University School of Medicine, St. Louis, MO, USA.

255.A PASI ≥90 response is associated with improved patient reported outcomes: Results from a phase 2 study in patients with psoriasis treated with ixekizumab Emily Edson-Heredia[1], Subhashis Banerjee[1], Baojin Zhu[1], Tomoko Maeda-Chubachi[1], Gregory Cameron[1], Wei Shen[1], Kenneth Gordon[2], Craig Leonardi[3]; 1. Lilly Research Labs, Indianapolis, IN, USA; 2. Northwestern University Feinberg School of Medicine, Chicago, IL, USA; 3. St. Louis University School of Medicine, St. Louis, MO, USA.

256*(CM1-02).Increased proportion of regulatory B cells after rituximab therapy for autoimmune blistering skin diseases (AIBD): A potential mechanism for disease control Alan Chen[1], Ayumi Yoshizaki[2], Tomomitsu Miyagaki[2], Robert Streilein[1], Thomas Tedder[2], Russell Hall[1, 2]; 1. Dermatology, Duke, Durham, NC, USA; 2. Immunology, Duke, Durham, NC, USA.

257.Bullous pemphigoid eosinophils express FcεRI and exhibit an immunoregulatory degranulation profile Heather Holahan[2], Kelly Messingham[2], Jeffrey Wang[2], Janet Fairley[1, 2]; 1. Dermatology, VA Medical Center, Iowa City, IA, USA; 2. Univ of Iowa, Iowa City, IA, USA.

258.Reversible Th22 dysfunction and persistent loss of Th17 responses in patients with L-CTCL Rei Watanabe, Emanuella Guenova, Ahmed Gehad, Jessica Teague, Natalie Adams, Andrew Dorosario, Robert Glinert, Marianne Tawa, Joi Carter, Keri Chaney, David Fisher, Thomas Kupper, Rachael Clark; Dana Farber/Brigham and Women's Cancer Center, Boston, MA, USA.

259.Defective expression of class I antigen presentation pathway members in Merkel cell carcinoma may underlie low MHC I expression and contribute to immune evasion Victor Huang[1], Mitra Dowlatshahi[1], Derin Keskin[1], Bruce Reinhold[1], T. Mayo[2], Jessica Teague[1], Ahmed Gehad[1], Ellis Reinherz[1], Masa Shuda[2], James DeCaprio[1], Manisha Thakuria[1], Andrew Dorosario[1], Rachael Clark[1]; 1. Dana Farber/Brigham and Women's Cancer Center, Boston, MA, USA; 2. Cancer Virology Program, University of Pittsburgh, Pittburgh, PA, USA.

260.Non-selective β-blocker increases the expression of CCL20 in HaCaT cells stimulated with TNF-α: A possible mechanism in exacerbation of psoriasis Heesu Kim, Sung Hee Kim, Dae Suk Kim, Do Young Kim, Dashlkhumbe Byamba, Hyunjoong Jee, Min-Geol Lee; Dermatology, Department of Dermatology, Severance Hospital, Cutaneous Biology Research Institute, Yonsei University College of Medicine, Seoul, Korea, Seoul, Republic of Korea.

261.Atopic dermatitis in adults: Augmented circulating IgG4 and IgE antibodies against *Staphylococcus aureus* enterotoxin B Raquel Orfali, Maria Sato, Vanessa Dos Santos, Tiago Titz, Alberto Duarte, Roberto Takaoka, Valeria Aoki; Dermatology, University of Sao Paulo School of Medicine, Sao Paulo, Brazil.

262*(CM6-06).A non-infectious sand fly salivary gland protein is likely involved in the development and clonal selection of anti-Dsg1 autoantibodies in Fogo Selvagem Ye Qian[1], Joseph Jeong[1], Jesus Valenzuela[2], Flor Evangelista[1], Valeria Aoki[3], Gunter Hans[4], Evandro Rivitti[3], Luis Diaz[1]; 1. Dermatology, University of North Carolina at Chapel Hill, Chapel Hill, NC, USA; 2. Vector Molecular Biology Section, Laboratory of Malaria and Vector Research, NIAID, NIH, Rockville, MD, USA; 3. Dermatology, University of Sao Paulo, Sao Paulo, Brazil; 4. Dermatology, University of Mato Grosso do Sul, Campo Grande, Brazil.

263.Dermatologists' knowledge of and preferences regarding topical steroids Laura Sandoval[1], Scott Davis[1], Steven Feldman[1, 2, 3]; 1. Dermatology, Center for Dermatology Research, Wake Forest School of Medicine, Winston Salem, NC, USA; 2. Pathology, Wake Forest School of Medicine, Winston Salem, NC, USA; 3. Public Health Sciences, Wake Forest School of Medicine, Winston Salem, NC, USA.

264.CD146 expression identifies Th17 and Tc17 subsets in psoriatic blood and skin Nehal Mehta, Pradeep Dagur, Elena Stansky, Shawn Rose, Angelique Biancotto, Karteek Sonti, Martin Playford, John McCoy; National Institutes of Health, Bethesda, MD, USA.

265.Three IL-17 ligands contribute to psoriasis: Blockade of IL-17RA signaling with brodalumab Jennifer Towne[2], Jeannette Bigler[1], Yu Zhang[2], Keith Kerkof[1], Martin Timour[1], Hugh Rand[1], Paul Klekotka[2], David Martin[1], David Salinger[3], Chris Russell[1]; 1. Medical Sciences, Amgen, Seattle, WA, USA; 2. Inflammation, Amgen, Seattle, WA, USA; 3. PKDM, Amgen, Seattle, WA, USA.

266.Human type VII collagen harbors multiple pathogenically relevant epitopes A. Vorobyev[1], H. Ujiie[2], A. Recke[1], J. Buijsrogge[3], M. Jonkman[3], T. Hashimoto[4], S. Kim[5], J. Kim[5], R. Groves[6], E. Schmidt[1], D. Zillikens[1], H. Shimizu[2], R. Ludwig[1]; 1. Dermatology, University of Lübeck, Lübeck, Germany; 2. Dermatology, Hokkaido University Graduate School of Medicine, Sapporo, Japan; 3. Dermatology, University Medical Center Groningen, University of Groningen, Groningen, Netherlands; 4. Dermatology, Kurume University School of Medicine, Fukuoka, Japan; 5. Dermatology and Cutaneous Biology Research Institute, Gangnam Severance Hospital, Yonsei University College of Medicine, Seoul, Republic of Korea; 6. Immunodermatology, St John's Institute of Dermatology, St Thomas' Hospital, London, United Kingdom.

267.Expression of chemokine receptor D6 in human psoriatic skin is modulated by cutaneous trauma and microRNAs Kave Shams[2], Mark Singh[2], Susan Holmes[1], David Burden[1], Vicky King[2], Clive McKimmie[2], Gerard Graham[2]; 1. Alan Lyell Centre for Dermatology, NHS Greater Glasgow and Clyde, Glasgow, United Kingdom; 2. Institute of Infection, Immunity and Inflammation, University of Glasgow, Glasgow, United Kingdom.

268.The effect of Shikonin on monocyte-derived DCs phenotype and IL-23 secretion Yan Wang, Jingxia Zhao, Ping Li; Beijing Insitut of Troditional Chinese Medicine, Beijing, China.

269.Epitope mapping of anti-type VII collagen antibodies in the patients with recessive dystrophic epidermolysis bullosa J. Cogan, X. Wang, Y. Hou, M. Khilili, D. Woodley, M. Chen; Dermatology, University of Southern California, Los Angeles, CA, USA.

270.GTW reduced imiquimod-induced skin lesions by a mechanism involving inhibition of STAT3 phosphary lation in Th17 cells Zhao Jingxia, Ping Li; Beijing Institute of Traditional Chinese Medicine, Beijing, China.

271.Decreased A20 can be overcome with an external NF-KB inhibitor in a mouse model of plaque psoriasis Brian Poligone[1], Kathleen Gillespie[1], Ian Strickland[2], Sankar Ghosh[2]; 1. Dermatology, University of Rochester School of Medicine, Rochester, NY, USA; 2. Department of Microbiology & Immunology, Columbia University, New York, NY, USA.

272.Evaluation of itch-inducing mediators in cutaneous T cell lymphoma Elaine Gilmore[1], Luojing Chen[1], Brian Poligone[1, 2]; 1. Department of Dermatology, University of Rochester School of Medicine, Rochester, NY, USA; 2. Wilmot Cancer Center, University of Rochester School of Medicine, Rochester, NY, USA.

273*(CM1-07).A short peptide overlapping the RAL motif of desmoglein 1 contains the conformational epitope for pathogenic IgG4 autoantibodies in fogo selvagem Flor Evangelista[1], Aleeza Roth[2], Kayla Shumate[1], Phillip Prisayanh[1], Zhi Liu[1], Valeria Aoki[3], Gunter Hans[3], Evandro Rivitti[3], Luis Diaz[1]; 1. Dermatology, University of North Carolina at Chapel Hill, Chapel Hill, NC, USA; 2. Kidney Center, University of North Carolina at Chapel Hill, Chapel Hill, NC, USA; 3. Dermatology, University of Sao Paulo, Sao Paulo, Brazil.

274.Defining unique B cell signatures in patients with autoimmune blistering diseases Ron Feldman[1], Chungwen Wei[2], Bridget Neary[2], Ignacio Sanz[2]; 1. Dermatology, Emory University, Atlanta, GA, USA; 2. Rheumatology, Emory University, Atlanta, GA, USA.

275.Neem and turmeric inhibit Propionibacterium acnes induced lipid synthesis and inflammatory response of human sebocytes Jennifer Ornelas[1], Ravi Dasu[1], Rasiq Zackria[1], Roslyn Isseroff[1, 2], Raja Sivamani[1]; 1. Dermatology, UC Davis School of Medicine, Sacramento, CA, USA; 2. VA Mather, Mather, CA, USA.

276.Attenuated regulatory function of IL-10-producing B cells in psoriasis Wei Li, Ming Wan, Jing Ren, Jixin Gao, Yufeng Liu; Dermatology, Xijing Hospital, Xi'an, China.

277.mRNA regulation is prior to miRNA regulation in psoriatic skin during treatment with Adalimumab Line Raaby, Ane Langkilde, Claus Johansen, Lars Iversen; Department of Dermatology, Aarhus University Hospital, Aarhus, Denmark.

278.Expression and function of non-neuronal transient receptor potential (TRPA1) ion channel in mastocytosis Jörg Buddenkotte[1, 2], Benjamin Meyerknecht[2], Mathias Sulk[1], Stephan Seeliger[3], Cordula Kempkes[1], Ferda Cevikbas[1], Martin Steinhoff[1]; 1. University of California San Francisco, San Francisco, CA, USA; 2. University Hospital Münster, Münster, Germany; 3. University of Göttingen, Göttingen, Germany.

279.Development of full-thickness skin equivalents including immunological cell types Szymon Kurdyn[1], Stephan Mielke[2], Joachim Nickel[1], Heike Walles[1]; 1. Department for Tissue Engineering and Regenerative Medicine, University Hospital, Würzburg, Germany; 2. Department of Internal Medicine II, University Hospital, Würzburg, Germany.

280.Fluorescence overlay antigen mapping using laser scanning confocal microscopy differentiates linear IgA bullous dermatosis from epidermolysis bullosa acquisita mediated by IgA Katarzyna Wozniak[1], Cezary Kowalewski[1], Takashi Hashimoto[2], Norito Ishii[2], Hiroshi Koga[2]; 1. Department of Dermatology, Medical University of Warsaw, Poland, Warsaw, Poland; 2. Department of Dermatology, Kurume University School of Medicine, Kurume, Japan.

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281. Dimethylfumarate impairs neutrophil functions Susen Müller[1], Martina Behnen[2], Sonja Möller[2], Lars Hellberg[2, 3], Martin Hänsel[1], Detlef Zillikens[1], Werner Solbach[2], Tamas Laskay[2], Ralf Ludwig[1]; 1. Dermatology, University of Lübeck, Lübeck, Germany; 2. Medical Microbiology and Hygiene, University of Lübeck, Lübeck, Germany; 3. Euroimmun Medizinische Labordiagnostika AG, Euroimmun, Lübeck, Germany.

282. An evaluation of early and late onset psoriasis Eleni Theodorakopoulou[1], Leena Chularojanamontri[1], Matthew Gittins[2], Richard Warren[1], Christopher E Griffiths[1]; 1. Dermatology Centre, University of Manchester, Manchester, United Kingdom; 2. Centre of Biostatistics, University of Manchester, Manchester, United Kingdom.

283. Abnormal IL-10 production in skin and blood in hidradenitis suppurativa [HS] patients G. Kelly[1], C. Sweeney[1], R. Fitzgerald[2], A. Lally[1], A. Tobin[2], B. Kirby[1]; 1. Dermatology Research Group, St. Vincent's University Hospital, Dublin, Ireland; 2. Tallaght Hospital, Dublin, Ireland.

284. Regulation of IFNλ production and response in the skin compartment Adewonuola Alase[1], Martin Stacey[4], Rosella Doble[4], Mark Goodfield[5], Miriam Wittmann[3, 1, 2]; 1. Centre for Skin Sciences, University of Bradford, Bradford, United Kingdom; 2. Dermatology, Bradford Teaching Hospitals NHS Foundation Trust, Bradford, United Kingdom; 3. Division of Rheumatic and Musculoskeletal Disease, University of Leeds, Leeds, United Kingdom; 4. School of Molecular and Cellular Biology, University of Leeds, Leeds, United Kingdom; 5. Dermatology, University of Leeds, Leeds, United Kingdom.

285. An autocrine regulatory loop in fibroblasts between the keratinocyte growth factor (KGF) and the extradomain-A fibronectin (EDA+FN) may contribute to psoriasis pathomechanism Barbara Gubán Konczné[1], Krisztina Vas[1], Bernadett Kormos[2], Attila Bebes[1], Anikó Göblös[1], Márta Széll[1], Lajos Kemény[1, 2], Zsuzsanna Bata-Csörgö[1, 2]; 1. Department of Dermatology and Allergology, University of Szeged, Szeged, Hungary; 2. Dermatological Research Group of the Hungarian Academy of Sciences, University of Szeged, Szeged, Hungary.

286. Increased th17 inflammatory response to streptococcus and decreased expression of Filaggrin and Loricrin *in vitro* in HLA-Cw*0602 positive psoriatic patients compared to HLA-Cw*0602 negative Ester Ruiz[1], Marta Ferran[2], Marc Sacrista[2], Antonio Celada[1], Ana Giménez-Arnau[2], Ramon Pujol[2], Luis Santamaria-Babí[1, 2]; 1. Department de Fisiologia i Immunologia, University of Barcelona, Barcelona, Spain; 2. Department of Dermatology, IMAS, Barcelona, Spain.

287. Broad spectrum and anti oxidant activities of a vitis vinifera shoot extract Francoise Pellicier, Philippe Schaeffer, Jean Hubert Cauchard, Catherine Heusele, Jocelyne Franchi, Sylvianne Schnebert; LVMH-Research, Saint Jean de Braye, France.

288. Vasoactive intestinal peptide receptor (VPAC)1 expression is upregulated in psoriatic skin and decreases during plaque resolution A. Onderdijk[1, 2], E. Florencia[1, 2], T. Wabeke[2], M. Kant[1, 2], E. Prens[1, 2]; 1. Dermatology, Erasmus University Medical Center, Rotterdam, Netherlands; 2. Immunology, Erasmus University Medical Center, Rotterdam, Netherlands.

289. Substance P and neurokinin 1 receptor expression in atopic dermatitis in relation to anxiety traits and depression Louise Lönndahl[1], Husameldin El-Nour[1], Björn Johansson[2], Mikael Holst[3], Sol-Britt Lonne-Rahm[1], Aram Rasul[1], Klas Nordlind[1]; 1. Dermatology and venereology unit, Department of Medicine, Solna, Karolinska Institutet, Stockholm, Sweden; 2. Department of Molecular Medicine and Surgery, Karolinska Institutet, Stockholm, Sweden; 3. Department of Woman and Child Health, Pediatric Endocrinology Unit, Karolinska Institutet, Stockholm, Sweden.

290. Desmoglein 1 is depleted from desmosomes and internalized into large vacuoles in pemphigus foliaceus patient skin Angelique Poot[1], Duco Kramer[1], Ruby Kalicharan[2], Jeroen Kuipers[2], Akemi Ishida-Yamamoto[3], Marcel Jonkman[1], Ben Giepmans[2], Hendri Pas[1]; 1. Dermatology, University Medical Center Groningen, University of Groningen, Groningen, Netherlands; 2. Cell Biology, University Medical Center Groningen, Groningen, Netherlands; 3. Dermatology, Asahikawa Medical University, Asahikawa, Japan.

291. Thymosin beta-4 plays important roles in skin cell anti-Inflammation response Ying Chen, Katherine Cintron, Qian Zheng, John Lyga, Russell Wyborski; Avon Products. Inc, Suffern, NY, USA.

292. cAMP regulates IL-12 production through Cox-2 and p38MAPKin human 6-sulpho LacNAc (slan) dendritic cells Hridayesh Prakash[1], Kunze Anja[1], Oehrl Stephanie[1], Giese Thomas[2], Schäkel Knut[1]; 1. Dermatology, Heidelberg University, Heidelberg, Germany; 2. Imstitute of Immunology, Heidelberg University, Heidelberg, Germany.

293. Prodifferentiation and anti -inflammatory and -hyperproliferative effects of delphinidin, a dietary anthocyanidin, in a three dimensional psoriatic skin equivalent model Jean Christopher Chamcheu, Imtiaz Siddiqui, Deeba Syed, Vaqar Adhami, Brendan Boylan, Hasan Mukhtar; Dermatology, University of Wisconsin-Madison, Madison, WI, USA.

294. Oxidative stress induces demethylation of PP2A catalytic subunit in human primary fibroblasts Jeffry Stock[1], Xiyi Li[1], Sherry Zhang[1], Akira Iinishi[2], Maxwell Stock[2], Eduardo Perez[2]; 1. Molecular Biology, Princeton University, Princeton, NJ, USA; 2. Signum Dermalogix, Monmouth Junction, NJ, USA.

295. Chronic mild stress modulates the 5-HT1A and 5-HT2A receptor expression in the cerebellar cortex of NC/Nga atopic-like mice Aram Rasul[1, 4], Björn Johansson[2], Sol-Britt Lonne-Rahm[1], Klas Nordlind[1], Elvar Theodorsson[3], Husameldin El-Nour[1]; 1. Dermatology and Venereology Unit, Department of Medicine, Karolinska University Hospital, Solna, Karolinska Institutet, Stockholm, Sweden; 2. Department of Molecular Medicine and Surgery, CMM, Karolinska Institutet, Stockholm, Sweden; 3. IBK/Clinical Chemistry, Linköping University Hospital, Linköping, Sweden; 4. Department of Dermatology and Venereology, Gävle Hospital, Gävle, Sweden.

296. Cytokine profile before and after hematopoietic stem cell transplantation in severe diffuse systemic sclerosis Julie Barault[1], Laurence Michel[1], Dominique Farge[2], Zora Marjanovic[2], Francette Jean-Louis[1], Raphael Porcher[3], Sondes Hadj-Khelifa[2], Franck Verrecchia[1], Jaap Van Laar[4]; 1. Dermatology. AP-HP Hôpital Saint-Louis, Inserm, Paris, France; 2. Internal Medicine, AP-HP Hôpital Saint-Louis, Paris, France; 3. Biostatistics, Univ Paris Diderot, Paris, France; 4. Internal Medicine, Institute of Cellular Medicine, Newcastle, United Kingdom.

297. Multiple roles of polyunsaturated fatty acids in sebocytes. Relevance in acne pathogenesis E. Camera[1], W. Chen[2], T. Alestas[2], E. Makrantonaki[2], H. Seltmann[2], K. Müller-Decker[3], M. Ludovici[1], O. Ottaviani[1], M. Picardo[1], C. Zouboulis[2]; 1. Cutaneous Physiopahology/CIRM, San Gallicano Institute of Dermatology (IRCCS), Rome, Italy; 2. Departments of Dermatology, Venereology, Allergology and Immunology, Dessau Medical Center, Dessau, Germany; 3. Deutsches Krebsforschungszentrum, Heidelberg, Germany.

298. Prevage® blend of cosmetic functional ingredients counteracts skin aging by providing anti-oxidant and anti-inflammatory protection Lavinia Popescu[1], Jose Fernandez[2], Jeffry Stock[3], Maxwell Stock[2], Aurelie Felix[1], Arthur Pellegrino[1], Eduardo Perez[2]; 1. Elizabeth Arden, New York, NY, USA; 2. Signum Dermalogix, Monmouth Junction, NJ, USA; 3. Princeton University, Princeton, NJ, USA.

299. Atypical pemphigus Luigia Venegoni, Daniele Fanoni, Fabrizio Vaira, Emilio Berti, Simona Muratori; Dermatology, Fondazione IRCCS Ca' Granda, Milan, Italy.

300. Atypical pemphigoid Simona Muratori, Luigia Venegoni, Daniele Fanoni, Massimiliano Riboldi, Emilio Berti; Fondazione IRCCS Ca' Granda, Milan, Italy.

301. Topical formulation of an effective, oral pain drug, ARRY-797, provides high local concetrations in porcine knee Laurence Burgess, Donald Corson, Coralee Mannila, Jed Pheneger, Steve Andrews, Jason Neale; Array BioPharma, Boulder, CO, USA.

302. Anti-desmoglein 1 antibodies are present in a high percentage of Brazilian but not Iranian patients with cutaneous leishmaniasis Laura de Sena Maehara[1, 2], Talitha de Vries[1], Jane Tomimori[2], Adriana Porro[2], Somei Ura[3], Fariba Jaffary[4], Gilles Diercks[1], Marcel Jonkman[1], Hendri Pas[1]; 1. Dermatology, University Medical Center Groningen, University of Groningen, Groningen, Netherlands; 2. Dermatology, Federal University of São Paulo, Brazil, São Paulo, Brazil; 3. Dermatology, Lauro de Souza Lima Institute, Bauru, Brazil; 4. Dermatology, Dermatology and Skin Disease and Leishmaniasis Research Centre, Isfahan University of Medical Sciences, Isfahan, Islamic Republic of Iran.

303. Decreased fibrinolytic potential in transglutaminase 3 antibody positive dermatitis herpetiformis patients Anna Görög[1], Pálma Silló[1], László Szabó[3], Krasimir Kolev[2], Sarolta Kárpáti[1]; 1. Department of Dermatology, Venerology and Dermatooncology, Semmelweis University, Budapest, Hungary; 2. Department of Medical Biochemistry, Semmelweis University, Budapest, Hungary; 3. Institute of Materials and Environmental Chemistry, Research Centre for Natural Sciences, Hungarian Academy of Sciences, Budapest, Hungary.

304. Molecular identification and characterization of rosacea as a Th1- and Th17-dominated disease Cordula Kempkes[1], Jörg Buddenkotte[2, 1], Ferda Cevikbas[1], Pawel Novak[2], Jérôme Aubert[3], Isabelle Carlavan[3], Timo Buhl[1], Sophie Déret[3], Pascale Reiniche[3], Mathias Sulk[1, 2], Johannes Voegel[3], Martin Steinhoff[1]; 1. Depts. of Dermatology and Surgery, University of California San Francisco, San Francisco, CA, USA; 2. Dept. of Dermatology, University Hospital Muenster, Muenster, Germany; 3. Galderma R&D, Galderma R&D, Sophia Antipolis, France.

305*(CM6-04). Keratinocyte-derived over-expression of protease-activated receptor-2 (PAR-2) results in epidermal-neuronal communication with pruritus and atopic dermatiti Ferda Cevikbas[1], Akihiko Ikoma[1], Cordula Kempkes[1], Tasuko Akiyama[2], Timo Buhl[1], Mikael Langner[1], Eric Camerer[3], Earl Carstens[2], Shaun Coughlin[4], Martin Steinhoff[1]; 1. Depts. of Dermatology and Surgery, University of California San Francisco, San Francisco, CA, USA; 2. Dept. of Neurobiology, University of California Davis, Davis, CA, USA; 3. Cardiovascular Research Center, INSERM, Paris, France; 4. Cardiovascular Research Institute, University of California San Francisco, San Francisco, CA, USA.

306. Ustekinumab is a promosing treatment option for hidradenitis suppurativa - preliminary results of an open label study Janine Blok, Marcel Jonkman, Barbara Horvath; Dermatology, University Medical Center Groningen, Groningen, Netherlands.

307. A new role for mast cells in rosacea Yumiko Muto, Zhenping Wang, Richard Gallo, Anna Di Nardo; Medicine-Dermatology, university of California San Diego, La Jolla, CA, USA.

308. Absolute levels of the novel anti-IL-17A antibody, secukinumab, in skin can be quantified by dermal open flow microperfusion (dOFM) G. Bruin[1], C. Dragatin[2], B. Aigner[3], F. Polus[1], C. Calonder[1], C. Froeliger[1], K. Tiffner[2], M. Bodenlenz[2], J. Mader[4], S. Korsatko[4], M. Ratzer[2], T. Pieber[2, 4], C. Loesche[1], F. Sinner[2, 4]; 1. Novartis Institutes for BioMedical Research (NIBR), Basel, Switzerland; 2. HEALTH—Institute for Biomedicine and Health Sciences, JOANNEUM RESEARCH Forschungsgesellschaft m.b.H., Graz, Austria; 3. Department of General Dermatology, Medical University, Graz, Austria; 4. Division of Endocrinology and Metabolism, Department of Internal Medicine, Medical University, Graz, Austria.

309. The comorbidities associated with serum vitamin D deficiency in veteran psoriasis and effect of antioxidant therapy Chen Young[2, 1], Wasim Nasir[1, 2], Robert Jackson[1, 2], Rohit Kakar[1, 2], L. Boyd Savoy[2, 1]; 1. Dermatology, Wayne State University, Detroit, MI, USA; 2. Dermatology, John D Dingell Veterans Affairs Medical Center, Detroit, MI, USA.

310. IL-17 mediated responses have a role in ultraviolet irradiation-induced immunosuppression in skin Hui Li, Mudit Vaid, Craig Elmets, Santosh Katiyar, Hui Xu; University of Alabama at Birmingham, Birmingham, AL, USA.

311. Anti-inflammatory activity of clotrimazole on TPA-induced ear swelling in mice Oliver Brandt, Daniel Spazierer, Christopher Schuster, Lamia El-Housseiny, Georg Stingl; Division of Immunology, Allergy and Infectious Diseases (DIAID), Department of Dermatology, Medical University of Vienna, Vienna, Austria.

312. Cellular expression of the alarmin IL-33 in acute skin inflammation Olav Sundnes, Denis Khnykin, Guttorm Haraldsen; Pathology, Oslo University Hospital, Oslo, Norway.

313. Ultraviolet radiation-induced migration of skin dendritic cell subsets requires transforming growth factor type-β signaling Adam Glick, Anand Ravindran, Javed Mohammed, Andrew Gunderson; Pennsylvania State University, University Park, PA, USA.

314. Establishment of a humanized model of skin immunity to investigate human skin-resident immune responses to pathogens Priti Agarwal[1], Gregory Vladimer[1], Waldemer Racki[2], Amy Cuthbert[2], Egil Lien[1], Micheal Brehm[2], Dale Greiner[2], John Harris[1], Leonard Shultz[3]; 1. Medicine, University of Massachusetts Medical School, Worcester, MA, USA; 2. Molecular Medicine, University of Massachusetts Medical School, Worcester, MA, USA; 3. Jackson Laboratories, Bar Harbor, ME, USA.

315. Live cell imaging of desmosomal proteins in pemphigus foliaceus Ena Sokol[1, 2], Klaas Sjollema[1], Michelle Baird[3], Michael Davidson[3], Marcel Jonkman[2], Hendri Pas[2], Ben Giepmans[1]; 1. Department of Cell Biology, UMCG, Groningen, Netherlands; 2. Department of Dermatology, UMCG, Groningen, Netherlands; 3. National High Magnetic Field Laboratory, The Florida State University, Tallahassee, FL, USA.

316. Pemphigus vulgaris mimicking toxic epidermal necrolysis Kossara Drenovska[1], Snejina Vassileva[1], Jana Kazandjieva[1], Karen Manuelyan[1], Ognyan Hadjiiski[2], Maria Balabanova[1], Sonya Marina[1]; 1. Department of Dermatology, University Hospital "Alexandrovska", Sofia, Bulgaria; 2. Department of burns and plastic surgery, UMHATEM "N.I. Pirogov", Sofia, Bulgaria.

317. Epidermal RelA specifically restricts contact allergen induced inflammation and apoptosis in skin Snehlata Kumari, Thomas Krieg, Ingo Haase; Dept. Dermatology, University of Cologne, Cologne, Germany.

318. Type I cytokines and chemokines are targetable immune pathways in alopecia areata Zhenpeng Dai[1], Luzhou Xing[2], Ali Jabbari[1], Annemieke de Jong[1], Angela Christiano[1, 3], Raphael Clynes[1, 2, 4]; 1. Dermatology, Columbia University, New York, NY, USA; 2. Pathology, Columbia University, New York, NY, USA; 3. Genetics & Development, Columbia University, New York, NY, USA; 4. Medicine, Columbia University, New York, NY, USA.

319. Injection of immunocytes into non-lesional skin grafts from psoriatic patients induces psoriasis-like lesions Joanna Wegner-Kops, Esther von Stebut-Borschitz, Rudolf Schopf; Dermatology, Johannes Gutenberg Univ., Mainz, Germany.

320. CD4+ T cells regulate disease severity in a mouse model of vitiligo John Harris, Priti Agarwal, Mehdi Rashighi, Kingsley Essien; University of Massachusetts Medical School, Worcester, MA, USA.

321. Increased circulating Th17 cells and elevated serum levels of TGF-beta and IL-21 invovled in human non-segmental vitiligo development Li Zhou[1, 2], Yuling Shi[1, 2], Kai Li[1, 2, 3], Iltefat Hamzavi[2], Tianwen Gao[3], Henry Lim[1, 2], Qing-Sheng Mi[1, 2]; 1. Immunology Program, Henry Ford health System, Detroit, MI, USA; 2. Dermatology, Henry Ford Health System, Detroit, MI, USA; 3. Xijing Hospital, Xian, China.

322. Chemical inducers of depigmentation in vitiligo Michael Frisoli, Mehdi Rashighi, Priti Agarwal, Kingsley Essien, John Harris; Medicine, University of Massachusetts Medical School, Worcester, MA, USA.

323. Fumaric acid esters: The future of psoriasis therapy? Inas Helwa[2, 3], Wendy Bollag[2, 3, 1]; 1. Oral Biology, Georgia Health Sciences University, Augusta, GA, USA; 2. Physiology, Georgia Health Sciences University, Augusta, GA, USA; 3. Charlie Norwood VAMC, Augusta, GA, USA.

324. 25-Hydroxyvitamin D3 rescues mice from the toxic effects of nitrogen mustard Leimin Au, Kurt Lu; Dermatology, Case Western Reserve University, Cleveland, OH, USA.

325. Microenvironmental abnormalities in the lesional and nonlesional skin of patients with vitiligo Mingwan Su[1], Richard Yu[1], Youwen Zhou[1, 2]; 1. Dermatology and Skin Science, University of British Columbia, Vancouver, BC, Canada; 2. Institute of Dermatology, Anhui Medical University, Hefei, China.

Carcinogenesis and Cancer Genetics

All orals designated with an asterisk (*) below are presented in a Concurrent Session (see code). Orals designated with two asterisks (**) will be presented during a Plenary Session (see code).

326. Chromothripsis and focal copy number alterations determine poor outcome in malignant melanoma Timo Gaiser[4, 1], Maria Gaiser[3], Daniela Hirsch[1], Ralf Kemmerling[2], Sean Davis[1], Paul Meltzer[1], Thomas Ried[1]; 1. Genetics Branch, National Institutes of Health, Bethesda, MD, USA; 2. Institute of Pathology, Paracelsus Medical University, Salzburg, Austria; 3. Department of Dermatology, University of Heidelberg, Heidelberg, Germany; 4. Institute of Pathology, University Medical Center Mannheim, Mannheim, Germany.

327. REC8 is aberrantly expressed in melanoma and may act as a driver of genomic instability Scott Lindsey, Mark Eller, Julia Escandon, Margaret Sanchez, James Grichnik; Department of Dermatology, University of Miami Miller School of Medicine, Miami, FL, USA.

328. An attempt to assess the expression of desmogleins 2 and 3 with fluorescent *in situ* hybridization and immunohistochemistry in basal cell carcinomas Marian Dmochowski[1], Justyna Gornowicz-Porowska[1], Pawel Pietkiewicz[1], Elzbieta Kaczmarek[2], Agnieszka Seraszek-Jaros[2], Monika Bowszyc-Dmochowska[1]; 1. Cutaneous Histopathology and Immunopathology Section, Department of Dermatology, Poznan University of Medical Sciences, Poznan, Poland; 2. Department of Bioinformatics and Computational Biology, Poznan University of Medical Sciences, Poznan, Poland.

329. Autophagy controls p38 activation to promote cell survival under UVB stress Lei Qiang[1], Chunli Wu[1, 2], Mei Ming[1], Benoit Viollet[3, 4, 5], Yu-Ying He[1]; 1. Dermatology/Medicine, University of Chicago, Chicago, IL, USA; 2. Radiation Oncology, China Medical University, Chicago, China; 3. Inserm, U1016, Institut Cochin, Paris, France; 4. Cnrs, UMR8104, Paris, France; 5. Univ Paris Descartes, Paris, France.

330. Targeting PI3K/mTOR signaling in cutaneous angiosarcoma Makoto Wada[1], Mano Horinaka[2], Toshiyuki Sakai[2], Mikio Masuzawa[3], Norito Katoh[1]; 1. Department of Dermatology, Graduate School of Medical Science, Kyoto Prefectural University of Medicine, Kyoto, Japan; 2. Department of Molecular-Targeting Cancer Prevention, Graduate School of Medical Science, Kyoto Prefectural University of Medicine, Kyoto, Japan; 3. Department of Regulation Biochemistry, Kitasato University School of Allied Health Sciences, Kanagawa, Japan.

331. UAB30, a novel synthetic RXR retinoid, is an effective chemopreventive agent against UVB-induced nonmelanoma skin cancers Gloria Nguyen, Sandeep Chaudhary, Ritesh Srivastava, Craig Elmets, Mohammad Athar; Department of Dermatology, University of Alabama at Birmingham, Birmingham, AL, USA.

332*(CM13-05). GLI2 induces genomic instability in human keratinocytes by inhibiting apoptosis Eleni Pantazi[1], Emilios Gemenetzidis[1], Giuseppe Trigiante[1], Gary Warnes[2], Ling Shan[3], Echo Mao[3], Mohammed Ikram[3], Graham Neill[1], Muy-Teck Teh[4], Yong-Jie Lu[3], Michael Philpott[1]; 1. Centre for Cutaneous Research, Institute of Cell and Molecular Science,Barts and The London School of Medicine and Dentistry, Queen Mary University of London, LONDON, United Kingdom; 2. Imaging and Flow Cytometry Core facilities, Institute of Cell and Molecular Science,Barts and The London School of Medicine and Dentistry, Queen Mary University of London, LONDON, United Kingdom; 3. Centre for Molecular Oncology, Barts Cancer Institute, Barts and The London School of Medicine and Dentistry, Queen Mary University of London, LONDON, United Kingdom; 4. Department of Diagnostic and Oral Sciences, Institute of Cell and Molecular Science, Barts and The London School of Medicine and Dentistry, Queen Mary University of London, LONDON, United Kingdom.

333. TLR4 is a negative regulator of keratinocyte proliferation Guergana Iotzova-Weiss, Sandra Freiberger, Ines Kleiber Schaaf, Piotr Dziunycz, Lars French, Hofbauer Günther; University Hospital Zurich, Dermatology Clinic, Zurich, Switzerland.

334. Langerhans cell contribution to UV-induced DNA damage and carcinogenesis Marianna Freudzon, Julia Lewis, Renata Filler, Michael Girardi; Dermatology, Yale University School of Medicine, New Haven, CT, USA.

335. Intercellular contact-dependent induction mechanism of podoplanin in squamous cell carcinoma Mizue Fujii, Masaru Honma, Hidetoshi Takahashi, Akemi Yamamoto, Hajime Iizuka; Dermatology, Asahikawa Medical University, Asahikawa, Japan.

336. Activated p-AKT, but not MDM2, drives malignant progression in Ras/Fos/PTEN^{null} skin carcinogenesis via p53/p21 loss and cyclin D1/E2 over-expression Fiona Macdonald, Yao Denggao, Jean Quinn, David Greenhalgh; Dermatology, Glasgow University Medical School, Glasgow, United Kingdom.

337. Inducible ROCK 2 activation increases primary keratinocyte differentiation but co-operates with ras^{Ha} activation in transgenic mouse skin carcinogenesis Siti Masre[1], Michael Olson[2], David Greenhalgh[1]; 1. Section of Dermatology, Glasgow University Medical School, Glasgow, United Kingdom; 2. Beatson Institute for Cancer Research, Glasgow, United Kingdom.

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338.Cytokine-induced senescence arrests cancers by activating the p16Ink4a/Rb pathway Matthias Hahn, Kilian Braungart, Sonja Assmann, Ellen Brenner, Thomas Wieder, Heidi Braumüller, Martin Röcken; Department of Dermatology, University Medical Center Tuebingen, Tuebingen, Germany.

339(PL3-02).Drug-resistant basal cell carcinomas maintain hedgehog pathway output by activating aPKC signaling** Scott Atwood, Jean Tang, Anthony Oro; Program in Epithelial Biology, Stanford University School of Medicine, Stanford, CA, USA.

340*(CM13-03).MicroRNA-9 causes expansion of cancer stem cells in skin squamous cell carcinoma metastasis Anand Reddi[1, 2], Ruth White[2], Jill Neiman[2], Gangwen Han[2], Dennis Roop[1], Xiao-Jing Wang[1, 2]; 1. Dermatology, University of Colorado School of Medicine, Denver, CO, USA; 2. Pathology, University of Colorado School of Medicine, Denver, CO, USA.

341*(CM10-04).Identification of a distinct microRNAome and tumor suppressive role of microRNA-125b in cutaneous squamous cell carcinoma Ning Xu[1], Lingyun Zhang[2], Florian Meisgen[1], Masako Harada[3], Johan Heilborn[1], Bernhard Homey[4], Dan Grandér[3], Mona Ståhle[1], Enikö Sonkoly[1], Andor Pivarcsi[1]; 1. Department of Medicine, Karolinska Institutet, Stockholm, Sweden; 2. Tianjin Life Science Research Center and Basic Medical School, Tianjin Medical University, Tianjin, China; 3. Department of Oncology-Pathology, Karolinska Institutet, Stockholm, Sweden; 4. Department of Dermatology, Heinrich-Heine-University, Düsseldorf, Germany.

342(PL6-03).Stat1-signaling in cancer cells critically controls senescence and metastases spreading** Ellen Brenner, Heidi Braumüller, Karin Schielbach, Thomas Wieder, Martin Röcken; Dermatology, University Tübingen, Tübingen, Germany.

343.Role of survivin in the development and progression of squamous cell carcinoma: *In vivo* models Roberta Lotti, Tiziana Petrachi, Katiuscia Dallaglio, Francesca Truzzi, Annalisa Saltari, Paolo Morandi, Alessandra Marconi, Carlo Pincelli; Dermatology, University of Modena and Reggio Emilia, Modena, Italy.

344.Tumor cell associated receptor tyrosine kinase, EphB2 modulates gene expression signatures involved in migration and invasion of tumor cells Mehdi Farshchian[1], Liisa Nissinen[1], Elina Siljamäki[1], Atte Kivisaari[1], Pilvi Riihilä[1], Risto Ala-aho[1], Taina Pihlajaniemi[2], Ritva Heljasvaara[2], Reidar Grénman[3], Juha Peltonen[4], Veli-Matti Kähäri[1]; 1. Department of Dermatology, and MediCity Research Laboratory, University of Turku, Turku, Finland; 2. Department of Medical Biochemistry, University of Oulu, Oulu, Finland; 3. Department of Otorhinolaryngology, Head and Neck Surgery, University of Turku, Turku, Finland; 4. Department of Anatomy and Cell Biology, University of Turku, Turku, Finland.

345.Epigenetic changes in basal cell carcinoma affect SHH and WNT signaling components Tjinta Brinkhuizen[1], Karin van den Hurk[2], Véronique Winnepenninckx[2], Joep de Hoon[2, 4], Ariënne van Marion[5], Jürgen Veeck[2, 4, 6], Manon van Engeland[2], Maurice van Steensel[1, 3]; 1. Dermatology, Maastricht University Medical Center, Maastricht, Netherlands; 2. Pathology, Maastricht University Medical Center, Maastricht, Netherlands; 3. Clinical Genetics, Maastricht University Medical Center, Maastricht, Netherlands; 4. Medical Oncology, Maastricht University Medical Center, Maastricht, Netherlands; 5. Pathology, VieCuri Medical Center, Venlo, Netherlands; 6. Pathology, University Hospital of the RWTH, Aachen, Germany.

346.Interventions for cutaneous Bowen's disease: A systematic review Rubeta Matin[1, 4], Jo Leonardi-Bee[2], David Wilkinson[3], Fiona Bath-Hextall[4]; 1. Dermatology, Oxford University Hospitals NHS Trust, Oxford, United Kingdom; 2. Division of Epidemiology and Public Health, University of Nottingham, Nottingham, United Kingdom; 3. School of Medicine, University of Queensland, Brisbane, QLD, Australia; 4. Centre of Evidence Based Dermatology, University of Nottingham, Nottingham, United Kingdom.

347.The rs2910164 G>C polymorphism in microRNA-146a is associated with the pathogenesis of malignant melanoma S. Fukushima, J. Yamashita, T. Iwakiri, M. Jinnin, A. Miyashita, J. Aoi, H. Kanemaru, A. Ichihara, Y. Inoue, H. Ihn; Dermatology and Plastic Surgery, Kumamoto University, Kumamoto, Japan.

348.RSK activation of translation factor eIF4B drives deregulated Laminin γ2 expression during epithelial neoplastic progression Martin Degen[1], Easwar Natarajan[2], Hans Widlund[1], James Rheinwald[1]; 1. Dermatology, Brigham and Women's Hospital, Boston, MA, USA; 2. Oral Health and Diagnostic Sciences, U. Conn. School of Dental Medicine, Farmington, CT, USA.

349.The expression of B-defensins, cathelicidin (LL-37) in skin tumors Young Lip Park[1], Kyu Uang Whang[2], Jong Suk Lee[3]; 1. Dermatology, Soonchunhyang university hospital, Bucheon, Republic of Korea; 2. Dermatology, Soonchunhyang university hospital, Seoul, Republic of Korea; 3. Dermatology, Soonchunhyang university hospital, Cheonan, Republic of Korea.

350.The specific expression of PDGF-B and CD34 in dermatofibrosarcoma protuberans implies the underlying pathogenesis with involvement of its mesenchymal stem cell origin Daisuke Utsumi[1], Ikumi Nakamura[1], Etsuko Okada[2], Masahito Yasuda[2], Osamu Ishikawa[2], HIroshi Uezato[1], Kenzo Takahashi[1]; 1. Dermatology, University of Ryukyus, Nakagami, Japan; 2. Dermatology, University of Gunma, Maebashi, Japan.

351.Diagnostic markers for Sézary syndrome Maarten Vermeer[1], Martine Bagot[2], Sean Whittaker[3], Rein Willemze[1], Stephanie Boonk[1], Wim Zoutman[1], Kees Tensen[1], Leslie van der Fits[1]; 1. Dermatology, Leiden University Medical Center, Leiden, Netherlands; 2. Dermatology, Hopital Saint-Louis, Paris, France; 3. Dermatology, St John's Institute of Dermatology, Paris, France.

352.Protein kinase D1 plays a unique role in enhancing tumor promotion in chemically-induced skin carcinogenesis Mohammad Rashel, Trivikram Gaddapara, Soosan Ghazizadeh; Oral Biology and Pathology, Stony Brook University, Stony Brook University, NY, USA.

353.The E3 ubiquitin ligase Trim32 has a functional role in the development and progression of cutaneous squamous cell carcinoma Aaron Wortham, Yuangang Liu, Yun Wang, James Lagowski, Emily Swanzey, Rebecca Bridges, Toni West, Molly Kulesz-Martin; Dermatology Research Division, Oregon Health and Science University, Portland, OR, USA.

354.Potential involvement of mitochondrial DNA damage elicited by oxidative stress in arsenic carcinogenesis in skin Chih-Hung Lee[1, 2], Shi-Bei Wu[5], Chien-Hui Hong[3, 4], Gwo-Shing Chen[2], Yau-Huei Wei[5, 6], Hsin-Su Yu[2]; 1. Dermatology, Kaohsiung Municipal Hsiao-Kang Hospital, Kaohsiung, Taiwan; 2. Dermatology, Kaohsiung Medical University, Kaohsiung, Taiwan; 3. Dermatology, Kaohsiung Veterans General Hospital, Kaohsiung, Taiwan; 4. Dermatology, National Yang-Ming University, Taipei, Taiwan; 5. Biochemistry and Molecular Biology, National Yang-Ming University, Taipei, Taiwan; 6. Medicine, Mackay Medical College, Taipei, Taiwan.

355.Periostin expression induced by wound healing process promotes metastasis of melanoma cells Keitaro Fukuda[1, 2], Eiji Sugihara[2], Masayuki Amagai[1], Hideyuki Saya[2]; 1. Department of dermatology, Keio University School of Medicine, Tokyo, Japan; 2. Division of Gene Regulation, Institute for Advanced Medical Research, Keio University School of Medicine, Tokyo, Japan.

356.Dissecting T-helper-cell-mediated anti-angiogenesis from T cell-induced cancer cell senescence Heidi Braumüller, Ellen Brenner, Kilian Braungart, Susanne Weidemann, Viola Galinat, Matthias Hahn, Thomas Wieder, Martin Röcken; Dermatology, University Medical Center, Tübingen, Germany.

357.The development of cutaneous squamous lesions in patients treated with vemurafenib: A possible role for human papillomavirus in addition to activated RAS Karin Purdie[1], Andrew South[2], Mary Sommerlad[3], Irene Leigh[2], Charlotte Proby[2], Catherine Harwood[1, 3]; 1. Centre for Cutaneous Research, Queen Mary University of London, London, United Kingdom; 2. Division of Cancer Research, University of Dundee, Dundee, United Kingdom; 3. Department of Dermatology, Barts Health NHS Trust, London, United Kingdom.

358.ABCB5 identifies a chemorefractory cell population in Merkel cell carcinoma Nayoung Lee[1], Sonja Kleffel[1], Maria Lezcano[2], Kristine Sobolewski[1], Andrew DoRosario[3], Markus Frank[1, 4], Linda Wang[1, 3], George Murphy[2], Tobias Schatton[1, 4]; 1. Department of Dermatology, Brigham and Women's Hospital, Boston, MA, USA; 2. Department of Pathology, Brigham and Women's Hospital, Boston, MA, USA; 3. Dana-Farber/Brigham and Women's Cancer Center, Boston, MA, USA; 4. Transplantation Research Center, Children's Hospital, Boston, MA, USA.

359.Potential driver genes in the development and progression of cutaneous T-cell lymphoma Xiao Ni, Meghali Goswami, Madeleine Duvic; The University of Texas MD Anderson Cancer Center, Houston, TX, USA.

360.Status of autophagy and mTOR associate with mortality and cell survival of angiosarcoma Toshiya Takahashi, Kenshi Yamasaki, Setsuya Aiba; Dermatology, Tohoku University Graduate School of Medicine, Sendai, Japan.

361.Acantholysis is the poor prognostic factor in squamous cell carcinoma, which is predictable by the anomalies of cytoskeletal-adhesion molecules Ryoko Awazawa[1], Masahito Yasuda[2], Etsuko Okada[2], Yoshiyuki Kariya[1], Osamu Ishikawa[2], Hiroshi Uezato[1], Kenzo Takahashi[1]; 1. Dermatology, University of Ryukyus, Okinawa, Japan; 2. Dermatology, Gunma University, Maebashi, Japan.

362.Cell surface CD74 expression is a key mediator of melanoma cell survival in response to the cytotoxic effect of IFN-γ Keiji Tanese[1, 2], Suhendan Ekmekcioglu[1], Elizabeth Grimm[1]; 1. Melanoma Medical Oncology, MD Anderson Cancer Center, Houston, TX, USA; 2. Dermatology, Keio University School of Medicine, Tokyo, Japan.

363.Gene expression analysis in CTCL patients validates the clinical importance of novel oncogenes and tumor suppressor genes Ivan Litvinov[1], Youwen Zhou[2], Kevin Pehr[1], Thomas Kupper[3], Denis Sasseville[1]; 1. Dermatology, McGill University Health Centre, Montreal, QC, Canada; 2. Dermatology, University of British Columbia, Vancouver, BC, Canada; 3. Dermatology, Brigham and Women's Hospital, Boston, MA, USA.

364.Stromal fibroblasts impaired in TGFβ signaling support oncogenic transformation of adjacent epithelia Ming Jie Tan[1], Ming Keat Sng[1], Nguan Soon Tan[1, 2]; 1. School of Biological Sciences, Nanyang Technological University, Singapore, Singapore; 2. Institute of Molecular and Cell Biology, Singapore, Singapore.

365.Mouse Tumor Biology Database (MTB): A centralized resource on mouse models for human skin and adnexal cancers Dale Begley, Debra Krupke, Steven Neuhauser, Joel Richardson, Carol Bult, Janan Eppig, John Sundberg; The Jackson Laboratory, Bar Harbor, ME, USA.

366.Low-dose of ionizing radiation impairs DNA repair system in human primary keratinocytes and human skin 3D model Marie-Rose Rovere[2], Mathilde Menneteau[1], Odile Damour[2], Michel Diserbo[3], Sylvie Sauvaigo[1], Walid Rachidi[1]; 1. CEA, Joseph Fourier University-Grenoble 1, Grenoble, France; 2. Hospices Civils de Lyon, LYON, France; 3. Institut de recherche biomédicale des armées, La Tronche, France.

367.Thymocyte selection-associated high mobility group box protein TOX is a novel diagnostic and prognostic marker for mycosis fungoides and Sézary syndrome Yuanshen Huang[1], Ivan Litvinov[2], Yang Wang[1], Mingwan Su[1], Denis Sasseville[2], Youwen Zhou[1]; 1. Dermatology and Skin Science, University of British Columbia, Vancouver, BC, Canada; 2. McGill University, Montreal, QC, Canada.

368.Squamous cell carcinoma cell line (DJM-1) inhibits the growth of Merkel cell polyomavirus-positive Merkel cell carcinoma cell line in collagen gel matrix culture Kotaro Nagase[1], Shinichi Koba[1], Shigehisa Aoki[2], Satoshi Ikeda[2], Shuji Toda[2], Yutaka Narisawa[1]; 1. Division of Dermatology, Department of Internal Medicine, Saga University, Saga, Japan; 2. Department of Pathology and Microbiology, Saga University, Saga, Japan.

369.Nuak2 amplification coupled with Pten deficiency confers tumorigenicity to melanomas via cdk2 Takeshi Namiki[1], Julio Valencai[1], Sergio Coelho[1], Lanlan Yin[1], Masakazu Kawaguchi[1], Wilfred Vieira[1], Yasuhiko Kaneko[2], Atsushi Tanemura[3], Ichiro Katayama[3], Yutaka Kawakami[4], Hiroo Yokozeki[5], Vincent Hearing[1]; 1. Laboratory of Cell Biology, National Cancer Institute, National Institutes of Health, Bethesda, MD, USA; 2. Research Institute for Clinical Oncology, Saitama Cancer Center, Saitama, Japan; 3. Department of Dermatology, Osaka University Graduate School of Medicine, Osaka, Japan; 4. Institute for Advanced Medical Research, Keio University School of Medicine, Tokyo, Japan; 5. Department of Dermatology, Tokyo Medical and Dental University Graduate School and Faculty of Medicine, Tokyo, Japan.

370.Akt and intermediate filaments inhibit autophagy and promote tumorigenesis through Beclin 1/14-3-3 sequestration Richard Wang[1], Yongjie Wei[3], Zhenyi An[3], Zhongju Zou[3], Michael White[2], Julia Reichelt[4], Beth Levine[3]; 1. Dermatology, UT Southwestern, Dallas, TX, USA; 2. Cell Biology, UT Southwestern, Dallas, TX, USA; 3. Center for Autophagy Research, UT Southwestern, Dallas, TX, USA; 4. Institute of Cellular Medicine, Newcastle University, Newcastle upon Tyne, United Kingdom.

371.Redox-based apoptosis induced by amino endoperoxides in tumors Runze Wang[1], Pengcheng Zhu[1], Nguan Soon Tan[1, 2]; 1. School of Biological Sciences, Nanyang Technological University, Singapore, Singapore; 2. Institute of Molecular and Cell Biology, Singapore, Singapore.

372.Nuclear receptor status of cancer-associated fibroblasts modifies squamous cell carcinoma gene expression signature Jeremy Soon Kiat Chan[1], Ming Keat Sng[1], Nguan Soon Tan[1, 2]; 1. School of Biological Sciences, Nanyang Technological University, Singapore, Singapore; 2. Cancer genetics and therapeutics, Institute of Molecular and Cell Biology (A*STAR), Singapore, Singapore.

373.Diagnostic utility of CD10 immunohistochemical staining in squamous cell carcinoma and precursor lesions: Evaluation using tissue microarray Jeong-Hwan Yun[1], Joon Seok Choi[1], Jong Rok Lee[1], Sang Hui Park[2], Joo Young Roh[1]; 1. Dermatology, Gachon University, Graduate School of Medicine, Incheon, Republic of Korea; 2. Pathology, Ewha Womans University, School of Medicine, Seoul, Republic of Korea.

374.The cross talk between p53 and NFκB determines the response to UVB in keratinocytes Ines Mueller, Stefan Beissert, Dagmar Kulms; Experimental Dermatology, University of Dresden, Dresden, Germany.

375.RNA trans-splicing molecules for targeted suicide gene delivery into cancer cells Christina Gruber[1], Ulrich Koller[1], Stefan Hainzl[1], Eva Murauer[1], Clemens Hüttner[1], Andrew South[2], Helmut Hintner[1], Johann Bauer[1]; 1. Department of Dermatology, Division of Experimental Dermatology and EB House Austria; Paracelsus Medical University, Salzburg, Austria; 2. Medical Research Institute, Division of Cancer Research;Ninewells Hospital and Medical School, University of Dundee, Dundee, United Kingdom.

376*(CM13-10).Diverse roles for laminin 332 subunits in squamous cell carcinoma Matthew Caley, Vera Martins, Kate Moore, John Marshall, Edel O'Toole; Barts and the London SMD, Queen Mary University of London, London, United Kingdom.

377.Characterisation of the peritumoral immune infiltrate in human primary cutaneous squamous cell carcinomas Chester Lai[1], Ramnik Behar[1], Suzannah August[1], Carolann McGuire[1], Marta Polak[1], Jeff Theaker[2], Aymen Al-Shamkhani[3], Eugene Healy[1]; 1. Dermatopharmacology, University of Southampton, Southampton, United Kingdom; 2. Histopathology, University Hospital Southampton NHS Foundation Trust, Southampton, United Kingdom; 3. Cancer Sciences, University of Southampton, Southampton, United Kingdom.

378.Targeting Fyn restores cell-cell adhesion in Ras-transformed HaCaT cells and inhibits UV skin tumorigenesis Mitchell Denning[1, 2], Sarah Fenton[2]; 1. Pathology, Loyola University Chicago, Maywood, IL, USA; 2. Molecular Biology Program, Loyola University Chicago, Maywood, IL, USA.

379.Crosstalk between Desmoglein-2 and Hedgehog signaling in skin tumorigenesis: Dsg2 modulates Gli expression in keratinocytes Donna Brennan, Natalia Riobo, My Mahoney; Thomas Jefferson University, Philadelphia, PA, USA.

380.Determination of genes involved in the resistance of squamous cell carcinoma to photodynamic therapy Angeles Juarranz[1], Laura Milla[2], Alejandra Damian[1], Nerea Salazar[1], Elisa Carrasco[1], Salvador Gonzalez[3], Vera-Alvarez Jesus[4], Yolanda Gilaberte[4]; 1. Biology, Autonomous University of Madrid, Madrid, Spain; 2. Molecular Biology, Universidad Nacional de Río Cuarto, Río Cuarto, Argentina; 3. Dermatology Service, Memorial Sloan-Kettering Cancer Center, New York, NY, USA; 4. Pathology and Dermatology, Hospital de San Jorge de Huesca, Huesca, Spain.

381* (CM13-04).Conditional Cyld mutation induces epidermal cell lineage-specific abnormalities due to deregulation of NF-kB and c-Myc gene regulators Jane Jin[1], Sally Wang[1], Joshua Cho[1], George Mosiolas Mosiolas[2], Jennifer Zhang[1]; 1. Dermatology, Duke University, Durham, NC, USA; 2. Aristotle University of Thessaloniki, Thessaloniki, Greece.

382.Gene expression profiling of primary fibroblasts isolated from multiple self-healing squamous epithelioma Yi Zhen Ng[1, 2], Ildikó Szeverényi[1], Lukas Lacina[1], Paula-Beth Benny[1], Anne- Marie Gerdes Gerdes[3], Sigurd Broesby-Olsen[4], Ellen Lane[1]; 1. Institute of Medical Biology, A*STAR, Singapore, Singapore; 2. University of Dundee, Dundee, United Kingdom; 3. Rigshospitalet Copenhagen University Hospital, Copenhagen, Denmark; 4. Odense University Hospital, Odense, Denmark.

383.The newly developed vinegar "Izumi" inhibits the proliferation of human squamous cell carcinoma cells by inducing programmed cell necrosis Naoko Baba, Yuko Higashi, Takuro Kanekura; Kagoshima University Graduate School of Medical and Dental Sciences, Kagoshima, Japan.

384.TRAIP expression is quantitatively and spatially regulated in epithelial cells Christophe Chapard[1, 2], Daniel Hohl[1, 2], Marcel Huber[1, 2]; 1. Dermatology, CHUV, Lausanne, Switzerland; 2. Biology and Medicine, UNIL, Lausanne, Switzerland.

385* (CM13-08).Enhanced MET signaling in mouse epidermis activates EGFR and initiates squamous carcinogenesis Stuart Yuspa, Fan Liu, Lisa Wright, Anne Zhuang, Glenn Merlino, Christophe Cataisson; Laboratory of Cancer Biology and Genetics, National Cancer Institute, Bethesda, MD, USA.

386.Cutaneous SCC and the RAS controversy Angela McHugh[1], Karin Purdie[2], Celine Pourreyron[1], Stephen Watt[1], Aidan Rose[1], Irene Leigh[1], Catherine Harwood[2], Andrew South[1], Charlotte Proby[1]; 1. Skin Tumour Laboratory, Division of Cancer Research, Ninewells Hospital & Medical School, University of Dundee, Dundee, United Kingdom; 2. Centre for Cutaneous Research, Barts & the London Queen Mary, University of London, London, United Kingdom.

387.The role of Retinoblastoma protein (Rb) in cell cycle control by T_{H1}-cytokines in mouse and human cancers Kilian Braungart, Matthias Hahn, Asmann Sonja, Heidi Braumüller, Ellen Brenner, Susanne Weidemann, Thomas Wieder, Martin Röcken; Department Of Dermatology, University Medical Center, Tübingen, Germany.

388.The detection of novel KIT mutations in mastocytosis I Ja Chan, Michael Tharp; Department of Dermatology, Rush University Medical Center, Chicago, IL, USA.

389.Epigenetic regulation of malignant peripheral nerve sheath tumor development Amish Patel, Chiachi Liu, Lu Le; Dermatology, UT Southwestern Medical Center, Dallas, TX, USA.

390.Expression of microRNAs in Merkel cell carcinoma Matthew Ning, Thomas Andl; Department of Medicine / Division of Dermatology, Vanderbilt University Medical Center, Nashville, TN, USA.

391.Genetic background of mastocytosis, a synopsis of cooperative studies conducted by ECNM Boguslaw Nedoszytko[1], Marek Niedoszytko[2], Magdalena Lange[1], Bartosz Wasag[3], Monika Zablotna[1], Jolanta Glen[1], Jasper van Doormaal[5], Judit Varkonyi[6], Istvan Aladzsity[6], Eszter Rausz[6], Jadwiga Roszkiewicz[1], Michal A. Zmijewski[4], Roman Nowicki[1], Peter Valent[7]; 1. Dermatology, Medical University of Gdansk, Gdansk, Poland; 2. Allergology, Medical University of Gdansk, Gdansk, Poland; 3. Medical Genetics, Medical University of Gdansk, Gdansk, Poland; 4. Histology, Medical University of Gdansk, Gdansk, Poland; 5. Allergology, University Groningen, Groningen, Netherlands; 6. Internal Medicine, Semmelweis University, Budapest, Hungary; 7. Internal Medicine, Medical University of Vienna, Vienna, Austria.

392*(CM13-01).ΔNp63α drives mutagen-induced skin tumor initiation and progression to malignancy Michael Devos[1, 2], Geertrui Denecker[1, 2], Barbara Gilbert[1, 2], Kirsten Leurs[1, 2], Kelly Lemeire[1, 2], Tino Hochepied[1, 2], Jody Haigh[1, 2], Geert Berx[1, 2], Saskia Lippens[1, 2], Peter Vandenabeele[1, 2], Wim Declercq[1, 2]; 1. DMBR, VIB, Ghent, Belgium; 2. DMB, Ghent University, Ghent, Belgium.

393.Expression microarray analysis identifies key processes in the transition from actinic keratosis to cutaneous squamous cell carcinoma Sally Lambert[1], Nikol Mladkova[1], Abha Gulati[1], Rifat Hamoudi[2], Karin Purdie[1], Rino Cerio[1], Irene Leigh[3], Charlotte Proby[3, 1], Catherine Harwood[1]; 1. Centre for Cutaneous Research, Blizard Institute, Barts and the London School of Medicine and Dentistry, Queen Mary University of London, London, United Kingdom; 2. Research Department of Pathology, Cancer Institute, University College London, London, United Kingdom; 3. Cancer Research UK Skin Tumour Laboratory, Medical Research Institute, Ninewells Hospital & Medical School, University of Dundee, Dundee, United Kingdom.

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394. **Analysis of pdgfrα mutations and survivin expression in merkel cell polyomavirus positive and negative merkel cell carcinomas** Marina Batinica[1], Paola Zigrino[1], Baki Akgül[2], Herbert Pfister[2], Cornelia Mauch[1]; 1. Dermatology, University of Cologne, Cologne, Germany; 2. Virology, University of Cologne, Cologne, Germany.

395. **Comprehensive analysis of the basal cell carcinoma functional methylome** Tjinta Brinkhuizen[1], Simon Denil[5], Geert Trooskens[5], Wim van Criekinge[5, 6], Veronique Winnepenninckx[3], Klara Mosterd[1], Manon van Engeland[3, 2], Maurice van Steensel[1, 4, 2]; 1. Dermatology, ; Maastricht University Medical Center, Maastricht, Netherlands; 2. GROW-School for Oncology and Developmental Biology, ; Maastricht University Medical Center, Maastricht, Netherlands; 3. Pathology, ; Maastricht University Medical Center, Maastricht, Netherlands; 4. Clinical Genetics, ; Maastricht University Medical Center, Maastricht, Netherlands; 5. Mathematical Modeling, Statistics and Bioinformatics, Ghent University, Ghent, Belgium; 6. MDX-Health, Liege, Belgium.

396. ***In vivo* role of TPL2 activation in squamous cell carcinoma, keratoacanthoma-type development and progression** Jung-han Suh[1], Jun-han Lee[1], Jae Jung[2], Joseph Jeong[1]; 1. Dermatology, Medical College of Wisconsin, Milwaukee, WI, USA; 2. Microbiology, USC, Los Angeles, CA, USA.

397. **Organ transplant recipients with Merkel cell carcinoma have reduced overall, disease-specific, and progression-free survival independent of stage at presentation** Theresa Canavan, Sarah Arron, Siegrid Yu; Dermatology, University of California, San Francisco, San Francisco, CA, USA.

398. **High frequency of *PTEN* mutations in pre-malignant and malignant pigmented lesions in xeroderma pigmentosum** T. Masaki[1, 3], Y. Wang[1, 5], J. DiGiovanna[1], C. Lee[4], S. Khan[1], M. Raffeld[4], T. Hornyak[1], T. Darling[2], K. Kraemer[1]; 1. Dermatololgy Branch, NCI, Bethesda, MD, USA; 2. Dermatology, USUHS, Bethesda, MD, USA; 3. Dermatology, Kobe University, Kobe, Japan; 4. Pathology, NCI, Bethesda, MD, USA; 5. Dermatology, Peking University First Hospital, Peking, China.

399. **Soluble adenylyl cyclase alters cellular metabolism to reflect a cancer-like phenotype** Michelle Park[1, 2], Jonathan Zippin[1]; 1. Dermatology, Weill Cornell Medical College, New York, NY, USA; 2. Albert Einstein College of Medicine, New York, NY, USA.

400. **The covert stages of cancer immunoediting provide prevention targets** Bradley Kubick, Dennis Roop; University of Colorado Anschutz Medical Campus, Aurora, CO, USA.

401* **(CM13-06).Suppression of autophagy is associated with enhanced regression of skin tumors in mice** Caterina Barresi[1], Johannes Pammer[2], Irene Steiner[3], Maria Buchberger[1], Heidemarie Rossiter[1], Leopold Eckhart[1], Erwin Tschachler[1]; 1. Research Division of Biology and Pathobiology of the Skin, Department of Dermatology, Medical University of Vienna, Vienna, Austria; 2. Institute of Clinical Pathology, Medical University of Vienna, Vienna, Austria; 3. Center for Medical Statistics, Informatics, and Intelligent Systems, Section for Medical Statistics, Medical University of Vienna, Vienna, Austria.

402* **(CM13-02).Gene expression profiling demonstrates that the effects of PTCH1 suppression are not fully reversed upon pharmacological inhibition of SMOOTHENED in human keratinocytes** Muhammad Rahman[1], Joanne Selway[2], Dimalee Herath[1], Allon Hazan[1], Avarjit Roy[2], Kenneth Langlands[2], Scott Edmunds[1], David Kelsell[1], Catherine Harwood[1], Michael Philpott[1], Graham Neill[1]; 1. Centre for Cutaneous Research, Queen Mary University of London, London, United Kingdom; 2. Clore Laboratory, University of Buckingham, Buckingham, United Kingdom.

403. **Romidepsin, but not Pralatrexate, alters expression of a genetic signature in CTCL** Brittany Dulmage, Louis Falo, Larisa Geskin; Dermatology, University of Pittsburgh, Pittsburgh, PA, USA.

404. **K-homology (KH)-type splicing regulatory protein (KSRP) protects against inflammation-mediated cutaneous carcinogenesis by destabilization of inflammatory mediators** Israr Ahmad[1], Kashiff Muneer[1], Chu-Fang Chou[2], Ching-Yi Chen[2], Nabiha Yusuf[1]; 1. Dermatology, University of Alabama at Birmingham, Birmingham, AL, USA; 2. Biochemistry and Molecular Genetics, University of Alabama at Birmingham, Birmingham, AL, USA.

405. **Laser cancer prevention: Is the ablative laser for rejuvenation preventive against ultraviolet-induced skin cancer?** Jiwon Gye[1], Jiyeon Yoo[1, 2], Ji Seok Kim[1], Jee Young Kim[1], Byung Cheol Park[1], MyungHwa Kim[1], Seung Phil Hong[1]; 1. Department of Dermatology, College of Medicine, Dankook University, Cheonan, Republic of Korea; 2. Department of Dermatology, Yonsei University Wonju College of Medicine, Wonju, Republic of Korea.

406. **Screening for cellular binding partners of the Merkel cell polyomavirus-small t antigen by yeast two-hybrid system** Harrison Nguyen, Apeksha Agranayak, Peter Rady, Stephen Tyring; Dermatology, University of Texas at Houston Medical School, Houston, TX, USA.

407. **A comparative study of Langerhans Cell Histiocytosis (LCH) and non-melanoma skin cancer transcriptional profiles** Parvathy Harikumar, Joanne Selway, Anthony Chu, Kenneth Langlands; Clore Laboratory, University of Buckingham, Buckingham, United Kingdom.

408. **Fc gamma receptor II (CD32) as novel regulator of keratinocyte proliferation and differentiation** Sandra Freiberger, Piotr Dziunycz, Gergana Iotzova-Weiss, Lars French, Günther Hofbauer; Department of Dermatology, University Hospital Zurich, Zurich, Switzerland.

409. **Three siblings with epidermodysplasia verruciformis caused by an aberrant splicing of the TMC8 gene** Bettina Burger[1], Zafer Yüksel[2], Iris Spoerri[1], Julie DeMesmaeker[1], Werner Kempf[3], Peter Itin[4, 1]; 1. Department of Biomedicine, University Hospital Basel, Basel, Switzerland; 2. Medical Genetics Department, Eskisehir Osmangazi University, Eskisehir, Turkey; 3. Kempf and Pfaltz Histological Diagnostics, Zurich, Switzerland; 4. Department of Dermatology, University Hospital Basel, Basel, Switzerland.

410. **Loss of collagen VII increases aggressive tumor behavior in Col7al hypomorphic mice** Venugopal Rao Mittapalli, Alexander Nyström, Anja Fritsch, Leena Bruckner-Tuderman; Department of Dermatology, University Medical Center, Freiburg, Germany.

411. **Distinct mechanisms mediate cellular proliferation by p63 and p73 in human skin squamous cell carcinoma** Teresa Mattiello, Dario Antonini, Caterina Missero; CEINGE, Center for Genetic Engineering, Napoli, Italy.

412. **Molecular analysis of primary cutaneous aggressive T-cell lymphomas** Daniele Fanoni[1], Cornelis Tensen[2], Francesca Novara[3], Luigia Venegoni[4], Laura Corti[1], Silvia Alberti Violetti[1], Francesco Onida[1, 4], Marco Paulli[3], Rein Willemze[2], Emilio Berti[5, 1]; 1. Fondazione IRCCS Ca' Granda, Milan, Italy; 2. Leiden University Medical Center, Leiden, Netherlands; 3. Fondazione IRCCS Policlinico S. Matteo, Pavia, Italy; 4. Università degli Studi di Milano, Milan, Italy; 5. Università degli Studi di Milano Bicocca, Milan, Italy.

413. **Mutant p53 in cutaneous squamous cell carcinoma** H. Saundh[1], I. Leigh[1, 2], A. South[1], M. Saville[1]; 1. Division of Cancer Research, University of Dundee, Dundee, United Kingdom; 2. Barts and the London School of Medicine, University of London, London, United Kingdom.

414. **Immunohistochemical assessment of MRG-binding protein and polo-like kinase 1 over-expression in human cutaneous SCC** Catriona Harkins, Stephen Watt, Celine Pourreyron, Irene Leigh, Charlotte Proby, Andrew South; Division of Cancer Research, University of Dundee, Dundee, United Kingdom.

415. **Notch1 signalling in systemic anaplastic large cell lymphoma and peripheral T-cell lymphomas not otherwise specified** Maria Kamstrup[1], Lise Mette Rahbek Gjerdrum[2], Edyta Biskup[1], Elizabeth Ralfkiaer[2], Omid Niazi[1], Robert Gniadecki[1]; 1. Dermatology, Bispebjerg Hospital, Copenhagen, Denmark; 2. Pathology, Rigshospitalet, Copenhagen, Denmark.

416* **(CM10-10).Depletion of MRG-binding protein invokes TIP60 histone acetyltransferase-dependent apoptosis in cutaneous squamous cell carcinoma cells** Stephen Watt, Kate Arrand, Irene Leigh, Andrew South; Division of Cancer Research, University of Dundee, Dundee, United Kingdom.

417* **(CM10-01).Targeting Merkel cell carcinoma dependence on Bcl-2 family members promotes efficient cell death *in vitro* and *in vivo*** Monique Verhaegen, Jack Weick, Tracy Vozheiko, Doris Mangelberger, Joanna Pero, Timothy Johnson, Christopher Bichakjian, Andrzej Dlugosz; Dermatology, University of Michigan, Ann Arbor, MI, USA.

418. **UISO cell line is not representative of Merkel cell carcinoma tumors** Kenneth Daily[1], Amy Coxon[1], Jonathan Williams[1], Chyi-Chia Richard Lee[1], Daniel Coit[2], Klaus Busam[2], Isaac Brownell[1, 2]; 1. National Cancer Institute, NIH, Bethesda, MD, USA; 2. Memorial Sloan-Kettering, New York, NY, USA.

419. **Combination of histone acetylation and dna demethylation is synergistic in ctcl treatment** Sima Rozati, Phil Cheng, Antonia Fettelschoss, Mitchell Leveque, Reinhard Dummer; Dermatology, University hospital of Zurich, Zurich, Switzerland.

420. **IQGAP1 and IQGAP3 are required for invasive epidermal tumorigenesis but are relatively dispensable for normal epidermal homeostasis** Christine Monteleon, Andrew McNeal, Todd Ridky; Dermatology, University of Pennsylvania, Philadelphia, PA, USA.

421* **(CM10-02).Cyclosporine A polarizes T cells toward T22 and induces IL-22 receptor in human SCC cells *in vitro*: A mechanism driving IL-22 induced SCC proliferation** Valerie Yanofsky[1], Hirsohi Mitsui[2], Claire Wang[2], Juana Gonzalez[3], James Krueger[2], Diane Felsen[4], John Carucci[1]; 1. Department of Dernatology, NYU Medical Center, New York, NY, USA; 2. Lab for Investigative Dermatology, Rockefeller, New York, NY, USA; 3. Translational Immunology Resource Center, Rockefeller, New York, NY, USA; 4. Institute for Pediatric Urology, Rockefeller, New York, NY, USA.

422. **A mutational storm revealed by Exome sequencing: Dramatic increase of UV signature mutations during development of skin cancer in Xeroderma pigmentosum patients** Peter Bauer[1], York Kamenisch[2], Marc Sturm[1], Christopher Schröder[1], Claudia Bauer[1], Martin Röcken[2], Olaf Riess[1], Mark Berneburg[2]; 1. Genetics, Eberhard Karls University, Tübingen, Germany; 2. Dermatology, Eberhard Karls University, Tübingen, Germany.

423. **RNAi depletion of PRSS21 in cutaneous squamous cell carcinoma keratinocytes induces maspin dependent apoptosis** Kim Robinson, Stephen Watt, Irene Leigh, Andrew South; Division of Cancer Research, University of Dundee, Dundee, United Kingdom.

424. **Perifosine, an alkylphospholipid inhibitor of Akt1, a downstream target of the sonic hedgehog (Shh) pathway, suppresses growth of basal cell carcinomas (BCC) cells** Arianna Kim[1], Yucui Zhu[1], Jung Back[1], Nathan Yardley[1], Mohammad Athar[2], David Bickers[1]; 1. Dermatology, Columbia University, New York, NY, USA; 2. University of Alabama at Birmingham, Birmingham, AL, USA.

425. **Loss of p38δ mitogen-activated protein kinase (MAPK) expression reveals a stage-specific regulation of skin inflammation and malignant progression in a two-stage chemical skin carcinogenesis model** Alexi Kiss[1], Aaron Koppel[1], Grace Kissling[2], Tatiana Efimova[1]; 1. Medicine/Dermatology, Washington University School of Medicine, St. Louis, MO, USA; 2. Biostatistics Branch, National Institute of Environmental Health Sciences, Research Triangle Park, NC, USA.

426. **FRIZZLED7 and ERBB3 regulate distinct metastatic properties in melanoma** Shweta Tiwary[1], Morgan Preziosi[1], Sonali Mohanti[1], Brad Martin[1], Nathalie Zeitouni[2], Lei Xu[1]; 1. Biomedical genetics, University of Rochester Medical Center, Rochester, NY, USA; 2. Roswell Park Cancer Institute, Buffalo, NY, USA.

427** **(PL4-04).Cutaneous squamous cell carcinoma carries the highest burden of mutation of any human tumor type and harbors prevalent mutations in CARD11 and CREBBP** Andrew South[1], Stephen Watt[1], Karin Purdie[2], Charlotte Proby[1], Catherine Harwood[2], Irene Leigh[1]; 1. Division of Cancer Research, University of Dundee, Dundee, United Kingdom; 2. Centre For Cutaneous Research, Barts and The London School of Medicine and Dentistry, London, United Kingdom.

428. **The Bmi-1 helix-turn and ring-finger domains are required for Bmi-1 antagonism of (-) epigallocatechin-3-gallate suppression of skin cancer cell survival** Sivaprakasam Balasubramanian, Tiffany Scharadin, Bingshe Han, Wen Xu, Richard Eckert; Departments of Biochemistry and Molecular Biology, University of Maryland School of Medicine, Baltimore, MD, USA.

429. **mTOR, a potential molecular target for the chemoprevention of non-melanoma skin cancer in organ transplant recipients** Sandeep Chaudhary[1], Stephanie Walsh[1], Xiu Tang[2], Arianna Kim[2], Deepali Kurundkar[1], Ritesh Srivastva[1], Zhiping Weng[1], David Bickers[2], Craig Elmets[1], Levy Kopelovich[3], Mohammad Athar[1]; 1. Dermatology, UAB, Birmingham, AL, USA; 2. Columbia University, NY, NY, USA; 3. NCI, Bethesda, MD, USA.

430* **(CM10-05).Bone marrow-derived epithelial cells as well as hair follicle bulge-derived cells contribute to skin tumors and ulcer-associated dysplasia mediated by tumor promotion in the mouse** H. Park[2, 3, 4], N. Readio[1], G. Jin[4], S. Asfaha[4], A. Singh[1], A. Singh[1], X. Yang[4], K. Patterson[4], C. Trempus[5], T. Wang[4], R. Morris[1, 2, 3]; 1. The Hormel Institute/University of Minnesota, Austin, MN, USA; 2. Dermatology, Columbia University, New York, NY, USA; 3. Pathology and Cell Biology, Columbia University, New York, NY, USA; 4. Medicine, Columbia University, New York, NY, USA; 5. Matrix Biology Group, NIEHS, Research Triangle Park, NC, USA.

431. **EGFR/Ras-induced CCL20 production is a critical factor within the tumor microenvironment** Andreas Hippe[1], Anne Schoor[1], Anja Müller-Homey[1, 2], Anke van Lierop[1], Stephan Seeliger[3], Andor Pivarcsi[4], Bettina Buhren[1], Stephanie Müller[1], Arne Gerber[1], Jonathan Sleeman[5], Nikolas Stoecklein[6], Frauke Alves[7], Thomas Hoffmann[8], Albert Zlotnik[9], Bernhard Homey[1]; 1. Dermatology, University Hospital Düsseldorf, Düsseldorf, Germany; 2. Radiation Oncology, University Hospital Düsseldorf, Düsseldorf, Germany; 3. Pediatric Cardiology and Intensive Care, Georg-August-University Göttingen, Göttingen, Germany; 4. Center for Molecular Medicine, Karolinska University Hospital, Stockholm, Sweden; 5. Centre for Biomedicine and Medical Technology, Medical Faculty Mannheim, Mannheim, Germany; 6. General-, Visceral- and Pediatric Surgery, University Hospital Düsseldorf, Düsseldorf, Germany; 7. Hematology and Oncology, Georg-August-University Göttingen, Göttingen, Germany; 8. Otorhinolaryngology, University Hospital Essen, Essen, Germany; 9. Physiology and Biophysics, University of California, Irvine, CA, USA.

432. **Phospholipase C-beta 4 regulates proliferation and invasion in cutaneous SCC** Emily Ruban[1], Vera Martins[1], Matthew Caley[1], Claudio Raimondi[2], Marco Falasca[2], Edel O'Toole[1]; 1. Centre for Cutaneous Research, Queen Mary University of London, London, United Kingdom; 2. Centre for Diabetes, Queen Mary University of London, London, United Kingdom.

433. **Yin and Yang: IL-1β promotes, while IL-1α inhibits, lymphoma and melanoma tumor growth in mice** Tian Tian, Robert Fuhlbrigge, Thomas Kupper; Dermatology, Brigham and Women's Hospital, Boston, MA, USA.

434. **Topical rapamycin inhibits tumor formation in a murine model of cutaneous T-cell lymphoma** Xuesong Wu, Justine Garner, Wasakorn Kittipongdaja, Sam Hwang, Stefan Schieke; Dermatology, Medical College of Wisconsin, Milwaukee, WI, USA.

435. **Topical platelet activating factor receptor (PAF-R) agonist treatment suppresses PMA induced inflammatory effects and cutaneous chemical carcinogenesis: Effects on inflammation requires both the PAF-R and mast cells** Raymond Konger[1, 2], Ravi Sahu[1], Sonia DaSilva-Arnold[1, 2], Jeffrey Travers[2], Samin Rezania[1]; 1. Pathology & Lab Medicine, Indiana University, Indianapolis, IN, USA; 2. Dermatology, Indiana University, Indianapolis, IN, USA.

436* **(CM10-03).Genetic loss of Srcasm promotes oncogenic signaling and cell growth after UVB exposure** Xioaping Yang[1], Kosei Tsukamoto[1, 2], Michael Gober[1], Christine Marshall[1], Lynn Wang[1], Tzvete Dentchev[1], John Seykora[1]; 1. Dermatology, Perelman School of Medicine UPenn, Philadelphai, PA, USA; 2. Rohto Pharmaceutical, Kyoto, Japan.

437. **Human basal cell carcinoma tumor-initiating cells are resistant to etoposide killing** Chantal Colmont[1], Antisar BenKetha[1], Rachel Errington[1], Carole Yee[2], Mark Udey[2], Girish Patel[3]; 1. School of Medicine, Cardiff University, Cardiff, United Kingdom; 2. Dermatology Branch, National Cancer Institute, NIH, Bethesda, MD, USA; 3. School of Biosciences, Cardiff University, Cardiff, United Kingdom.

438. **NKp46 specific expression on skin-resident CD4+ lymphocytes of mycosis fungoides (MF) and Sézary syndrome (SS)** P. Schneider[1, 2], L. Verneuil[3], M. Battistella[1, 3], A. Bensussan[2], M. Bagot[1, 2], A. Janin[1, 3]; 1. hopital Saint-Louis, paris, France; 2. inserm U976, paris, France; 3. inserm U728, paris, France.

439. **Defining and targeting differentiation pathways in non-melanoma skin cancer** Antisar BenKetah[1], Simon Reed[1], Paul Bowden[1], Girish Patel[2]; 1. School of Medicine, Cardiff University, Cardiff, United Kingdom; 2. School of Biosciences, Cardiff University, Cardiff, United Kingdom.

440. **The expression of IL-1 family cytokines is perturbed in non-melanoma cancers of the skin** Abhishek Aphale, Marybeth Riblett, Christopher Bichakjian, Timothy Johnson, Andrew Johnston, Johann Gudjonsson; Department of Dermatology, University of Michigan, Ann Arbor, MI, USA.

441* **(CM13-09).Oncogene addiction distinguishes malignant from benign skin tumors caused by deregulated Hedgehog signaling** M. Grachtchouk, D. Wilbert, J. Pero, K. Fiehler, J. Crowley, A. Photenhauer, A. Ermilov, A. Dlugosz; University of Michigan, Ann Arbor, MI, USA.

442. **A miR-34a-SIRT6 axis in the squamous cell differentiation network** Karine Lefort[1, 2], Yang Brooks[3], Paola Ostano[4], Muriel Cario-André[5], Valérie Calpini[1], Andrea Albinger-Hegyi[6], Wolfram Hoetzenecker[1], Gian Paolo Dotto[1, 3]; 1. Biochemistry, University of Lausanne, Epalinges, Switzerland; 2. Medicine, CHUV, Lausanne, Switzerland; 3. Cutaneous Biology Research Center, Massachusetts General Hospital, Charlestown, MA, USA; 4. Laboratory of Cancer Genomics, Fondazione Edo ed Elvo Tempia Valenta, Biella, Italy; 5. Inserm U876 and National Reference Centre for Rare Skin Diseases, Bordeaux hospital, Bordeaux, France; 6. HNO Praxis, HNO Zuerich Fraumünster, Zurich, Switzerland.

443. **Expression of epidermal growth factor receptor and detection of mutant EGFR (EGFRvIII) in human cutaneous squamous cell carcinoma** Plotr Dziunycz Dziunycz[1], Zelmira Lazarova[2], Nathan Duncan[2], Stuart Wong[3], Marcy Neuburg[2], Günther Hofbauer[1], Edit Olasz[2]; 1. Department of Dermatology, University Hospital Zurich, Zurich, Switzerland; 2. Department of Dermatology, Medical College of Wisconsin, Milwaukee, WI, USA; 3. Department of Oncology, Medical College of Wisconsin, Milwaukee, WI, USA.

444. **Defining the roles of p53, Myc, and Aurora kinase A in skin squamous cell carcinomas from organ transplant recipients** Enrique Torchia[1], Tamara Terzian[1], Monica Salazar[2], Farinaz Arbab[3], Dennis Roop[1]; 1. Dermatology and Gates Center for Regenerative Medicine and Stem Cell Biology, University of Colorado Anschutz Medical Campus, Aurora, CO, USA; 2. School of Medicine, University of Colorado Anschutz Medical Campus, Aurora, CO, USA; 3. Pathology, West Houston Medical Center, Houston, TX, USA.

445. **Lgr5+ stem cells give rise to Hedgehog pathway-driven gastric adenocarcinomas** L. Syu, X. Zhao, M. Grachtchouk, A. Ermilov, J. Greenson, X. Zheng, A. Kaatz, J. Pero, D. Wilbert, D. Gumucio, L. Samuelson, J. Merchant, A. Dlugosz; University of Michigan, Ann Arbor, MI, USA.

446* **(CM13-07).ΔNp63α in squamous cancer pathogenesis** Kathryn King[1], Linan Ha[1], Roshini Ponnamperuma[1], Steve Jay[2], Wendy Weinberg[1]; 1. Laboratory of Molecular Oncology, Division of Monoclonal Antibodies, Center for Drug Evaluation and Research/FDA, Bethesda, MD, USA; 2. SAIC Frederick, Inc., Frederick, MD, USA.

Cutaneous and Hair Development

All orals designated with an asterisk (*) below are presented in a Concurrent Session (see code). Orals designated with two asterisks (**) will be presented during a Plenary Session (see code).

447. **Role of 11β-hydroxysteroid dehydrogenase 1 on sebocyte differentiation** Laurent Lamy, Sophie Carrere, Jonathan Pascau, Sandrine Réthoré, Jean-Guy Boiteau, Jean-François Fournier, Claire Bouix-Peter, Johannes Voegel, André Jomard, Jérome Aubert; Research, Galderma R&D, Sophia-Antipolis, France.

448* **(CM4-01).Full-thickness skin with mature and cycling hair follicles using tissue culture expanded human cells** Xunwei Wu, Larry Scott, Kurt Stenn; Aderans Research Institute, Inc, Marietta, GA, USA.

449. **Sphingolipids of murine hair: Biochemical and immunohistochemical analyses** Sumiko Hamanaka[1, 3], Mikiko Abe[1], Eriko Oshima[1], Yoshio Hirabayashi[1], Shota Sakai[2], Asami Makino[2], Tetsuya Tsuchida[3]; 1. Molecular Membrane Neuroscience, Brain Science Institute, RIKEN, Wako, Japan; 2. Lipid biology laboratory, Advanced Science Institute, RIKEN, Wako, Japan; 3. Dermatology, Saitama Medical University, Moroyama-machi, Japan.

450. **Screening for autoantigen epitopes involved in the development of alopecia areata** Eddy Wang[1], Jan Dutz[1, 2], Jerry Shapiro[2], Kevin McElwee[1]; 1. Dermatology and Skin Science, University of British Columbia, Vancouver, BC, Canada; 2. Dermatology and Skin Science, Vancouver General Hospital, Vancouver, BC, Canada.

451. **Validation of a high throughput human primary sebocyte discovery platform** Benjamin Buehrer, Malika Boukhelifa, Jim Nicoll; Zen-Bio, Inc, RTP, NC, USA.

452. **Tissue engineering a 3-D functional model of the human eccrine sweat gland** Viviana Robles, Mike Philpott, Harshad Navsaria; Cutaneous Research, Queen Mary University, London, United Kingdom.

Posters

453.Thyroid hormones regulate key parameters of mitochondrial biology in human skin epithelium *in situ* and may exert anti-ageing effects Silvia Vidali[1], Jana Knuever[1], Abigail Langton[2], Rachel Watson[2], Matthias Klinger[3], Ralf Paus[1, 2]; 1. Department of Dermatology, University of Lübeck, Lübeck, Germany; 2. Institute of Inflammation and Repair, University of Manchester, Manchester, United Kingdom; 3. Department of Anatomy, University of Lübeck, Lübeck, Germany.

454.11β-HSD1 inhibitor reverses the overproduction of sebum induced by topical application of cortisone in rat skin Sandrine Réthoré, Gérard Féraille, Fanny Bonnard, Karine Nicolas, Gilbert Laffet, Laurent Lamy, André Jomard; Research, Galderma R&D, Sophia-Antipolis, France.

455.The roles and capabilities of multipotent nestin-expressing stem cells of the hair follicle Sumiyuki Mii[1], Jennifer Duong[1], Yasunori Tome[1], Aisada Uchugonova[2], Fang Liu[3], Yasuyuki Amoh[4], Norimitsu Saito[4], Kensei Katsuoka[4], Robert Hoffman[1, 5]; 1. AntiCancer Inc., San Diego, CA, USA; 2. Department of Biophotonics and Laser Technology, Saarland University, Saarbruecken, Germany; 3. Department of Anatomy, Second Military Medical University, Shanghai, China; 4. Department of Dermatology, Kitasato University School of Medicine, Kanagawa, Japan; 5. Department of Surgery, University of California San Diego, San Diego, CA, USA.

456.Timing the hair cycle: BMAL1 knock-out induces anagen prolongation and increases melanogenesis in the hair follicle Jonathan Hardman[1, 2], Yusur Al-Nuaimi[3], Nilofer Farjo[4], Bessam Farjo[4], Iain Haslam[2], Ralf Paus[5]; 1. Integrative Systems Biology Doctoral Training Centre, Manchester Interdisciplinary Biocentre,, University of Manchester, Manchester, United Kingdom; 2. Institute of Inflammation and Repair, School of Translational Medicine, University of Manchester, Manchester, United Kingdom; 3. Salford Royal Foundation Trust, Salford Royal Hospital, Salford, United Kingdom; 4. Farjo Medical Centre, Manchester, United Kingdom; 5. Department of Dermatology, University of Lübeck, Lübeck, Germany.

457.Learning your ABCs: xenobiotic transporter expression in human hair follicles Iain Haslam[1], Asim Shahmalak[2], Ralf Paus[1, 3]; 1. Institute of Inflammation and Repair, University of Manchester, Manchester, United Kingdom; 2. Crown Cosma Clinic, Manchester, United Kingdom; 3. Department of Dermatology, University of Luebeck, Luebeck, Germany.

458.*In vitro study* of the effect of glycation on an innervated and endothelialized tissue-engineered skin Sébastien Cadau[1], Sabine Pain[2], Nicolas Bechetoille[2], Valérie André-Frei[2], François Berthod[2]; 1. Laboratoire de genie tissulaire et régénération nerveuse, Centre LOEX de l'Université de Laval-Québec, Quebec, QC, Canada; 2. BASF BEAUTY CREATIONS BEAUTY CARE SOLUTIONS FRANCE SAS, LYON, France.

459.Soy extract modified by biotechnology increases synthesis of a functional characterized heterotypic type I/V/III collagen fibers network in the extracellular matrix of the human skin Delphine Rival, Sébastien Bonnet, Aurélie Boher, Vanessa Marques-Quintela, Christelle Gaillard, Valérie André-Frei; BASF BEAUTY CREATIONS BEAUTY CARE SOLUTIONS FRANCE SAS, Lyon, France.

460.Ajuga reptans enriched in 50% of phenylpropanoids: New evidences for hair disorders Barbara Marzani, Daniela Pinto, Anna Benedusi, Giammaria Giuliani; R&D, Giuliani, Milan, Italy.

461.Muscarinic agonist induction control of sweat glands Steve Hoynowski, Benjamin Buehrer; ZenBio, Inc., RTP, NC, USA.

462.A novel strategy for therapeutic hair growth inhibition: PPARγ modulation promotes catagen and induces hair matrix apoptosis while inhibiting inflammation and preserving the epithelial stem cell compartment Yuval Ramot[1, 2], Arianna Mastrofrancesco[3], Erika Herczeg-Lisztes[4], Tamas Biro[4], Mauro Picardo[3], Jennifer Kloepper[1], Ralf Paus[1, 5]; 1. University of Luebeck, Luebeck, Germany; 2. Hadassah-Hebrew University Medical Center, Jerusalem, Israel; 3. S. Gallicano Dermatologic Institute (IRCCS), Rome, Italy; 4. University of Debrecen, Debrecen, Hungary; 5. University of Manchester, Manchester, United Kingdom.

463.Calcium-dependent deimination, followed by zinc-involved tetramerization, of S100A3 during the trichocytic dfferentiation Kenji Kizawa[1], Masaki Unno[2], Claus Heizmann[3], Hidenari Takahara[4, 2]; 1. Innovative Beauty Research Laboratory, Kanebo Cosmetics Inc., Odawara, Japan; 2. Frontier Research Center for Applied Atomic Sciences, Ibaraki University, Tokai, Japan; 3. Department of Pediatrics, Zurich University, Zurich, Switzerland; 4. Deptartment of Applied Biological Resource Sciences, Ibaraki University, Ibaraki, Japan.

464.Communicate to grow: The example of the human hair follicle Catherine Gondran, Armelle Perrin, Celine Meyrignac, Sandrine Ratz, Jean marie Botto, Nouha Domloge; Ashland Specialty Ingredient, Vincience, Global Skin Research Center, Sophia Antipolis, France.

465.Different approaches to assess the effects of stress on human hair follicle Catherine Gondran[1], Armelle Perrin[1], Celine Meyrignac[1], Sandrine Ratz[1], Gopinathan Menon[2], Jean Marie Botto[1], Nouha Domloge[1]; 1. Ashland Specialty Ingredient, Vincience, Global Skin Research Center, Sophia Antipolis, France; 2. Ashland Specialty Ingredient, Vincience, Global Skin Research Center, Wayne, NJ, USA.

466.Transcriptome analysis of estrogen regulating factors in hair cycle Yuko Obayashi[1], Yujiro Endo[1], Noriko Aisawa[1], Masato Takahashi[1], Tatsuyuki Midorikawa[1], Tetsushi Serizawa[1], Rie Ueki[2], Michiaki Murakoshi[1]; 1. Life Science Research Laboratories, LION Corporation, Kanagawa, Japan; 2. Dermatology unit, Juntendo Tokyo Koto Geriatric Medical Center, Tokyo, Japan.

467.Analysis of hair shaft cuticle-specific keratin-associated protein 10 (KRTAP10) family Hiroki Fujikawa[1, 2], Atsushi Fujimoto[1, 2], Muhammad Farooq[1], Masaaki Ito[2], Yutaka Shimomura[1]; 1. Laboratory of Genetic Skin Diseases, Niigata University Graduate School of Medical and Dental Sciences, Niigata, Japan; 2. Division of Dermatology, Niigata University Graduate School of Medical and Dental Sciences, Niigata, Japan.

468.A novel heterozygous deletion-insertion mutation in the mouse *Krt71* gene underlies wavy coat phenotype Atsushi Fujimoto[1, 2], Asuka Inoue[3], Muhammad Farooq[1], Hiroki Fujikawa[1, 2], Junken Aoki[3], Masaaki Ito[2], Yutaka Shimomura[1]; 1. Laboratory of Genetic Skin Diseases, Niigata University Graduate School of Medical and Dental Sciences, Niigata, Japan; 2. Division of Dermatology, Niigata University Graduate School of Medical and Dental Sciences, Niigata, Japan; 3. Laboratory of Molecular and Cellular Biochemistry, Graduate School of Pharmaceutical Sciences, Tohoku University, Sendai, Japan.

469*(CM4-08).Inhibitory effects of anti-histamines against T cell-chemoattractions by suppression of F-actin polymerization in alopecia areata Taisuke Ito[1], Hideo Hashizume[2], Yoshiki Tokura[1]; 1. Dermatology, Hamamatsu University School of Medicine, Hamamatsu, Japan; 2. Dermatology, Shimada Municipal Hospital, Shimada, Japan.

470.Epithelial deletion of Wntless causes premature regression of hair follicles and epidermal hyperplasia Xuming Zhu, Sixia Huang, Yixin Tao, Yanfang Liu, Yushu Wang, Baojie Li, Xizhi Guo, Lin He, Gang Ma; Bio-X Institutes, Key Laboratory for the Genetics of Developmental and Neuropsychiatric Disorders (Ministry of Education), Shanghai Jiao Tong University, Shanghai, China.

471.Human sebocytes treated with ROCK inhibitors produce lipids in the absence of mature sterol response element binding protein (SREBP) Diane Thiboutot, Zhaoyuan Cong, Kathryn Gilliland; Dermatology, Penn State University, Hershey, PA, USA.

472.Loss of MPZL3 function results in severe skin and hair abnormalities in mice Anne Chen, Irene Tabas, Angel Leiva, Tongyu Wikramanayake; Dermatology and Cutaneous Surgery, University of Miami Miller School of Medicine, Miami, FL, USA.

473.Baicalin promotes hair growth Young Sung, Seung Shin, Moon Kim, Jung Kim; Kyungpook National University, Daegu, Republic of Korea.

474.A molecular signature for primary lymphocitic cicatricial alopecia subtypes Nerea Ormaechea Pérez[1], Ane Jaka Moreno[1], Francisco Jiménez Acosta[3], Enrique Poblet Martínez[4], Araika Gutierrez Rivera[2], Ander Izeta Permisan[2], Arantxa López Pestaña[1], Anna Tuneu Valls[1]; 1. Dermatology, Hospital Universitario Donostia, San Sebastian, Spain; 2. Bioengineering, Instituto Biodonostia, Hospital Universitario Donostia, San Sebastian, Spain; 3. Dermatology, Clínica Dr Jiménez-Acosta, Las Palmas de Gran Canaria, Spain; 4. Pathology, Hospital General Universitario Reina Sofía and Universidad de Murcia, Murcia, Spain.

475.Racial differences of hair steroid profiling in male pattern baldness between Korean and Caucasian populations Bark-Lynn Lew[1], Boo-Kyoung Kang[1], Young-Jun Oh[1], Young-Lip Park[2], Man-Ho Choi[3], Bong-Chul Chung[3], Woo-Young Sim[1]; 1. Kyunghee university hospital, Seoul, Republic of Korea; 2. Soonchunhyang university hospital, Seoul, Republic of Korea; 3. University of Science and Technology, Seoul, Republic of Korea.

476.Wnt5a inhibits Wnt3a-mediated signaling in human hair follicular dermal papilla cells Mi Kwack, Moon Kim, Jung Kim, Young Sung; Kyungpook National University, Daegu, Republic of Korea.

477.An international repository for mouse models of skin and adnexal diseases Cat Lutz, Stephen Rockwood, Herbert Pratt, John Sundberg; The Jackson Laboratory, Bar Harbor, ME, USA.

478.R164C mutation in FOXQ1 H3 domain affects formation of the hair medulla Herbert Pratt[1], Christopher Potter[1], Baojin Wu[1, 2], Kathleen Silva[1], Victoria Kennedy[1], John Sundberg[1]; 1. The Jackson Laboratory, Bar Harbor, ME, USA; 2. Hangzhou Normal University, Hangzhou Zhejiang, China.

479.Vitamin C inhibits the expression of inflammatory cytokines in cultured sebocytes Weon Ju Lee[1], Jin Sub Lee[1], Mi Yeung Sohn[1], Hyo Jin Kim[2], Seok-Jong Lee[1], Do Won Kim[1]; 1. Department of Dermatology, Kyungpook National University School of Medicine, Daegu, Republic of Korea; 2. Department of Dermatology, Busan Paik Hospital, College of Medicine, Inje University, Busan, Republic of Korea.

480.Novel *ex vivo* preparation to study afferent response pharmacology of guard hair follicles of hairy skin Robert Banks[1], Peter Cahusac[2], Michael Siebrecht[3], Sonia Watson[3], Guy Bewick[3]; 1. Biological & Biomedical Sciences, Durham University, Durham, United Kingdom; 2. College of Medicine, Alfaisal University, Riyadh, Saudi Arabia; 3. Medical Sciences, Aberdeen University, Aberdeen, United Kingdom.

481.Comparison of the young and adult rat models in chemotherapy induced alopecia Natalie Yin, Tongyu Wikramanayake, Lucia Mauro, Lawrence Schachner, Joaquin Jimenez; Dermatology and Cutaneous Surgery, University of Miami Miller School of Medicine, Miami, FL, USA.

482.A position effect on FGF13 underlies X-linked congenital generalized hypertrichosis Gina DeStefano[1], Katherine Fantauzzo[1, 2], Lynn Petukhova[2, 3], Mazen Kurban[2], Marija Tadin-Strapps[1], Brynn Levy[4], Dorothy Warburton[1, 4], Elizabeth Cirulli[5], Yujun Han[5], Rodrigo Cepeda-Valdes[6], Julio Cesar Salas-Alanis[7], Angela Christiano[2, 1]; 1. Genetics and Development, Columbia University, New York, NY, USA; 2. Dermatology, Columbia University, New York, NY, USA; 3. Epidemiology, Columbia University, New York, NY, USA; 4. Pathobiology and Cell Biology, Columbia University, New York, NY, USA; 5. Center for Human Genome Variation, Duke University School of Medicine, Raleigh, NC, USA; 6. Dystrophic Epidermolysis Bullosa Research Association, Mexico AC, Mexico; 7. Dermatology Service Hospital Universitario, UNAL, Mexico.

483.Lectins as investigative tools of skin and hair follicle compartments Julien Laboureau[1], Agnès Thomas-Collignon[2], Sébastien Thibaut[2], Mark Donovan[2], Dominique Bernard[2], Bruno Bernard[2]; 1. L'Oréal Recherche, Chevilly Larue, France; 2. L'Oréal Recherche, Clichy, France.

484(PL5-02).Polycomb subunits Ezh1 and Ezh2 regulate the Merkel cell differentiation program in skin stem cells** Elena Ezhkova, Evan Bardot, Julian Valdes; Department of Developmental and Regenerative Biology, Mount Sinai School of Medicine, New York, NY, USA.

485.Indispensable roles of BNIP3, an inducer of autophagy, in both differentiation and maintenance of epidermal keratinocytes Mariko Moriyama[1, 2], Junki Uda[1], Hiroyuki Moriyama[1]; 1. Pharmaceutical Research and Technology Institute, Kinki University, Higashi-Osaka, Japan; 2. Department of Somatic Stem Cell Therapy and Health Policy, Foundation for Biomedical Research and Innovation, Kobe, Japan.

486.Hair follicle-associated PD-L1 regulates T cell hyporesponsiveness: A potential mechanism of immune privilege Xiaojie Wang[1], Alexandra Marr[2], Trisia Breitkopf[1], Gigi Leung[1], Eddy Wang[1], Jianqiang Hao[3], Alice Mui[3], Garth Warnock[3], Jerry Shapiro[1], Kevin McElwee[1]; 1. Dermatology and Skin Science, Univerisity of British Columbia, Vancouver, BC, Canada; 2. Medical Genetics, Univerisity of British Columbia, Vancouver, BC, Canada; 3. Surgery, Univerisity of British Columbia, Vancouver, BC, Canada.

487.Circadian rhythm of autophagy in human dermal fibroblasts derived from young and aged donors Kelly Dong[1], Edward Pelle[1, 2], Dawn Layman[1], Daniel Yarosh[1], Nadine Pernodet[1]; 1. R&D, Estee Lauder Research Laboratories, Melville, NY, USA; 2. Environmental Medicine, New York University School of Medicine, New York, NY, USA.

488.Scd3-iCre knockin mice: A new tool for sebaceous gland-specific gene deletion Maik Dahlhoff, Marlon Schneider; Gene Center, LMU Munich, Munich, Germany.

489.Human anagen scalp hair follicles contain the enzymes to synthesise *de novo* prostaglandins and prostamides from phospholipids, prostaglandin E_2 and D_2 lipid mediators Karzan Khidhir[1], Nilofer Farjo[2], Bessam Farjo[2], David Woodward[3], Valerie Randall[4]; 1. Department of Biology, University of Sulaimani, Al-Sulaimanyiah, Iraq; 2. Farjo Medical Center, Manchester, United Kingdom; 3. Allergan Inc., Irvine, CA, USA; 4. University of Bradford, Bradford, United Kingdom.

490.The efficacy and safety of minoxidil 5% combination with azelaic acid 1/5% and caffeine 1% solution on male pattern hair loss Hamid Reza Pazoki-Toroudi[1, 4], Roozbeh Mobasher Moghadam[2], Marjan Ajami[3, 4], Mansour Nassiri-Kashani[1], Amir Hooshang Ehsani[2], Hossein Tabatabaie[1], Sepideh Khani[2], Zahra Abbasi[1], Mohammad Shizarpour[1], Alireza Firooz[1], Yahya Dowlati[1]; 1. Center for Research and Training in Skin Diseases and Leprosy, Tehran University, Tehran, Islamic Republic of Iran; 2. Razi Dermatology Hospital,Tehran University, Tehran, Islamic Republic of Iran; 3. Faculty of Nutrition Sciences and Food Technology, Shahid Beheshti University, Tehran, Islamic Republic of Iran; 4. Nano Vichar Pharmaceutical Ltd, Tehran, Islamic Republic of Iran.

491.Female patten hair loss (FPHL) - Not always patterned! Punit Saraogi, Rachita Dhurat; B.Y.L.Nair.Charitable Hospital, Mumbai, India.

492.Multipotency can be rescued in cultured adult keratinocytes Chih-Chieh Chan[1, 2], Wei-Hung Wang[2], Mai-Yi Fan[2], Chien-Mei Yen[2], Hao-Wei Lee[2], Hui-Ru Tu[2], Sung-Jan Lin[2, 1]; 1. Dermatology, National Taiwan University Hospital, Taipei, Taiwan; 2. Institute of Biomedical Engineering, National Taiwan University, Taipei, Taiwan.

493*(CM4-05).A mouse model for *in vivo* quantitative monitoring of Wnt/B-Catenin signalling in skin reveals macroscopic hair cycle dynamics in health and disease Samantha Hodgson, Zoltan Neufeld, Kiarash Khosrotehrani; The University of Queensland, Brisbane, QLD, Australia.

494.The human hair follicle cycle: A guide Jennifer Kloepper[1], John Seykora[2], David Whiting[3], Koji Sugawara[4], Nadine Doerwald[1], Dorothee Langan[1], Christian Rose[1], George Cotsarelis[2], Ralf Paus[1, 5]; 1. Dept. of Dermatology, University of Luebeck, Luebeck, Germany; 2. Dept. of Dermatology, University of Pennsylvania, Philadelphia, PA, USA; 3. Baylor Hair Research and Treatment Centre, University of Texas, Dallas, TX, USA; 4. Dept. of Dermatology, Osaka City University, Osaka, Japan; 5. Institue of Inflammation and Repair, Manchester University, Manchester, United Kingdom.

495.DGAT1: A new player in sebaceous gland homeostasis, sebocyte secretory droplet formation and hair follicle cycling Eleanor Hinde[1], Iain Haslam[1], Huw Jones[2], Carolin Schramm[2], Ralf Paus[1, 3]; 1. Institute of Inflammation and Repair, University of Manchester, Manchester, United Kingdom; 2. AstraZeneca, Alderley Park, United Kingdom; 3. Experimental Dermatology, University of Luebeck, Luebeck, Germany.

496*(CM4-09).Autophagy-related gene Atg5 controls terminal differentiation of sebocytes in the preputial gland of the mouse Supawadee Sukseree[1, 2], Heidemarie Rossiter[1], Michael Mildner[1], Maria Buchberger[1], Florian Gruber[1], Ramida Watanapokasin[2], Erwin Tschachler[1], Leopold Eckhart[1]; 1. Department of Dermatology, Medical University of Vienna, Vienna, Austria; 2. Department of Biochemistry, Srinakharinwirot University, Bangkok, Thailand.

497.Oxidative stress and cell senescence in androgenetic alopecia (AGA) James Upton[1], Adiam Bahta[1], Nilofer Farjo[2], Bessam Farjo[2], Ranjit Bhogal[3], Michael Philpott[1]; 1. Centre for Cutaneous Research, Queen Mary's University of London, London, United Kingdom; 2. Farjo Medical Centre, Manchester, United Kingdom; 3. Unilever, Colworth, United Kingdom.

498.Reprogramming regular skin fibroblasts into hair inducing dermal papilla cells Carlos Clavel[1, 2], Amelie Rezza[1, 2], Michael Rendl[1, 2, 3]; 1. Developmental and Regenerative Biology, Mount Sinai School of Medicine, New York, NY, USA; 2. Black Family Stem Cell Institute, Mount Sinai School of Medicine, New York, NY, USA; 3. Dermatology, Mount Sinai School of Medicine, New York, NY, USA.

499.Mitochondrial dysfunction present early and trigger the pathogenic sequelae in cicatricial alopecia Roopa Subbaih, Sreejith Panicker, Mary Consolo, Paradi Mirmirani, Vera Price, Pratima Karnik; Dermatology, Case Western Reserve Univ, Cleveland, OH, USA.

500.Human hair follicle neogenesis using microenvironmentally reprogrammed dermal papilla cells Claire Higgins[2], Colin Jahoda[1], Angela Christiano[2]; 1. Durham, Durham, United Kingdom; 2. Dermatology, Columbia, NYC, NY, USA.

501*(CM4-04).Trichomegaly, or Hollywood "movie lashes", resulting from mutations in FGF5 and an elongated hair cycle anagen phase C. Higgins[1], L. Petukhova[1], Y. Ho[1], E. Drill[1], L. Shapiro[2], M. Wajid[3], A. Christiano[1]; 1. Dermatology, Columbia University, NYC, NY, USA; 2. Biochemistry, Columbia University, NYC, NY, USA; 3. Zoology, University of Education, Lahore, Pakistan.

502.Impaired ubiquitin-proteasome system in cicatricial alopecia: Implications for inflammatory response Roopa Shree Subbaiah, Mary Consolo, Paradi Mirmirani, Vera Price, Pratima Karnik; Dermatology, Case Western Reserve University, Cleveland, OH, USA.

503.Continuous systemic low-dose steroids as a therapy option for alopecia areata of childhood Karin Jahn, Georg Stingl, Franz Karlhofer; Department of Dermatology, MUW, DIAID, Vienna, Austria.**504.Epidermal insulin/IGF signalling is a crucial regulator of epidermal stratification and UVB-induced skin responses** Mehmet Akyüz[1, 2, 3], Christian Günschmann[1, 2, 4], Heike Stachelscheid[1, 3], Caterina Missero[5], Jens Brüning[4, 2, 3], Björn Schumacher[2, 4], Carien Niessen[1, 2, 3]; 1. Department of dermatology, University of Cologne, Cologne, Germany; 2. Cologne Excellence Cluster on Cellular Stress Responses in Aging-associated Diseases, University of Cologne, Cologne, Germany; 3. Center for Molecular Medicine Cologne, University of Cologne, Cologne, Germany; 4. Institute for Genetics, University of Cologne, Cologne, Germany; 5. CEINGE Biotecnologie Avanzate, Naples, Italy.

505.Blocking K_{ATP} channels in scalp follicles in organ culture inhibit hair growth and alter paracrine signalling increasing inhibitory TNF and decreasing stimulatory FGF-10 Heero Rahman[1], Nilofer Farjo[2], Bassam Farjo[2], Val Randall[1]; 1. Centre for Skin Sciences, University of Bradford, Bradford, United Kingdom; 2. Farjo Medical Centre, Manchester, United Kingdom.

506(PL5-04).MicroRNA-214 controls skin and hair follicle development by targeting beta-catenin and modulating the activity of Wnt signaling pathway** Mohamed Ahmed[1], Majid Alam[1], Vladimir Emelyanov[2], Andrey Sharov[2], Andrei Mardariev[1], Natalia Botchkareva[1]; 1. Centre for Skin Sciences, University of Bradford, Bradford, United Kingdom; 2. Department of Dermatology, Boston University, Boston, MA, USA.

507.Embryonic-like cell-secreted proteins induce hair growth in a phase I/II trial in male pattern baldness Gail Naughton[1], Michael Zimber[1], Julieta Peralta-Arambulo[2], Theresa Reyes-Cacas[3], Mark Hubka[1], Danielle Ehrlich[1], Jonathan Mansbridge[1]; 1. Histogen, Inc., San Diego, CA, USA; 2. Asian Hair Restoration Center, Pasig City, Philippines; 3. Marc Medical Group, Manila, Philippines.

508*(CM4-07).Polycomb component Cbx4 inhibits the expression of non-epidermal lineage genes and regulates cell proliferation in keratinocytes during skin development Andrei Mardaryev[1], Valentina Rapisarda[1], Bo Liu[4], Krzysztof Poterlowicz[1], Andrey Sharov[2], Salvador Aznar-Benitah[3], Guo-Liang Xu[4], Vladimir Botchkarev[1, 2]; 1. Centre for Skin Sciences, University of Bradford, Bradford, United Kingdom; 2. Dermatology, Boston University, Boston, MA, USA; 3. Center for Genomic Regulation, Barcelona, Spain; 4. Shanghai Institute of Biological Sciences, Shanghai, China.

509.p63 transcription factor controls the expression of nuclear envelope components and organization of nuclear architecture during epidermal development Valentina Rapisarda[1], Andrei Mardaryev[1], Andrey Sharov[2], Michael Fessing[1], Iakowos Karakesisoglou[3], Chris Hutchison[3], Vladimir Botchkarev[1, 2]; 1. Centre for Skin Sciences, University of Bradford, Bradford, United Kingdom; 2. Dermatology, Boston University, Boston, MA, USA; 3. School of Biological Sciences, University of Durham, Durham, United Kingdom.

Posters

510*(CM4-06).Blockade of Gli transcriptional activity in mature anagen hair follicles leads to impaired matrix cell proliferation, aberrant differentiation, and defective hair shaft formation A. Ermilov, J. Pero, D. Wilbert, A. Photenhauer, H. Zabawa, M. Grachtchouk, A. Dlugosz; Dermatology, University of Michigan, Ann Arbor, MI, USA.

511.“Weed against zit?” - Investigation of the anti-acne effects of cannabidiol Attila Oláh[1], Attila Szöllösi[1], Erika Lisztes[1], Koji Sugawara[2], Ralf Paus[2], Christos Zouboulis[3], Tamás Bíró[1]; 1. DE-MTA “Lendület” Cellular Physiology Research Group, University of Debrecen, Debrecen, Hungary; 2. Department of Dermatology, University of Lübeck, Lübeck, Germany; 3. Departments of Dermatology, Venereology, Allergology, and Immunology, Dessau Medical Center, Dessau, Germany.

Epidemiology & Health Services Research

All orals designated with an asterisk (*) below are presented in a Concurrent Session (see code). Orals designated with two asterisks (**) will be presented during a Plenary Session (see code).

512.Systematic review of pharmacogenomics in psoriasis Amy Foulkes[1], Andrea Jorgensen[2], Munir Pirmohamed[2], Christopher Griffiths[1], Richard Warren[1]; 1. The Dermatology Centre, University of Manchester, Manchester, United Kingdom; 2. Wolfson Centre for Personalised Medicine, Liverpool, United Kingdom.

513.Hospitalizations for cellulitis in Canada: A retrospective database study Akerke Baibergenova[1, 2], Aaron Drucker[2], Neil Shear[2, 1]; 1. Dermatology, Sunnybrook Health Sciences Centre, Toronto, ON, Canada; 2. Dermatology Division, University of Toronto, Toronto, ON, Canada.

514.Association between the type and length of tumor necrosis factor (TNF) inhibitor therapy and myocardial infarction (MI) risk in psoriasis Jashin Wu[1], Kwun-Yee Poon[2], Judith Bebchuk[2]; 1. Dermatology, Kaiser Permanente Los Angeles Medical Center, Los Angeles, CA, USA; 2. Research and Evaluation, Kaiser Permanente Southern California, Pasadena, CA, USA.

515.Designing the ‘molluscum contagiosum diagnostic tool for parents’ (MCDTP) Jonathan Olsen[1], Nick Francis[1], John Gallacher[1], Vincent Piguet[2]; 1. Cochrane Institute of Primary Care and Public Health, Cardiff University, Cardiff, United Kingdom; 2. Department of Dermatology and Wound Healing, Cardiff University, Cardiff, United Kingdom.

516.Thanakha and its dermatologic uses in Myanmar (Burma) Elizabeth Seiverling[1], Hadjh Ahrns[2]; 1. Dermatology, The Vancouver Clinic, Vancouver, WA, USA; 2. Family Medicine, Oregon Health and Science University, Portland, OR, USA.

517*(CM5-07).Alcohol intake is associated with increased risk of squamous cell carcinoma of the skin: Prospective cohort study Satu Siiskonen[1, 2], Jiali Han[2, 3, 4], Tricia Li[3], Tamar Nijsten[1], Abrar Qureshi[2, 3]; 1. Department of Dermatology, Erasmus MC, Rotterdam, Netherlands; 2. Clinical Research Program, Department of Dermatology, Brigham and Women’s Hospital, Harvard Medical School, Boston, MA, USA; 3. Channing Division of Network Medicine, Department of Medicine, Brigham and Women’s Hospital, Harvard Medical School, Boston, MA, USA; 4. Department of Epidemiology, Harvard School of Public Health, Boston, MA, USA.

518*(CM5-02).Excellent reliability and validity of a novel Epidermolysis Bullosa Disease Activity and Scarring Index (EBDASI) compared to two other outcome measures Clement Chee Hoou Loh[1, 6], Jaehwan Kim[1, 6], John Su[2], Benjamin Daniel[3, 6], Supriya Venugopal[4, 6], Lesley Rhodes[1], Lizbeth Intong[1, 6], Matthew Law[5], Dedee Murrell[1, 6]; 1. Dept Derm, St George Hospital, Sydney, NSW, Australia; 2. Dept Paeds, Univ of Melbourne, Melbourne, VIC, Australia; 3. Dept Medicine, St Vincent’s Hospital, Sydney, NSW, Australia; 4. Dept Derm, Westmead Hospital, Sydney, NSW, Australia; 5. Kirby Institute, Univ of NSW, Sydney, NSW, Australia; 6. Faculty of Medicine, Univ of NSW, Sydney, NSW, Australia.

519*(PL5-05).Dense genotyping of six atopic dermatitis and 180 autoimmune risk loci in 2,425 atopic dermatitis patients Hansjoerg Baurecht[1], Elke Rodríguez[1], David Ellinghaus[2], Jorge Esparza-Gordillo[3, 4], Christian Gieger[5], Stefan Schreiber[2], Young-AE Lee[3, 4], Andre Franke[2], Stephan Weidinger[1]; 1. Department of Dermatology, Allergology, and Venerology, University Hospital Schleswig-Holstein, Kiel, Germany; 2. Institute of Clinical Molecular Biology, Christian-Albrechts-University, Kiel, Germany; 3. Pediatric Pneumology and Immunology, Charité, Berlin, Germany; 4. Max-Delbrück-Centrum (MDC) for Molecular Medicine, Berlin, Germany; 5. Institute of Genetic Epidemiology, Helmholtz Centre Munich, Neuherberg, Germany.

520.Development of a disease registry for autoimmune bullous diseases: Initial analysis for the pemphigus vulgaris subset Amit Shah[1], David Sirois[2], Victoria Werth[3], Will Zrnchik[4], Kristina Seiffert-Sinha[1], Animesh Sinha[1]; 1. University at Buffalo, Buffalo, NY, USA; 2. New York University, New York, NY, USA; 3. University of Pennsylvania, Philadelphia, PA, USA; 4. IPPF, Sacramento, CA, USA.

521.Measuring the severity of topical 5-fluorouracil toxicity Kaveri Korgavkar[1, 3], Michael Xiong[1, 3], Kim Marcolivio[1, 2], Robert Lew[2], Elnaz Firoz[3], Martin Weinstock[1, 2, 3], . VAKCC Trial Group[1, 2]; 1. Dermatoepidemiology Unit, VA Medical Center, Providence, RI, USA; 2. VA Cooperative Studies Program, Boston, MA, USA; 3. Dermatology, Alpert Medical School of Brown University, Providence, RI, USA.

522.Environmental and behavioral risk factors for melanoma among young women in the United States Jacqueline Moreau[1], Laura Ferris[3], Daniel Winger[2]; 1. University of Pittsburgh School of Medicine, Pittsburgh, PA, USA; 2. Clinical and Translational Science Institute, University of Pittsburgh, Pittsburgh, PA, USA; 3. Dermatology, University of Pittsburgh School of Medicine, Pittsburgh, PA, USA.

523.Predictors of subsequent BCC by body site in the VATTC trial Michael Xiong[1, 2], Martin Weinstock[1, 2, 3], . VATTC Trial Group[1]; 1. Dermatoepidemiology Unit, VA Medical Center, Providence, RI, USA; 2. Dept. of Dermatology, Alpert Medical School of Brown University, Providence, RI, USA; 3. Dept. of Dermatology, Rhode Island Hospital, Providence, RI, USA.

524.Second primary malignancies in patients with history of soft tissue tumors from the SEER database Sherry Yu[1], David Kurlander[1], Jeremy Bordeaux[1, 2]; 1. Case Western Reserve University School of Medicine, Cleveland, OH, USA; 2. Dermatology, University Hospitals Case Medical Center, Cleveland, OH, USA.

525.Milk: An endocrine mTORC1-driving anabolic signal transduction system of mammalian evolution promotes diseases of Western civilization like acne Bodo Melnik; University of Osnabrück, Dermatology, Environmental Medicine and Health Theory, Osnabrück, Germany.

526.Personal history of prostate cancer and increased risk of incident melanoma in US men Wenqing Li[1, 2], Abrar Qureshi[1], Alisa Goldstein[2], Edward Giovannucci[1], Meir Stampfer[1], Jiali Han[1]; 1. Harvard Medical School, Boston, MA, USA; 2. National Institutes of Health, Rockville, MD, USA.

527.Evaluation of AJCC, UICC, and Brigham and Women’s Hospital tumor staging for cutaneous squamous cell carcinoma Pritesh Karia[1], David Harrington[2], Anokhi Jambusaria-Pahlajani[3], George Murphy[4], Abrar Qureshi[1], Chrysalyne Schmults[1]; 1. Dermatology, Brigham and Women’s Hospital , Harvard Medical School, Boston, MA, USA; 2. Biostatistics, Harvard School of Public Health, Boston, MA, USA; 3. Dermatology, Mayo Clinic, Jacksonville, FL, USA; 4. Pathology, Brigham and Women’s Hospital, Harvard Medical School, Boston, MA, USA.

528.Moderate to severe psoriasis is associated with an increased risk of chronic and end stage renal disease Shuwei Wang[1], Joy Wan[1], Kevin Haynes[2], Daniel Shin[1, 2], Michelle Denburg[3, 4], Joel Gelfand[1, 2]; 1. Dermatology, University of Pennsylvania, Philadelphia, PA, USA; 2. Center for Clinical Epidemiology and Biostatistics, University of Pennsylvania, Philadelphia, PA, USA; 3. Nephrology, The Children’s Hospital of Philadelphia, Philadelphia, PA, USA; 4. Nephrology, University of Pennsylvania, Philadelphia, PA, USA.

529.Ten-year publication trends in dermatology in mainland China Shujun Xin[1], Jacqueline Mauro[2], Theodora Mauro[3], Peter Elias[3], Man-Qiang Man[1, 3]; 1. Skin Physiology Res, Dalian Skin Disease Hosp, Liaoning, China; 2. Keystone Strategy Grp, Brisbane, CA, USA; 3. Dermatology, VA Med Ctr/UCSF, San Francisco, CA, USA.

530.Burden-of-illness in moderate-to-severe psoriasis subjects seeking treatment: An overall descriptive assessment C. Schaefer[1], J. Cappelleri[2], J. Cole[3], S. Guenthner[4], J. Fowler[5], S. Johnson[6], C. Mamolo[2]; 1. Covance Inc, Gaithersburg, MD, USA; 2. Pfizer Inc, Groton, CT, USA; 3. Covance Inc, San Diego, CA, USA; 4. The Dermatology Center of Indiana, Plainfield, IN, USA; 5. University of Louisville, Louisville, KY, USA; 6. Johnson Dermatology, Fort Smith, AR, USA.

531.High compliance but low persistency within 12 months with systemic and biologic treatments for psoriasis in Sweden A. Svedbom[1], C. Mamolo[2], J. Dalen[1], J. Cappelleri[2], I. Petersson[3], M. Stahle[4]; 1. OptumInsight, Stockholm, Sweden; 2. Pfizer Inc, Groton, CT, USA; 3. Orthopedics, Clinical Sciences, Lund University, Lund, Sweden; 4. Dermatology Unit, Department of Medicine, Karolinska Institutet, Stockholm, Sweden.

532.Mood states and personality traits mediate quality of life impact in chronic pruritus Seema Kini[1], Emir Veledar[1], Sarah Booker[1], Suephy Chen[1, 2]; 1. Dermatology, Emory University, Atlanta, GA, USA; 2. Dermatology, Atlanta Veterans Affairs Medical Center (VAMC), Atlanta, GA, USA.

533.Bridging dermatologists with patient advocacy groups through smartphones Arianne Kourosh, Evan Schoenberg, Jean Dejace, Paul Bergstresser; Department of Dermatology, University of Texas Southwestern Medical Center, Dallas, TX, USA.

534.Advanced Rai stage and skin cancer tumor stage predicts outcomes of skin cancer in patients with chronic lymphocytic leukemia Nicole Velez[3], Pritesh Karia[1], Ye Guo[1], Alexander Vartanov[2], Matthew Davids[2], Jennifer Brown[2], Victor Neel[3], Chrysalyne Schmults[1]; 1. Dermatology, Brigham and Women’s Hospital, Harvard Medical School, Boston, MA, USA; 2. Medical Oncology, Dana-Farber Cancer Institute, Harvard Medical School, Boston, MA, USA; 3. Dermatology, Massachusetts General Hospital, Harvard Medical School, Boston, MA, USA.

535.The prevalence of autosomal recessive congenital ichthyosis and of transglutaminase-1 deficiency in Germany: Calculation of estimates using the three-source capture-recapture method Tobias Hartz[1], Hans-Christian Hennies[2], Vinzenz Oji[3], Irene Schmidtmann[1], Kerstin Kiekbusch[4], Barbara Kleinow[4], Karin Aufenvenne[3], Frank Ückert[1], Heiko Traupe[3]; 1. Institute of Medical Biometry, Epidemiology and Informatics, University of Mainz, Mainz, Germany; 2. Cologne Center of Genomics, University of Köln, Köln, Germany; 3. Department of Dermatology, University of Münster, Münster, Germany; 4. Selbsthilfe Ichthyose, Patient Organization, Mittenwalde, Germany.

536*(CM5-06).Low dose aspirin is not associated with a decreased incident skin cancer risk: A population-based cohort study among 1.2 million Dutch inhabitants Loes Hollestein[1], Myrthe van Herk-Sukel[2], Rikje Ruiter[1], Esther de Vries[1, 3], Ron Mathijssen[1], Erik Wiemer[1], Theo Stijnen[4], Valery Lemmens[1, 3], Ron Herings[2], Bruno Stricker[1, 2], Tamar Nijsten[1]; 1. Erasmus University MC, Rotterdam, Netherlands; 2. PHARMO, Utrecht, Netherlands; 3. Eindhoven Cancer Registry, Eindhoven, Netherlands; 4. Leiden University MC, Leiden, Netherlands.

537.Chronic pruritus and gender: Overview of differences in prevalence in clinic setting, severity and burden of disease Melanie Weiss, Elke Weisshaar; Clinical Social Medicine, University Hospital Heidelberg, Heidelberg, Germany.

538.Effectiveness of less commonly used systemic monotherapies and common combination therapies for moderate to severe psoriasis in the real world setting: results from the Dermatology Clinical Effectiveness Research Network (DCERN) Junko Takeshita[1], Shuwei Wang[1], Kristina Callis Duffin[2], Gerald Krueger[2], Andrea Troxel[1], Abby Van Voorhees[1], Joel Gelfand[1]; 1. University of Pennsylvania, Philadelphia, PA, USA; 2. University of Utah, Salt Lake City, UT, USA.

539.Improvement in precision of counting actinic keratosis after annual consensus discussion Kachiu Lee[1, 3], Robert Lew[2], Martin Weinstock[1, 2]; 1. Dermatoepidemiology, VA Medical Center, Providence, RI, USA; 2. Cooperative Studies, VA Medical Center, Boston, MA, USA; 3. Dermatology, Brown University, Providence, RI, USA.

540.Severe allergic contact dermatitis to compound tincture of benzoin in post-surgical patients is associated with positive reactions to fragrances and essential oils Jade Fettig[1], Apra Sood[2], James Taylor[2], Debra Murray[2]; 1. Cleveland Clinic Lerner College of Medicine, Cleveland Clinic Foundation, Cleveland, OH, USA; 2. Department of Dermatology, Cleveland Clinic Foundation, Cleveland, OH, USA.

541.Predictors of morpheaform BCC on the face and ears in the VATTC trial Michael Xiong[1, 2], Martin Weinstock[1, 2, 3], . VATTC Trial Group[1]; 1. Dermatoepidemiology Unit, VA Medical Center, Providence, RI, USA; 2. Dept. of Dermatology, Alpert Medical School of Brown University, Providence, RI, USA; 3. Dept. of Dermatology, Rhode Island Hospital, Providence, RI, USA.

542*(CM5-05).Lower serum vitamin D levels are associated with increased risk of eczema in US adults Teresa Fu, Christina Gamba, Hillary Ive, Jean Tang; Dermatology, Stanford University School of Medicine, Stanford, CA, USA.

543.Association between ultraviolet flux and risk of invasive cutaneous squamous cell carcinoma in US men Khang Nguyen[1], Jiali Han[1, 2, 3], Tricia Li[2], Abrar Qureshi[1, 2]; 1. Clinical Research Program, Department of Dermatology, Brigham and Women’s Hospital and Harvard Medical School, Boston, MA, USA; 2. Channing Division of Network Medicine, Department of Medicine, Brigham and Women’s Hospital and Harvard Medical School, Boston, MA, USA; 3. Department of Epidemiology, Harvard School of Public Health, Boston, MA, USA.

544.Increasing incidence of bullous pemphigoid in Finland Anna-Kaisa Försti[1], Jari Jokelainen[2], Markku Timonen[2], Kaisa Tasanen[1]; 1. Dermatology, University of Oulu, Oulu, Finland; 2. Health Sciences, University of Oulu, Oulu, Finland.

545*(CM5-08).Surgical excision versus imiquimod 5% cream for basal-cell carcinoma (SINS): A multi-centre non-inferiority randomised controlled trial Hywel Williams, Fiona Bath-Hextall, Mara Ozolins, Graham Colver, William Perkins, Sarah Armstrong, Paul Miller; University of Nottingham, Nottingham, United Kingdom.

546.Epidemiology of cutaneous lymphoma in Japan: A nationwide study of 1,871 patients Toshihisa Hamada, Keiji Iwatsuki; Dermatology, Okayama University Graduate School of Medicine, Dentistry, and Pharmaceutical Sciences, Okayama, Japan.

547.Risk of subsequent non-melanoma skin cancers in patients with prior non-melanoma skin cancer Mackenzie Wehner[1, 2], Eleni Linos[1], Rupa Parvataneni[1], Sarah Stuart[1], W. Boscardin[3], Mary-Margaret Chren[1, 4]; 1. Dermatology, University of California San Francisco, San Francisco, CA, USA; 2. School of Medicine, Stanford University, Stanford, CA, USA; 3. Epidemiology and Biostatistics, University of California San Francisco, San Francisco, CA, USA; 4. Dermatology, San Francisco Veterans Affairs Medical Center, San Francisco, CA, USA.

548.Incidence of nonmelanoma skin cancer in patients presenting for routine dermatological care Monica Enamandram, Kevin Donahue, Lyn Duncan, Alexa Kimball; Massachusetts General Hospital and Harvard Medical School, Boston, MA, USA.

549.A market for concierge melanoma clinics may exist Elizabeth Seidler[1], Erin Vickery[1], Everett Jones[1], Emir Veledar[1], Suephy Chen[1, 2]; 1. Dermatology, Emory University, Atlanta, GA, USA; 2. Dermatology, Veterans Affairs Medical Center, Atlanta, GA, USA.

550.Malignancy risk is not demonstrated in patients with immunobullous diseases receiving mycophenolate mofetil Lawrence Chan[1, 2], Eden Pappo[1]; 1. Dermatology, University of Illinois Hospital and Health Sciences System, Chicago, IL, USA; 2. Dermatology, Jesse Brown VA, Chicago, IL, USA.

551.Basal cell carcinoma incidence and associated risk factors in US women and men Shaowei Wu[1, 2], Jiali Han[1, 2, 3], Wen-qing Li[1, 2], Abrar Qureshi[1, 2]; 1. Department of Dermatology, Brigham and Women’s Hospital, Harvard Medical School, Boston, MA, USA; 2. Channing Division of Network Medicine, Department of Medicine, Brigham and Women’s Hospital, Harvard Medical School, Boston, MA, USA; 3. Department of Epidemiology, Harvard School of Public Health, Boston, MA, USA.

552.Hypertension, type 2 diabetes, high cholesterol, related medication use and risk of incident psoriasis in U.S. women Shaowei Wu[1, 2], Wen-qing Li[1, 2], Jiali Han[1, 2, 3], Abrar Qureshi[1, 2]; 1. Department of Dermatology, Brigham and Women’s Hospital, Harvard Medical School, Boston, MA, USA; 2. Channing Division of Network Medicine, Department of Medicine, Brigham and Women’s Hospital, Harvard Medical School, Boston, MA, USA; 3. Department of Epidemiology, Harvard School of Public Health, Boston, MA, USA.

553.Genital psoriasis is associated with significant impairment in quality of life and sexual functioning Caitriona Ryan[1], Muriel Sadlier[2], Mahir Patel[1], Brian Kirby[2], Alan Menter[1]; 1. Dermatology, Baylor University Medical Center, Dallas, TX, USA; 2. Dermatology, St Vincent’s University Hospital, Dublin, Ireland.

554.Determinants of survival in dermatofibrosarcoma protuberans patients developing subsequent primary cancers David Kurlander[1], Jill Barnholtz-Sloan[1, 3], Haley Gittleman[3], Yanwen Chen[1, 3], Meg Gerstenblith[1, 2], Jeremy Bordeaux[1, 2]; 1. Case Western Reserve University School of Medicine, Cleveland, OH, USA; 2. Department of Dermatology, University Hospitals Case Medical Center, Cleveland, OH, USA; 3. Case Comprehensive Cancer Center, Cleveland, OH, USA.

555.Personal history of psoriasis and the risk of non-melanoma skin cancers Min Chen[1], Abrar A Qureshi[1, 2], Tricia Li[1, 2], Jiali Han[1, 2, 3]; 1. Dermatology, Brigham and Women’s Hospital and Harvard Medical School, Boston, MA, USA; 2. Channing Laboratory, Brigham and Women’s Hospital and Harvard Medical School, Boston, MA, USA; 3. Epidemiology, Harvard School of Public Health, Boston, MA, USA.

556.Minimal Clinically Important Difference (MCID) of the Dermatology Life Quality Index (DLQI) scores and responsiveness to change in inflammatory dermatoses Mohammad Basra[1], Sam Salek[2], Andrew Finlay[1]; 1. Department of Dermatology and Wound Healing, Cardiff University School of Medicine, Cardiff, United Kingdom; 2. Centre for Socioeconomic Research, School of Pharmacy and Pharmaceutical Sciences, Cardiff University, Cardiff, United Kingdom.

557.Identification of cutaneous T-cell lymphoma geographic hotspots in Houston metropolitan area Ivan Litvinov[1], Michael Tetzlaff[2], Elham Rahme[3], Pamela Gangar[4], Michelle Tetzlaff[2], Kevin Pehr[1], Victor Prieto[2], Denis Sasseville[1], Madeleine Duvic[4]; 1. Dermatology, McGill University Health Centre, Montreal, QC, Canada; 2. Pathology, MD Anderson Cancer Center, Houston, TX, USA; 3. Clinical Epidemiology, McGill University Health Centre, Montreal, QC, Canada; 4. Dermatology, MD Anderson Cancer Center, Houston, TX, USA.

558.Development and validation of teenagers’ Quality of Life (T-QoL©) index: A dermatology-specific measure for adolescents Mohammad Basra[1], Andrew Finlay[1], Sam Salek[2]; 1. Department of Dermatology and Wound Healing, Cardiff University School of Medicine, Cardiff, United Kingdom; 2. Centre for Socioeconomic Research, School of Pharmacy and Pharmaceutical Sciences, Cardiff University, Cardiff, United Kingdom.

559.Severe teenage acne and breast cancer risk Mingfeng Zhang[1], Abrar Qureshi[1, 2], Renée Fortner[2], Susan Hankinson[2, 3], Qingyi Wei[4], Li-E Wang[4], Heather Eliassen[2, 5], Walter Willett[2, 5, 6], David Hunter[2, 5, 6], Jiali Han[1, 2, 5]; 1. Dermatology, Brigham and Women’s Hospital, Boston, MA, USA; 2. Medicine, Brigham and Women’s Hospital, Boston, MA, USA; 3. Public Health, University of Massachusetts Amherst, Amherst, MA, USA; 4. Epidemiology, The University of Texas M.D. Anderson Cancer Center, Houston, TX, USA; 5. Epidemiology, Harvard School of Public Health, Boston, MA, USA; 6. Nutrition, Harvard School of Public Health, Boston, MA, USA.

560.Use of tanning beds and total cancer risk Mingfeng Zhang[1], Fengju Song[2], David Hunter[3, 4, 5], Abrar Qureshi[1, 3], Jiali Han[1, 3, 5]; 1. Dermatology, Brigham and Women’s Hospital, Boston, MA, USA; 2. Epidemiology, Tianjin Medical University Cancer Institute and Hospital, Tianjin, China; 3. Medicine, Brigham and Women’s Hospital, Boston, MA, USA; 4. Nutrition, Harvard School of Public Health, Boston, MA, USA; 5. Epidemiology, Harvard School of Public Health, Boston, MA, USA.

561.The role of evidence based dermatology in World Health Organization guidelines Esther Freeman[1], Philippa Easterbrook[2], Lulu Muhe[3], Roderick Hay[4], Jeffrey Martin[5], Toby Maurer[6]; 1. Dermatology, Massachusetts General Hospital, Boston, MA, USA; 2. HIV Department, World Health Organization, Geneva, Switzerland; 3. Department of Child and Adolescent Health and Development, World Health Organization, Geneva, Switzerland; 4. International Foundation for Dermatology, London, United Kingdom; 5. Department of Epidemiology and Biostatistics, University of California, San Francisco, CA, USA; 6. Dermatology, University of California, San Francisco, CA, USA.

562.The need for unified international guidance on HIV dermatology Esther Freeman[1], Rachel Evans[2], Toby Maurer[4], Lulu Muhe[3], Philippa Easterbrook[2]; 1. Dermatology, Massachusetts General Hospital, Boston, MA, USA; 2. HIV Department, World Health Organization, Geneva, Switzerland; 3. Child and Adolescent Health, World Health Organization, Geneva, Switzerland; 4. Dermatology, University of California, San Francisco, CA, USA.

563.Association between severe acne in adolescence and sinopulmonary and gastrointestinal comorbidity: A US population-based study Jonathan Silverberg, Nanette Silverberg; Dermatology, St. Luke’s-Roosevelt Hospital and Beth Israel Medical Center, New York, NY, USA.

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564*(CM5-04).Common warts in childhood are associated with increased atopy and infections: A US population-based study Jonathan Silverberg, Nanette Silverberg; Dermatology, St. Luke's-Roosevelt Hospital and Beth Israel Medical Centers, New York, NY, USA.

565.The prevalence of alopecia areata among 915,429 dermatology patients seen in dermatology private practice offices throughout the United States James Solomon[1, 2], Daquesha Chever[1], Chauncey Caldwell[2]; 1. Ameriderm Research, Ormond Beach, FL, USA; 2. University of Central Florida College of Medicine, Lake Nona, FL, USA.

566.Risk of subsequent cutaneous squamous cell carcinoma in patients with melanoma Maryam Asgari[1], E. Margaret Warton[1], Charles Quesenberry[1], Daniel Koralek[2], Michael Taylor[2]; 1. Kaiser Permanente Northern California, Oakland, CA, USA; 2. Epidemiology and Patient Reported Outcomes, Genentech, South San Francisco, CA, USA.

567.Journal of the American Academy of Dermatology facebook page posting metrics Robert Dellavalle[1, 2], Ryan Gamble[1]; 1. Dermatology, University of Colorado School of Medicine, Aurora, CO, USA; 2. Dermatology, Veterans Affairs Medical Center, Denver, CO, USA.

568.Atrial fibrillation and electrocardiographic characteristics among patients with psoriasis and coronary heart disease April Armstrong[1], Sameen Azizi[2], Julie Wu[1], Caitlin Harskamp[1], Jason Farrow[2], Kristopher Klem[2], David Anderson[2], Ehrin Armstrong[2]; 1. Dermatology, University of California Davis, Sacramento, CA, USA; 2. Cardiovascular Medicine, University of California Davis, Sacramento, CA, USA.

569.Epidemiological and clinical characteristics of Behçet's disease in Korea - using a clinical database for patients' registry So Young Na[1], Do Young Kim[2], Min Ju Cho[2], Dongsik Bang[2], Joo Young Roh[3], Shin Seok Lee[1], Eun-So Lee[4]; 1. Dermatology, Ajou University, Suwon, Republic of Korea; 2. Dermatology, Yonsei University, Seoul, Republic of Korea; 3. Dermatology, Gachon University Gil Medical Center, Incheon, Republic of Korea; 4. Rheumatology, Chonnam National University, Kwangju, Republic of Korea.

570.Diet and stress perceived to make acne worse in UK teenagers Ketaki Bhate, Hywel Williams, Mara Ozolins; Centre of Evidence Based Dermatology, University of Nottingham, Nottingham, United Kingdom.

571.An instrument for measuring skin aging in large-scale epidemiological studies holds promise as a monitor for general aging or disease processes Andrea Vierkötter, Lisa Effner, Barbara Hoffmann, Ursula Krämer, Jean Krutmann; IUF-Leibniz Research Institute for Environmental Medicine, Düsseldorf, Germany.

572.How to retrieve acceptable scores from DLQI: An introduction to Rasch measurement using the DLQI in a sample of hand eczema patients Robert Ofenloch[1], Thomas Diepgen[1], Peter Elsner[2], Elke Weisshaar[1], Christian Apfelbacher[3]; 1. Clinical Social Medicine, University Hospital Heidelberg, Heidelberg, Germany; 2. Department of Dermatology, University Hospital Jena, Jena, Germany; 3. Medical Sociology, Institute of Epidemiology and Preventive Medicine, University of Regensburg, Regensburg, Germany.

573.Dynamics of the incidence of cutaneous T- cell lymphomas in Moscow Nikolay Potekaev[1, 2], Irina Khamaganova[1], Alla Almazova[2], Galina Lebedeva[2], Victoria Lysenko[2], Olga Shvec[2]; 1. department of skin diseases&cosmetology, Russian national research medical university named after N.I. Pirogov, Moscow, Russian Federation; 2. Moscow research & practical centre for dermatology & cosmetology, Moscow, Russian Federation.

574.High incidence of striae distensae in pediatric adolescent patients on high dose corticosteroids for treatment of rheumatic disease and effect on adherence to prescribed regimen Nina Washington[1], Anne Lynn Chang[2]; 1. Department of Pediatric Rheumatology, Lucile Packard Children's Hospital at Stanford University, Palo Alto, CA, USA; 2. Department of Dermatology, Stanford University Hospitals and Clinics, Palo Alto, CA, USA.

575.Trends in social media use among dermatology journals Ryan Gamble[1], Barbara Gilchrest[2], Robert Dellavalle[1, 3]; 1. Dermatology, University of Colorado, Aurora, CO, USA; 2. Dermatology, Boston University, Boston, MA, USA; 3. Dermatology, Veterans Affairs Medical Center, Denver, CO, USA.

576.Ethnic and racial disparities in the use of office-based dermatology visits among the insured, 2005-2010 Valerie Harvey[1, 2], Joanny Paul[3], Vlad Beresovsky[4], L. Ebony Boulware[5]; 1. EVMS, Norfolk, VA, USA; 2. Hampton University, Hampton, VA, USA; 3. Virginia Clinical Research, Norfolk, VA, USA; 4. NCHS, Hyatsville, MD, USA; 5. JHU Bloomberg School of Public Health, Baltimore, MD, USA.

577.Risk factors and genetics of sagging eyelids in Europeans L. Jacobs[1], F. Liu[2], I. Bleyen[3], D. Gunn[4], A. Hofman[5], C. Klaver[3, 5], A. Uitterlinden[5], T. Spector[6], M. Kayser[2], T. Nijsten[1]; 1. Dermatology, Erasmus MC, Rotterdam, Netherlands; 2. Forensic Molecular Biology, Erasmus MC, Rotterdam, Netherlands; 3. Ophthalmology, Erasmus MC, Rotterdam, Netherlands; 4. Unilever Discover, Sharnbrook, United Kingdom; 5. Epidemiology, Erasmus MC, Rotterdam, Netherlands; 6. Twin Research and Genetic Epidemiology, King's College, Londen, United Kingdom.

578.Varying prevalence of depression in psoriasis according to assessment method: a systematic review and meta-analysis Emmilia Dowlatshahi[1], Marlies Wakkee[1], Lidia Arends[2, 3], Tamar Nijsten[1]; 1. Dermatology, Erasmus Medical Centre, Rotterdam, Netherlands; 2. Biostatistics, Erasmus Medical Centre, Rotterdam, Netherlands; 3. Insitute of Psychology, Erasmus University, Rotterdam, Netherlands.

579*(CM5-03).Thymic stromal lymphopoietin (TSLP) and atopic dermatitis (AD) in a longitudinal cohort D. Margolis, B. Kim, A. Apter, J. Gupta, N. Mitra; University of Pennsylvania School of Medicine, Philadelphia, PA, USA.

580.A pilot study using unannounced patients and moulage to measure melanoma detection rates by internal medicine residents Claudia Hernandez[1], June Robinson[2]; 1. Dermatology, University of Illinois at Chicago, Chicago, IL, USA; 2. Dermatology, Northwestern Feinberg School of Medicine, Chicago, IL, USA.

581.Epidemiology of anorectal melanoma in the United States: 1992-2009 Adrienne Callahan[1], William Anderson[2], Sital Patel[1, 3], Jill Barnholtz-Sloan[1, 4], Jeremy Bordeaux[1, 3, 4], Margaret Tucker[2], Meg Gerstenblith[1, 3, 4]; 1. Case Western Reserve University School of Medicine, Cleveland, OH, USA; 2. Division of Cancer Epidemiology and Genetics, National Cancer Institute, NIH, Rockville, MD, USA; 3. Department of Dermatology, University Hospitals Case Medical Center, Cleveland, OH, USA; 4. Case Comprehensive Cancer Center, Cleveland, OH, USA.

582(PL4-05).Herpes zoster vaccine effectiveness against incident herpes zoster and post-herpetic neuralgia in an older US population** Sinead Langan[1], Liam Smeeth[1], David Margolis[2], Sara Thomas[1]; 1. Dept of Epidemiology and Population Health, London School of Hygiene and Tropical Medicine, London, United Kingdom; 2. Dept of Dermatology, University of Pennsylvania, Philadelphia, PA, USA.

583.Prognostic factors in transformed mycosis fungoides: A retrospective analysis of 187 cases Rakhshandra Talpur[1], Dawen Sui[2], Madeleine Duvic[1]; 1. Dermatology, UT MD Anderson Cancer Center, Houston, TX, USA; 2. Biostatistics, UT MD Anderson Cancer Center, Houston, TX, USA.

584.Pigmentary phenotype and race are incomplete predictors of Fitzpatrick skin type Steven He[1], W. John Boscardin[2], Charles McCulloch[2], Mary-Margaret Chren[1], Eleni Linos[1], Sarah Arron[1]; 1. Dermatology, University of California, San Francisco, CA, USA; 2. Epidemiology & Biostatistics, University of California, San Francisco, San Francisco, CA, USA.

585.SSc-overlap syndromes differ in disease progression from limited and diffuse SSc (on behalf of all DNSS centers) Pia Moinzadeh, Thomas Krieg, Nicolas Hunzelmann; University of Cologne, Cologne, Germany.

586.Vitamin D intake and risk of incident psoriasis Joseph Merola[1], Jiali Han[1, 2], Tricia Li[2], Abrar Qureshi[1, 2]; 1. Clinical Research Program, Department of Dermatology, Brigham and Women's Hospital, Harvard Medical School, Boston, MA, USA; 2. Channing Division of Network Medicine, Department of Medicine, Brigham and Women's Hospital, Harvard Medical School, Boston, MA, USA.

587*(CM5-09).Inverse relationship between melanoma death and sentinel lymph node metastases by age in the SEER Databases (2003-2009) Margaret Cavanaugh-Hussey[1], Euphemia Mu[1], Timothy Wang[1], Charles Balch[2], Sewon Kang[1]; 1. Dermatology, Johns Hopkins Medical Institutions, Baltimore, MD, USA; 2. Surgical Oncology, University of Texas Southwestern Medical Center, Baltimore, MD, USA.

588.The Journal of Investigative Dermatology's experience in its first six months on Facebook Ryan Gamble[1], Barbara Gilchrest[2], Robert Dellavalle[1, 3]; 1. Dermatology, University of Colorado, Aurora, CO, USA; 2. Dermatology, Boston University, Boston, MA, USA; 3. Dermatology, Veterans Affairs Medical Center, Denver, CO, USA.

589.Sun exposure, tanning bed usage and prevalence of atopic dermatitis Longde Lin[1, 2, 4], Jiali Han[1, 2, 3], Zhiyong Zhang[4], Carlos Camargo[2, 3], Abrar Qureshi[1, 2]; 1. Clinical Research Program, Department of Dermatology, Brigham and Women's Hospital, Harvard Medical School, Boston, MA, USA; 2. Channing Division of Network Medicine, Department of Medicine, Brigham and Women's Hospital, Harvard Medical School, Boston, MA, USA; 3. 3Department of Epidemiology, Harvard School of Public Health, Boston, MA, USA; 4. 4School of Public Health, Guangxi Medical University, Nanning, China.

590.Comparison between treatments for adult and adolescent acne: Response to treatments and challenges to study M. Diakow[1], S. Rivas[1], T. Mammone[2], Wei-Li Lee[1], A. Shalita[1]; 1. Dermatology, SUNY-Downstate Med Ctr, Brooklyn, NY, USA; 2. Basic Science Research, Estee Lauder Companies, Melville, NY, USA.

591.High prevalence rates of occupational hand eczema among dental workers in Japan Keiko Minamoto[1], Takeshi Watanabe[2], Thomas Diepgen[3]; 1. Department of Preventive and Environmental Medicine, Graduate School of Life Sciences, Kumamoto University, Kumamoto, Japan; 2. Watanabe Dental Clinic, Kumamoto, Japan; 3. Department of Social Medicine, Occupational and environmental dermatology, University of Heidelberg, Heidelberg, Germany.

592.What are the most important questions to be answered in dystrophic epidermolysis bullosa(DEB) research? Results from the Spanish prioritization partnership Paula Dávila-Seijo[1], Ángela Hernández-Martín[2], Evanina Morcillo-Makow[3], Raúl De Lucas[4], Esther Domínguez[3], Natividad Romero[3], Eva Monrrós[3], Marta Feito[4], Luis Carretero[3], Beatriz Aranegui[6, 5], Ignacio García-Doval[6, 1]; 1. Dermatology, Complexo Hospitalario de Pontevedra, Pontevedra, Spain; 2. Dermatology, Hospital Niño Jesús, Madrid, Spain; 3. The Dystrophic Epidermolysis Bullosa Research Association (DEBRA) Spain, Marbella, Spain; 4. Dermatology, Hospital Universitario de la Paz, Madrid, Spain; 5. Dermatology, Clínica Universitaria de Navarra, Madrid, Spain; 6. Research Unit, Fundacion AEDV, Academia Española de Dermatologia y Venreología (AEDV), Madrid, Spain.

593.High prevalence rates of contact allergy in the European general population Thomas Diepgen[1], Luigi Naldi[2], Magnus Bruze[3], Simone Cazzaniga[2], Pieter-Jan Coenraads[4], Peter Elsner[5], Robert Ofenloch[1], Ake Svensson[6]; 1. Clinical Social Medicine, University Hospital Heidelberg, Heidelberg, Germany; 2. Centro Studi GISED, Bergamo, Italy; 3. University Hospital Malmö, Malmö, Sweden; 4. Department of Dermatology, University Hospital Groningen, Groningen, Netherlands; 5. Department of Dermatology and Allergology, University Hospital Jena, Jena, Germany; 6. University Hospital Coimbra, Coimbra, Portugal.

594.Patient-assessed disease severity is a strong determinant of health-related quality of life in chronic hand eczema Christian Apfelbacher[1], Elke Weisshaar[2], Sonja Molin[3], Andrea Bauer[4, 7], Vera Mahler[5], Uwe Matterne[2], Melanie Weiss[2], Jochen Schmitt[6, 7], Thomas Ruzicka[3], Peter Elsner[8], Thomas Diepgen[2]; 1. Institute of Epidemiology and Preventive Medicine, University of Regensburg, Regensburg, Germany; 2. Department of Clinical Social Medicine, University of Heidelberg, Heidelberg, Germany; 3. Department of Dermatology and Allergology, Ludwig-Maximilians-University Munich, Munich, Germany; 4. Department of Dermatology, University Hospital Carl Gustav Carus, Technical University Dresden, Dresden, Germany; 5. Department of Dermatology, University of Erlangen, Erlangen, Germany; 6. Institute and Outpatient Clinics of Occupational and Social Medicine, Technical University Dresden, Dresden, Germany; 7. UniversityAllergyCenter, University Hospital Carl Gustav Carus, Technical University Dresden, Dresden, Germany; 8. Department of Dermatology and dermatological Allergology, Friedrich-Schiller-University Jena, Jena, Germany.

595.Black henna tattoos but not hair colorants are an important risk factor for contact allergy to p-phenylene diamine in the European general population Thomas Diepgen[1], Luigi Naldi[2], Magnus Bruze[3], Simone Cazzaniga[2], Pieter Jan Coenraads[4], Peter Elsner[5], Margarida Goncalo[6], Robert Ofenloch[1], Ake Svensson[3]; 1. Department for Clinical Social Medicine, University Hospital Heidelberg, Heidelberg, Germany; 2. Centro Studi GISED, Bergamo, Italy; 3. University Hospital Malmö, Malmö, Sweden; 4. Dept. of Dermatology, University Hospital Groningen, Groningen, Netherlands; 5. University Hospital Jena, Jena, Germany; 6. University Hospital Coimbra, Coimbra, Portugal.

596.The impact of localisation on the association of itch and acne. Results from a population survey among adolescents Florence Dalgard, Jon Anders Halvorsen; University of Oslo, Oslo, Norway.

597.International validation of a quality of life instrument specific to cosmetics and physical appearance: The BeautyQoL Ariel Beresniak[1], G. Krueger[2], S. Talarico[3], K. Tsutani[4], G. Duru[5], Jp Auray[5], S. Aractingi[6], Y. de Linares[7]; 1. Research, Data Mining Int., Geneva, Switzerland; 2. Dermatology, Univ. of Utah, SLC, UT, USA; 3. Dermatology, Univ. of Sao Paulo, Sao Paulo, Brazil; 4. Public Health, Univ.of Tokyo, Tokyo, Japan; 5. Research, Cyklad, Lyon, France; 6. Dermatology, Paris-Descartes Univ., Paris, France; 7. Research Innovation, L'Oreal, Paris, France.

598*(CM5-01).Latent Ccass analysis of 697 patients with non-segmental viiligo identify of two clinical subtypes Khaled Ezzedine[1], Aurélie le Thuaut[2], Thomas Jouary[1], Julien Seneschal[1], Alain Taieb[1], Sylvie Bastuji-Garin[2]; 1. Dermatology, Hôpital St-André, Bordeaux, France; 2. Public Health and Statistics, (1) Université Paris Est Créteil, LIC EA 4393 ; AP-HP, Hôpital Henri-Mondor, Créteil, France.

599.Incidence and mortality of bullous pemphigoid in Olmsted County, Minnesota, USA over five decades Chad Weaver, Christine Lohse, Mark Pittelkow, Michael Camilleri, Mustafa Al-Hashimi, Amy Weaver, Carilyn Wieland; Dermatology, Mayo Clinic, Rochester, MN, USA.

600.Reliability study of four objective outcome measures for atopic dermatitis Anh Tran[1, 3], Johanna Lazo-Dizon[1, 3], Jaehwan Kim[1, 3], Benjamin Daniel[1, 3], Supriya Venugopal[1, 3], Lesley Rhodes[1, 3], Matthew Laws[2], Dedee Murrell[1, 3]; 1. Department of Dermatology, St George Hospital, Sydney, NSW, Australia; 2. Kirby Institute, Sydney, NSW, Australia; 3. University of New South Wales, Sydney, NSW, Australia.

601.Inpatient pseudocellulitis: Assessing the extent of the problem through dermatology consultation services L. Strazzula[1], J. Cotliar[2], L. Fox[4], S. Gee[3], S. Hughey[5], K. Shinkai[4], D. Kroshinsky[1]; 1. Massachusetts General Hospital, Boston, MA, USA; 2. Northwestern Medical Center, Chicago, IL, USA; 3. University of California Los Angeles Medical Center, Los Angeles, CA, USA; 4. University of California San Francisco Medical Center, San Francisco, CA, USA; 5. University of Alabama, Tuscaloosa, AL, USA.

602.Life-style factors associated with hidradenitis suppurativa Virginia Reeder[1], Daniel Gold[1], Meredith Mahan[2], Iltefat Hamzavi[1], Henry Lim[1]; 1. Department of Dermatology, Henry Ford Medical Center, Detroit, MI, USA; 2. Department of Public Health Services, Henry Ford Medical Center, Detroit, MI, USA.

603.Recurrent cellulitis in outpatient primary care: assessing the nature of the problem Lauren Strazzula, Daniela Kroshinsky; Massachusetts General Hospital, Boston, MA, USA.

604.Clinical factors and outcomes associated with invasive melanoma biopsy transection Jamie Woodcock[1], Anneli Bowen[1], Yingying Zhang[2], Gregory Stoddard[2], Kristina Callis Duffin[1]; 1. Dermatology, University of Utah, Salt Lake City, UT, USA; 2. School of Medicine, University of Utah, Salt Lake City, UT, USA.

605.Pilot study of skin aging peculiarities in patients with metabolic syndrome Jana Janovska[1], Julia Voicehovska[2], Janis Kisis[1], Regina Kleina[3], Raimons Karls[1]; 1. Dermatology, Riga Stradinsh University, Riga, Latvia; 2. Internal Disease, Riga Stradinsh University, Riga, Latvia; 3. Pathology, Riga Stradinsh University, Riga, Latvia.

606*(CM5-10).Fragrance contact allergy in the European general population Thomas Diepgen[1], Luigi Naldi[2], Magnus Bruze[3], Simone Cazzaniga[2], Pieter Jan Coenraads[4], Peter Elsner[5], Margarida Goncalo[6], Robert Ofenloch[1], Ake Svensson[3]; 1. Department for Clinical Social Medicine, University Hospital Heidelberg, Heidelberg, Germany; 2. Centro Studi GISED, Bergamo, Italy; 3. University Hospital Malmö, Malmö, Sweden; 4. University Hospital Groningen, Groningen, Netherlands; 5. University Hospital Jena, Jena, Germany; 6. University Hospital Coimbra, Coimbra, Portugal.

Epidermal Structure & Barrier Function

All orals designated with an asterisk (*) below are presented in a Concurrent Session (see code). Orals designated with two asterisks (**) will be presented during a Plenary Session (see code).

607.Phenotypical characterisation of mice deficient for the channel activating protease 2/tmprss4 Anna Keppner, Ditte Andreasen, Anne-Marie Mérillat, Edith Hummler; Department of pharmacology and toxicology, University of Lausanne, Lausanne, Switzerland.

608.Phosphorylation of the keratin K10 plays an important role in maintaining the physical properties of the stratum corneum Noriaki Nakagawa, Norio Shimizu, Shingo Sakai; Innovative Beauty Science Laboratory, Kanebo Cosmetics Inc., Kanagawa, Japan.

609*(CM3-01).Coal tar induces AhR-dependent skin barrier repair in atopic dermatitis: The search for the active ingredient(s) Ellen van den Bogaard[1, 2], J. Bergboer[1], I. van Vlijmen-Willems[1], S. Hato[3], P. van der Valk[1], J. Schroder[4], I. Joosten[2], P. Zeeuwen[1], J. Schalkwijk[1]; 1. Dermatology, RUNMC, Nijmegen, Netherlands; 2. Lab of Med Immunology, RUNMC, Nijmegen, Netherlands; 3. Tumor Immunology, RUNMC, Nijmegen, Netherlands; 4. Dermatology, Univ Hospital of Schleswig-Holstein, Kiel, Germany.

610.Modifying cellular membranes mediate cosmetic improvements in the skin Walter Smith; Dermac, Wellington, FL, USA.

611.βKlotho is required for the epidermal differentiation, and its expression is suppressed in human nonmelanoma skin cancer Kozo Nakai[1], Shigeaki Inoue[2], Reiji Haba[3], Yoshio Kushida[3], Nahomi Katsuki[3], Yoichiro Hosokawa[1], Tetsuya Moriue[1], Kozo Yoneda[1], Hiroaki Kosaka[4], Yasuo Kubota[1]; 1. Dermatology, Kagawa University, Kita-gun, Japan; 2. Institute of Innovative Science and technology, Tokai University, Isehara, Japan; 3. Diagnostic Pathology, Kagawa University, Kita-gun, Japan; 4. Cardiovascular Physiology, Kagawa University, Kita-gun, Japan.

612.Low environmental humidity induces synthesis and release of cortisol from skin equivalent model Kentaro Takei[2], Mitsuhiro Denda[1, 2], Sumiko Denda[1, 2], Junichi Kumamoto[2]; 1. Shiseido Research Center, Yokohama, Japan; 2. Japan Science and Technology Agency,, Tokyo, Japan.

613.External negative electric potential accelerates exocytosis of lamellar bodies in human skin tissue culture Junichi Kumamoto[2], Mitsuhiro Denda[1, 2], Makiko Goto[1, 2], Sumiko Denda[1, 2], Masashi Nakatani[2], Yuya Takasugi[3], Katsunori Tsuchiya[3], Yuji Shimizu[3], Yusuke Takatsuru[4]; 1. Shiseido Research Center, Yokohama, Japan; 2. CREST, Japan Science and Technology Agency, Tokyo, Japan; 3. Dai Nippon Printing Co., Ltd., Tokyo, Japan; 4. Depetment of Integrative Physiology, Gunma University, Graduated School of Medicine, Maebashi, Japan.

614.Histamine attenuates acetylcholine-mediated sweating by inactivating GSK3β via H1-receptor mediated pathway Saki Matsui[1, 3], Hiroyuki Murota[1], Yang Lingli[1], Kota Omiya[2], Masato Ohmi[2], Junichi Kikuta[3], Masaru Ishii[3], Ichiro Katayama[1]; 1. Dermatology, Osaka University, Suita-City, Japan; 2. Biomedical Physics and Engineering Laboratory, Osaka University, Suita-City, Japan; 3. Cellular Dynamics, Immunology Frontier Research Center, Osaka University, Suita-City, Japan.

615.Characterisation of Spink6, a conserved inhibitor of Kallikrein-related peptidases, during barrier injury Jan Fischer, Zhihong Wu, Tomasz Kantyka, Sperrhacke Maria, Olga Dmitrieva, Yulia Koblyakova, Kerstin Ahrens, Nina Graumann, Hansjörg Baurecht, Karina Reiss, Jens-Michael Schröder, Ehrhardt Proksch, Ulf Meyer-Hoffert; Department of Dermatology, University Hospital Schleswig-Holstein, Campus Kiel, Kiel, Germany.

616(PL1-01).*In vivo* and *in vitro* inhibition of the membrane-bound serine protease CAP1/Prss8 by serpins** Giovanna Crisante, Chloé Sergi, Anne-Marie Merillat, Simona Frateschi, Edith Hummler; departement of pharmacology and toxicology, University of Lausanne, Lausanne, Switzerland.

617.A regulation of keratinocyte differentiation and proliferation by transcription factors Runx1 and Runx3 Ryuhei Uchiyama[1], Eisaku Ogawa[1], Yukiko Kiniwa[1], Hisashi Uhara[1], Won Wong[2], Kazuyoshi Kofu[3], Shuntaro Ikawa[4], Masanobu Satake[2], Ryuhei Okuyama[1]; 1. Department of dermatology, shinhsu university, Matsumoto, Japan; 2. Institute of Development, Aging and Cancer, Tohoku University, Sendai, Japan; 3. National University Singapore, Singapore, Singapore; 4. Center for Interdisciplinary Research, Tohoku University, Sendai, Japan.

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618.Deregulated signalling through the mTOR pathway may contribute to the development of psoriatic plaques Alina Eiser[1], Olivia Franke[1], Bartosz Malisiewicz[1], Sandra Diehl[1], Victoria Lang[1], Katja Steinhorst[1], Wolf-Henning Boehncke[2, 1], Claudia Buerger[1]; 1. Department of Dermatology, Goethe University, Frankfurt, Germany; 2. Service de Dermatologie, Hôpital Universitaire, Geneva, Switzerland.

619.Cholesterol depletion induces similar cell responses in keratinocyte monolayers and reconstructed human epidermis Evelyne De Vuyst[1], Julie Deslé[1], Catherine Lambert de Rouvroit[1], Sandrine Bessou-Touya[2], Hélène Duplan[2], Michel Salmon[3], Yves Poumay[1]; 1. Cell and Tissue Laboratory-URPHYM-Narilis, University of Namur, Namur, Belgium; 2. Department of in vitro pharmacology, Pierre Fabre Dermo-cosmétique, Toulouse, France; 3. StratiCell, Namur, Belgium.

620.The molecular organization of the human skin barrier determined Lars Norlen; Medicine, Karolinska Institutet, Stockholm, Sweden.

621.Anti-itching and barrier restoring effects of a lipid-replenishing balm on atopic dermatitis models Stéphanie Brédif[1], Johan Rocheteau[1], Caroline Baudouin[1], Francine Joly[2], Philippe Msika[1]; 1. INNOVATION, R&D DIRECTION, LABORATOIRES EXPANSCIENCE, EPERNON, France; 2. SEPHRA, PUTEAUX, France.

622.Molecular biomarkers' analysis to characterize epidermis of infants Caroline Baudouin[1], Stéphanie Brédif[1], Nathalie Pedretti[2], Christine Barrault[2], François Bernard[2], Philippe Msika[1]; 1. Innovation, R&D Direction, LABORATOIRES EXPANSCIENCE, EPERNON, France; 2. BIOALTERNATIVES, GENCAY, France.

623.Avocado perseose, a biomimetic active ingredient for the protection and accompaniment of infants' skin Sophie Leclere-Bienfait, Johan Rocheteau, Stéphanie Brédif, Caroline Baudouin, Alex Saunois, Philippe Msika; Innovation, R&D Direction, Laboratoires Expanscience, Epernon, France.

624*(CM3-02).Dlx3 as a cell cycle modulator during keratinocyte differentiation and tumor development Elisabetta Palazzo[1], Pietroni Valentina[1], Gormley Anna[1], Nadezda Radoja[1], Miroslav Blumenberg[3], Jin Chul Kim[1], Andrew Ryscavage[2], Christophe Cataisson[2], Maria Morasso[1]; 1. Developmental Biology Section Unit, NIH/NIAMS, Bethesda, MD, USA; 2. Laboratory of Cancer Biology and Genetics, NIH/NCI, Bethesda, MD, USA; 3. Department of Dermatology, New York University, New York, NY, USA.

625.Divergent abnormalities in lamellar body secretion account for increased infections in harlequin ichthyosis and netherton syndrome Aegean Chan[1], Almudena Nuno[1], Elena Godoy-Gijon[1], Debra Crumrine[1], Melanie Hupe[1], Philip Fleckman[2], Peter Elias[1]; 1. Dermatology, VA Med Ctr/UCSF, San Francisco, CA, USA; 2. Dermatology, Univ of Washington, Seattle, WA, USA.

626.Topical apigenin improves epidermal permeabiity barrier homeostasis in normal murine skin by divergent mechanisms Maihua Hou[1, 2], Richard Sun[1], Melanie Hupe[1], Peggy Kim[1], Kyungho Park[1], Debra Crumrine[1], Tzu-Kai Lin[1], Juan Luis Santiago[1], Theodora Mauro[1], Peter Elias[1], Mao-Qiang Man[1, 3]; 1. Dermatology, VA Med Ctr/UCSF, San Francisco, CA, USA; 2. Dermatology, Nanjing Med Univ, Nanjing, China; 3. Skin Physiology Res, Dalian SKin Disease Hosp, Liaoning, China.

627.Did latitude-dependent differences in prevalence of filaggrin mutations evolve to support cutaneous vitamin D production? Jacob Thyssen[1, 2], Peter Elias[2]; 1. Dermato-Allergology, Copenhagen Univ Hosp Gentofte, Hellerup, Denmark; 2. Dermatology, VA Med Ctr/UCSF, San Francisco, CA, USA.

628.Filaggrin deficiency and epidermal water permeability barrier: Evidence for a surprisingly mild disturbance Ana Maria Perusquia-Ortiz[1], Vinzenz Oji[1], Maria Sauerland[2], Tatjana Tarinski[1], Irina Zaraeva[1], Natalia Seller[1], Dieter Metze[1], Karin Aufenvenne[1], Ingrid Hausser[3], Heiko Traupe[1]; 1. Dermatology, University Hospital, Muenster, Germany; 2. Institute of Biostatistics and Clinical Research, University of Muenster, Muenster, Germany; 3. Dermatology, University of Heidelberg, Heidelberg, Germany.

629.p38 signaling and regulation of tight junctions in keratinocytes Laura Raiko[1, 2], Elina Siljamäki[1], Liisa Nissinen[1], Juha Peltonen[1], Veli-Matti Kähäri[1, 2], Sirkku Peltonen[1, 2]; 1. University of Turku, Turku, Finland; 2. Turku University Hospital, Turku, Finland.

630.'Barrier repair' ingredients and formulations regulate barrier homeostasis and antimicrobial peptide expression in parallel Mao-Qiang Man, Richard Sun, Peter Elias; Dermatology, VA Med Ctr/UCSF, San Francisco, CA, USA.

631.Basis for pigmentation-enhanced barrier function Mao-Qiang Man[1], Tzu-Kai Lin[1], Juan Luis Santiago[4], Lily Zhong[1], Anna Celli[1], Truus Roelandt[2], Melanie Hupe[1], John Sundberg[3], Kathleen Silva[3], Debra Crumrine[1], Lizhi Hu[1], Gemma Martin-Ezquerra[4], Carles Trullas[4], Maria Wei[1], Ken Feingold[1], Thea Mauro[1], Peter Elias[1]; 1. Derm, VAMC/UCSF, SF, CA, USA; 2. Derm, Univ Ziekenhuis, Brussels, Belgium; 3. Derm, Jackson Lab, Bar Harbor, ME, USA; 4. R&D, ISDIN, Barcelona, Spain.

632.The stratum corneum water content and natural moisturization factor composition evolve with age and depend on body site Elise Boireau-Adamezyk[1, 2], Arlette Baillet-Guffroy[1], Georgios Stamatas[2]; 1. Laboratory of analytical chemistry, Analytical Chemistry Group (GCAPS-EA4041), Université Paris Sud 11, Châtenay-Malabry, France; 2. Skin Care R&D, Johnson & Johnson Santé Beauté France, Issy-les-Moulineaux, France.

633.*In vitro* skin permeation method: A metabolomic assessment Ana Azambuja[1], Julia Menegola[1], Ana Zeri[2]; 1. Science and Technology, Ideas and Concepts, Natura Inovação, Cajamar, Brazil; 2. Brazilian Biosciences National Laboratory, CNPEM, Campinas, Brazil.

634.Involvement of kallikrein-related peptidase 5 in profilaggrin processing Jun-ichi Sakabe[1], Mami Yamamoto[2, 3], Akira Motoyama[2], Isao Ohta[4], Satoshi Hirakawa[1], Toshihiko Hibino[2], Yoshiki Tokura[1]; 1. Dermatology, Hamamatsu University School of Medicine, Hamamatsu, Japan; 2. Shiseido Innovative Science Research & Development Center, Yokohama, Japan; 3. Dermatology, Tokyo Medical University, Tokyo, Japan; 4. Research Equipment Center, Hamamatsu University School of Medicine, Hamamatsu, Japan.

635.A novel culture medium ages keratinocytes without the need for pro-aging stimuli Chennakesava Cuddapah[1], Claudia Escher[2], Roland Bruderer[2], Peter Girling[1]; 1. CELLnTEC Advanced Cell Systems AG, Bern, Switzerland; 2. Biognosys AG, Zurich, Switzerland.

636*(CM3-03).TLR3 activation is important for skin barrier repair following UV exposure Andrew Borkowski, Richard Gallo; Medicine, University of California, San Diego, La Jolla, CA, USA.

637.The N terminal S100 domain of Filaggrin 2 activates the skin aspartic acid protease in the epidermis of human skin, *in vitro* Mark Donovan[1], Agnes Thomas-Collignon[1], Jean-Christophe Rain[2], Etienne Formstecher[2], Dominique Bernard[1]; 1. Biology, L'Oréal R&I, Clichy, France; 2. Hybrigenics, Paris, France.

638.High sulfation and chain length are key in heparan regulation of transglutaminase activity in the stratum corneum of a reconstructed skin model Mark Donovan[1], Françoise Jarrousse[1], Agnes Thomas-Collignon[1], Jerry Turnbull[2], Dominique Bernard[1]; 1. L'Oréal R& I, Clichy, France; 2. Intellihep, Liverpool, United Kingdom.

639.Kallikrein 5 up-regulation in epidermal barrier dysfunction and atopic dermatitis pathogenesis Yanan Zhu[1], John Harper[2, 1], Ryan O'Shaughnessy[1], Weili Di[1, 2]; 1. University College London, London, United Kingdom; 2. Great Ormond Street Hospital, London, United Kingdom.

640.A new cosmetic composition enhances the expression of epidermal genes involved in unbalanced skin aging functions Kahina Abed, Charlotte Tacheau, Jean-François Michelet, Marie-Jesus Perez, Bruno A.Bernard, Nükhet Cavusoglu, Stéphanie Cheilian, Brigitte Lavaud, Claire Deloche, Dominique Bernard; L'oreal R&I, Paris, France.

641.Mathematical modelling of feedback control mechanisms for age differences in skin hydration Elisa Domínguez Hüttinger[1], Georgios Stamatas[2], Reiko Tanaka[1]; 1. Department of Bioengineering, Imperial College London, London, United Kingdom; 2. SkinCare R&D, Johnson & Johnson Santé Beauté France, Paris, France.

642.The mitochondrial fusion proteins Mfn1 and Mfn2 are involved in keratinization Asuka Suto, Riichiro Abe, Nao Saito, Shotaro Suzuki, Yasuyuki Fujita, Toshihumi Nomura, Hideki Nakamura, Hiroshi Shimizu; Dermatology, Hokkaido University, Sapporo, Japan.

643.IGF-1 signaling mediates the entry in differentiation of human keratinocytes Carine Mainzer[1], Noëlle Remoue[2], Carla Barrichello[2], Pascal Sommer[1]; 1. Institute of Biology and Chemistry of Proteins FRE3310 - CNRS/Université de Lyon, Lyon, France; 2. Natura Innovation, Paris, France.

644.Staphylococcus aureus and staphylococcus epidermidis activate different innate immune and signaling pathways in human skin and epidermal equivalents Tammy Zhai[1], Tiffany Scharschmidt[1], Anna Celli[1], Richard Sun[1], Peter Elias[1], Paul Sullam[2], Theodora Mauro[1]; 1. Dermatology, VAMC/UCSF, San Francisco, CA, USA; 2. Medicine, VAMC/UCSF, San Francisco, CA, USA.

645*(CM16-05).Human β-defensin-3 improves the epithelial tight junction (TJ) barrier through activation of glycogen synthase kinase-3 (GSK-3) and protein kinase C (PKC) Chanisa Kiatsurayanon[1, 2], François Niyonsaba[1], Rithee Smithrithee[1, 2], Toan The Nguyen[1, 2], Toshihiro Akiyama[1, 2], Hiroko Ushio[1], Shigaku Ikeda[1, 2], Ko Okumura[1], Hideoki Ogawa[1]; 1. Atopy (Allergy) Research Center, Juntendo University Graduate School of Medicine, Tokyo, Japan; 2. Department of Dermatology, Juntendo University Graduate School of Medicine, Tokyo, Japan.

646.Activation of Transient Receptor Potential Melastatin 8 (TRPM8) reduces UVB-induced PGE2 production in keratinocytes Nok-Hyun Park, Yongjoo Na, Jun-Cheol Cho, Hae-Kwang Lee; Skin Research Institute, Amorepacific R&D Center, Yongin, Republic of Korea.

647.Topical cholesterol application ameliorates hapten-evoked cutaneous hypersensitivity by sustaining expression of 11βHSD-1 in epidermis Hiroyuki Murota[1], Mika Terao[1], Saki Matsui[1], Hiromi Kawai[2], Yasunari Satou[2], Kazuma Suda[2], Ichiro Katayama[1]; 1. Dermatology, Osaka University, Suita, Japan; 2. Rohto Pharmaceutical Co., Ltd., Kizugawa, Japan.

648.Galectin-7- miRNA-203-p63 signaling is important for keratinocyte proliferation and differentiation Hung-Lin Chen[1], Po-Cheng Chiang[1], Chia-Hui Lo[1], Yuan-Hsin Lo[2], Huan-Yuan Chen[1], Fu-Tong Liu[1, 2]; 1. Institute of Biomedical Sciences, Academia Sinica, Taipei, Taiwan; 2. Graduate institute of immunology, College of Medicine, National Taiwan University, Taipei, Taiwan.

649.MALDI-MSI-IMS examination of emollient treated living skin equivalent for lipidomic and small molecule analysis Christopher Marshall[1], Michael Lee[2], Richard Bojar[3], Michael Donaldson[4], Francese Simona[5], Malcolm Clench[5]; 1. Department of biosciences, Sheffield Hallam University, Sheffield, United Kingdom; 2. Platform Technology Support, GlaxoSmithKline, Stevenage, United Kingdom; 3. Evocutis, York, United Kingdom; 4. Stiefel, GlaxoSmithKline, Uxbridge, United Kingdom; 5. Department of Biosciences, Sheffield Hallam University, Uxbridge, United Kingdom.

650.Barrier function in different regions of the hair follicle predicts susceptibility to acne and the route for transcutaneous drug delivery James Fulton[1], Debra Crumrine[2], Almudena Nuno[2], Peter Elias[2], Theodora Mauro[2]; 1. Dermatology, Vivant Skin Care, Key Biscayne, FL, USA; 2. Dermatology, VAMC/UCSF, San Francisco, CA, USA.

651.Loss of phospholipase C δ1 impairs epidermal barrier and induces chronic dermatitis Kaori Kanemaru, Yoshikazu Nakamura, Kiyoko Fukami; Laboratory of Genome and Biosignals, School of Life Sciences, Tokyo University of Pharmacy and Life Sciences, Tokyo, Japan.

652.Low-frequency sonophoresis alters the structure of epidermal tight junction protein, claudin-1 and barrier function: Implications in ultrasound-mediated transdermal drug delivery Sang Eun Lee[1], Ji Hwoon Baek[2], Ki Ju Choi[3], Seung Hun Lee[4]; 1. Department of Dermatology, CHA Bundang Medical Center Hospital, CHA University, Seongnam, Republic of Korea; 2. DERMAPRO LTD. 919-1, Bangbae-Dong, Seocho-Gu, Seoul, Republic of Korea; 3. Electron Microscopic Research, Korea Basic Science Institute, Daejeon, Republic of Korea; 4. Department of Dermatology, Yonsei University College of Medicine, Seoul, Republic of Korea.

653*(CM3-05).Keratinocyte-specific PRSS3 effectively activates KLKs and degrades LEKTI - a hidden mechanism of desquamation Masashi Miyai[1], Yuuko Matsumoto[1], Haruyo Yamanishi[1], Mami Yamamoto[1, 2], Ryoji Tsuboi[2], Toshihiko Hibino[1]; 1. Shiseido Research Center, Yokohama, Japan; 2. Dermatology, Tokyo Medical University, Tokyo, Japan.

654.Interleukin-36 cytokines enhance the production of host defense peptides LL-37 and psoriasin by human keratinocytes through activation of MAPKs and NF-κB Toshihiro Akiyama[1, 2], Toan The Nguyen[1, 2], Francois Niyonsaba[2], Rithee Smithrithee[1, 2], Chanisa Kiatsurayanon[1, 2], Hiroko Ushio[2], Ko Okumura[2], Hideoki Ogawa[2], Shigaku Ikeda[1, 2]; 1. Dermatology, Juntendo University Graduate School of Medicine, Tokyo, Japan; 2. Atopy Research Center, Juntendo University Graduate School of Medicine, Tokyo, Japan.

655.Dietary effect of royal jelly supplementation on epidermal levels of hydration, filaggrins, free amino acids and the related enzyme expression in UV irradiated hairless mice* Jihyun Min[1], YunJu Lee[1], Sang-Mi Han[2], YunHi Cho[1]; 1. Kyung Hee University, Yong-In, Republic of Korea; 2. Rural Development Adminstration, Su-Won, Republic of Korea.

656.Dietary royal jelly improves epidermal hydration with increased levels of glucosylceramide and ceramide in intrinsically aged C57BL mice* Sang Hun Jeon, Yun Hi Cho; Kyung Hee University, Yong-In, Republic of Korea.

657.Thymosin-beta4: A major player in skin renewal and anti-aging processes Laurine Bergeron, Emilie Court, Valere Busuttil, Jean Marie Botto, Nouha Domloge; Ashland Specialty Ingredient, Vincience, Global Skin Research Center,, Sophia Antipolis, France.

658.Kallikreins 5 and 7 are upregulated in human skin following application of irritants Jo Underwood, Chris Pickard, Eugene Healy; Dermatopharmacology, Faculty of Medicine, University of Southampton, Southampton, United Kingdom.

659.IL-31 prevents barrier formation but tightens the antimicrobial defense of the skin partially by upregulating IL-1α expression in human organotypic skin models Kai Hänel[2, 1], Christian Cornelissen[2, 1], Philipp Amann[1], Yvonne Marquardt[1], Katharina Czaja[1], Juliane Lüscher-Firzlaff[2], Bernhard Lüscher[2], Jens Malte Baron[1]; 1. Department of Dermatology and Allergology, RWTH Aachen University, Aachen, Germany; 2. Institute of Biochemistry and Molecular Biology, RWTH Aachen University, Aachen, Germany.

660.Air-liquid interface epidermal cultures of keratinocytes from elderly adult skin which have been treated with the rho kinase inhibitor, Y-27632, contain multiple areas of dysplasia Jo Underwood[1], Marta Polak[1], James Chan[2], Chris Pickard[1], Eugene Healy[1]; 1. Dermatopharmacology, Faculty of Medicine, University of Southampton, Southampton, United Kingdom; 2. Histopathology, University of Southampton, Southampton, United Kingdom.

661.Chaperone proteins such as Mitochondrial Heat Shock Proteins (mtHSPs) play a critical role in the protection of keratinocytes and human skin from stresses Christelle Plaza, Florian Labarrade, Ludivine Mur, Valere Busuttil, Jean Marie Botto, Nouha Domloge; Ashland Specialty Ingredient, Vincience, Global Skin Research Center, Sophia Antipolis, France.

662.How blue LED wavelengths can be effective on acne disorders? Rachel Chabert[1], Linda Fouque-Parachini[2], Sandrine Pinacolo[1], Laura Restellini,[1], Noelle Garcia[1], Nouha Domloge[1]; 1. shland Specialty Ingredient, Vincience, Global Skin Research Center,, Sophia Antipolis, France; 2. Centre de Dermatologie, Nice, France.

663.Bioinformatic analysis of genes and microRNAs potentially involved in keratinocyte differentiation Catherine Serre, Laurine Bergeron, Florian Labarrade, Valere Busuttil, Jean Marie Botto, Nouha Domloge; Ashland Specialty Ingredient, Vincience, Global Skin Research Center, Sophia Antipolis, France.

664.Role of p150Glued subunit of dynactin in the structure and maintenance of keratinocyte microparasol Alexia Lebleu[1], Emilie Court[1], Gopinathan Menon[2], Florian Labarrade[1], Valere Busuttil[1], Jean Marie Botto[1], Nouha Domloge[1]; 1. Ashland Specialty Ingredient, Vincience, Global Skin Research Center, Sophia Antipolis, France; 2. Ashland Specialty Ingredient, Vincience, Global Skin Research Center, Wayne, NJ, USA.

665.Impact of UVA + UVB full-spectrum compared to UVB mono-wavelength on cells and skin pigmentation Magali Bonnans, Audrey Lemestr, Gregory Bressier, Noelle Garcia, Nouha Domloge; Ashland Specialty Ingredient, Vincience, Global Skin Research Center, Sophia Antipolis, France.

666.Importance to preserve human SKin-derived Precursors (SKPs) from aging and stresses Laurine Bergeron[1], Isabelle Imbert[1], Carine Nizard[2], Michel Dumas[2], Sylvianne Schnebert[2], Valere Busuttil[1], Jean Marie Botto[1], Nouha Domloge[1]; 1. Ashland Specialty Ingredient, Vincience, Global Skin Research Center,, Sophia Antipolis, France; 2. LVMH Recherche, Saint Jean de Braye, France.

667.Air exposure hastens barrier maturation in human epidermal equivalents Richard Sun[1], Anna Celli[1], Tammy Zhai[1], Sally Pennypacker[1], Tiffany Scharschmidt[1], Peter Elias[1], Steven Hoath[2], Kenneth Feingold[1], Theodora Mauro[1]; 1. Dermatology, VA Med Ctr/UCSF, San Francisco, CA, USA; 2. Cincinnati Children's Hospital, Cincinnati, OH, USA.

668.Clarifying the role of autophagy in the skin by using skin grafts from wild-type and ATG7-deficient mice Nagisa Yoshihara[1], Atsushi Takagi[1], Takashi Ueno[2], Shigaku Ikeda[1]; 1. Department of Dermatology and Allergology, Juntendo University Graduate School of Medicine, Tokyo, Japan; 2. Department of Biochemistry, Juntendo University Graduate School of Medicine, Tokyo, Japan.

669.Anti-psoriatic effects of 1,25-dihydoxyvitamin D_3 in combination with betamethasone on human keratinocytes Hideya Uratsuji, Kei Hashimoto, Ritsuko Ishii; Research Laboratories, Kyoto R&D Center, Maruho Co., Ltd., Kyoto, Japan.

670.Clock gene is one of the important regulators in epidermal homeostasis Teruaki Masutani[1, 2], Kenichi Ito[1], Tonoji Hamada[1], Yuka Tsuda[1], Shigeki Shimba[3], Arunasiri Iddamalgoda[1]; 1. ICHIMARU PHARCOS Co., Ltd., Motosu, Japan; 2. United Graduate Sch. of Drug Discovery and Medical Information Sci., Gifu University, Gifu, Japan; 3. Dept. of Health Sci., Sch. of Pharmacy, Nihon University, Chiba, Japan.

671*(CM3-04).Decreased adhesion of keratinocytes via E-cadherin downmodulation is a platform for leukocytes mobility in the epidermis Gyohei Egawa, Yoshiki Miyachi, Kenji Kabashima; Dermatology, Kyoto University, Kyoto, Japan.

672.The role of glutamate signaling in keratinocytes Maki Wakabayashi[1], Takuji Yamaguchi[5, 6], Naoko Funakushi[3], Hajime Suto[2], Rie Ueki[4], Hiroyuki Kobayashi[5], Hideoki Ogawa[1], Shigaku Ikeda[1, 2]; 1. Dermatology and allergology, Juntendo University Graduate School of Medicine, Tokyo, Japan; 2. Atopy (Allergy) Research Center, Juntendo University Graduate School of Medicine, Tokyo, Japan; 3. Dermatology Unit, Juntendo University Nerima Hospital, Tokyo, Japan; 4. Dermatology Unit, Juntendo Tokyo Geriatric Medical Center, Tokyo, Japan; 5. Center for Advanced Kampo Medicine and Clinical Research, Juntendo University School of Medicine, Tokyo, Japan; 6. Tsumura Research Laboratories, Tsumura & Co, Ibaraki, Japan.

673.A new cosmetic composition attenuates the effects on age-related imbalance of biological functions of stratum corneum Nukhet Cavusoglu[1], Sylvie Bourassa[2], Benjamin Nehme[2], Kahina Abed[1], Bruno Bernard[1], Stephanie Cheilian[1], Brigitte Lavaud[1], Claire Deloche[1], Arnaud Droit[2], Dominique Bernard[1]; 1. L'OREAL R & I, Paris, France; 2. Plateforme proteomique CHUL, Quebec, QC, Canada.

674.Epidermal HIF-regulating PHD proteins (EGLNs): Response to hypoxia and link to skin pathology Lynda Weir[1], Douglas Robertson[1], Keith Vass[1], Andrey Panteleyev[1, 2]; 1. University of Dundee, Dundee, United Kingdom; 2. Kurchatov Institute, Moscow, Russian Federation.

675.Keratinocyte response to environmental challenge: Cross-effects of hypoxia and calcium Lynda Weir[1], Douglas Robertson[1], Keith Vass[1], Andrey Panteleyev[1, 2]; 1. University of Dundee, Dundee, United Kingdom; 2. Kurchatov Institute, Moscow, Russian Federation.

676.IL-33 affects to cell proliferation and differentiation of normal humanl keratinocytes Hidetoshi Tsuda[1], Mayumi Komine[1, 2], Tomoyuki Ohshio[1], Shin-ichi Tominaga[2], Mamitaro Ohtsuki[1]; 1. Department of Dermatology, Jichi Medical University, Simotsuke, Japan; 2. Department of Biochemistry, Jichi Medical University, Simotsuke, Japan.

677*(CM3-07).The stratum corneum comprises three layers with distinct barrier properties to metal ions Akiharu Kubo[1], Itsuko Ishizaki[2], Akiko Kubo[3], Hiroshi Kawasaki[1], Keisuke Nagao[1], Yoshiharu Ohashi[2], Masayuki Amagai[1]; 1. Dermatology, Keio University, Tokyo, Japan; 2. ULVAC-PHI, INC., Chigasaki, Japan; 3. Biochemistry, Keio University, Tokyo, Japan.

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678.ATP release from keratinocytes is a Ca^{2+}-dependent exocytosis via a vesicular nucleotide transporter, VNUT Kaori Inoue[1, 2], Kayoko Fujishita[2], Keisuke Shibata[2], Ryohei Komatsu[2], Yoshio Imura[2], Yoshinori Moriyama[3], Schuichi Koizumi[2]; 1. Shiseido Research Center, Yokohama, Japan; 2. Department of Neuropharmacology, Interdisciplinary Graduate School of Medicine and Engineering, University of Yamanashi, Yamanashi, Japan; 3. Department of Membrane Biochemistry, Okayama University Graduate School of Medicine, Dentistry and Pharmaceutical Sciences, Okayama, Japan.

679(PL3-05).Disturbed lipid metabolism in fetal skin predisposes for development of allergic disorders** Denis Khnykin[1, 5], Meei-Hua Lin[2], Louise Bjerkan[3], Naoko Goto-Inoue[4], Yoshikazu Uchida[5], Ingrid Hausser[6], Mitsutoshi Setou[7], Jeffrey Miner[2], Finn-Eirik Johansen[1], Frode Jahnsen[1]; 1. Pathology, University of Oslo, Oslo, Norway; 2. Internal Medicine, Washington University School of Medicine, St. Louis, MO, USA; 3. Oral Biology, University of Oslo, Oslo, Norway; 4. Health Promotion Sciences, Tokyo Metropolitan University, Tokyo, Japan; 5. Dermatology, UCSF, San Francisco, CA, USA; 6. Dermatology, University Clinic Heidelberg, Heidelberg, Germany; 7. Cell Biology and Anatomy, Hamamatsu University School of Medicine, Hamamatsu, Japan.

680.Loss of the local cortisol stress response pathway contributes to the pathogenesis inflammatory skin diseases Rosalind Hannen[1], Joanna Nikitorowicz-Buniak[2], Richard Stratton[2], Alia Ahmed[1], Shefali Rajpopat[1], Michael Philpott[1]; 1. Centre for Cutaneous Research, Queen Mary University of London, London, United Kingdom; 2. Centre for Rheumatology, University of London, London, United Kingdom.

681.Novel metabolism of vitamin D in human epidermal keratinocytes and epithelial colon cells Tae-Kang Kim[1], Zongtao Lin[2], Robert Tuckey[3], Edith Tang[3], Wei Li[2], Adrzej Slominski[4]; 1. Pathology, University of Tennessee HSC, Memphis, TN, USA; 2. Pharmaceutical Sciences, University of Tennessee HSC, Memphis, TN, USA; 3. Chemistry and Biochemistry, University of Western Australia, Crawley, WA, Australia; 4. Medicine, University of Tennessee HSC, Memphis, TN, USA.

682.JAK-STAT pathway mediates cutaneous inflammation via enhancing immune responses and attenuating skin barrier functions Wataru Amano, Saeko Nakajima, Yoshiki Miyachi, Kenji Kabashima; Dermatology, Kyoto University Graduate School of Medicine, Kyoto, Japan.

683*(CM3-08).Loss of ELOVL1 enzyme depletes very long-chain fatty acids and causes lethal skin barrier disruption in mice Shotaro Suzuki[1, 2], Toshifumi Nomura[1], Takayuki Sassa[3], Yusuke Ohno[3], Masashi Akiyama[4], Akio Kihara[3], Hiroshi Shimizu[1]; 1. Department of Dermatology, Hokkaido University Graduate School of Medicine, Sapporo, Japan; 2. Products Research Laboratories, ALBION Co., Ltd., Ginza, Japan; 3. Laboratory of Biochemistry, Faculty of Pharmaceutical Sciences, Sapporo, Japan; 4. Department of Dermatology, Nagoya University Graduate School of Medicine, Nagoya, Japan.

684.The role of protein o-fucose transferase-1 in epidermal and hair cycle homeostasis Hisen-Yi Lin, Liang-Tung Yang; National Health Research Institutes, Zhunan, Taiwan.

685.Interferon γ does not reduce calpain I but filaggrin expression in a concentration and time dependent manner Ivana Topic, Ehrhardt Proksch, Rüdiger Panzer; Clinic for dermatology, University hospitals Schleswig-Holstein, campus Kiel, Kiel, Germany.

686.Retinol showed different gene expression of keratinocyte differentiation compared to retinoic acid Jin Young Lee, Hyangtae Choi, Jun-Cheol Cho, Hae-kwang Lee; R&D Center, Amorepacific Corporation, Yongin-si, Republic of Korea.

687.Podoplanin alters β1-integrin-mediated cell adhesion and initiates terminal differentiation of human epidermal keratinocytes Masaru Honma, Mizue Fujii, Hidetoshi Takahashi, Hajime Iizuka; Department of Dermatology, Asahikawa Medical University, Asahikawa, Japan.

688.Glucocorticoid receptor enhances involucrin expression of keratinocyte in a ligand-independent manner Jeung-Hoon Lee, Hyun Kyung Yoon, Kyung-Cheol Sohn, Dae-Kyoung Choi, DongKyun Hong, Myung Im, Young Lee, Young-Joon Seo, Chang Deok Kim; Dermatology, Chungnam National University, Daejeon, Republic of Korea.

689.Kallikrein 7 is increased, but only partially activated in atopic dermatitis corneocytes Satomi Igawa[1], Mari Kishibe[1], Masako Minami-Hori[1], Masamoto Murakami[2], Akemi Ishida-Yamamoto[1], Hajime Iizuka[1]; 1. Dermatology, Asahikawa Medical University, Asahikawa, Japan; 2. Dermatology, Ehime University Graduate School of Medicine, Toon, Japan.

690.Interest of Pentyl-rhamnoside in prevention of xerosis Marie Florence Galliano, Cédric Carrasco, Sandrine Bessou-Touya, Hélène Duplan; Dermo Cosmetic Department, Pierre FABRE R&D Center, Toulouse, France.

691.Genomic analysis of a resveratrol treated epidermal *in vitro* model Karen Barrett, Della Hyliands, Fei-Ling Lim, Gail Jenkins, Jennifer Pople; Unilever Discover, Sharnbrook, United Kingdom.

692.Skin barrier functions in the patients with atopic dermatitis, allergic contact dermatitis, psoriasis, and xerotic eczema Eung Ho Choi, Noo Ri Lee, Sang-Yeon Park, Na Young Yoon, Dong Hye Kim; Department of Dermatology, Yonsei University Wonju College of Medicine, Wonju, Republic of Korea.

693.The steroid and xenobiotic receptor pregnane X receptor controls epidermal homeostasis Andreas Elentner[1], Nikos Yannoutsos[2], Matthias Schmuth[1], Sandrine Dubrac[1]; 1. Dermatology and Venereology, Innsbruck Medical School, Innsbruck, Austria; 2. Gene Regulation and Immunology Laboratory, Department of Cell Biology,, Innsbruck Medical School, Innsbruck, Austria.

694.Antagonistic effects of IL17A and IL4 on epidermal tight junctions Anna De Benedetto[1], Takeshi Yoshida[1], I-Hsin Kuo[1], Spiro Gestios[2], Andrei Ivanov[3], Donald Leung[4], Lisa Beck[1]; 1. Department of Dermatology, University of Rochester Medical Center, Rochester, NY, USA; 2. Department of Dermatology, Northwestern University Feinberg School of Medicine, Chicago, IL, USA; 3. Department of Human and Molecular Genetics, Virginia Commonwealth University School of Medicine, Richmond, VA, USA; 4. Department of Pediatrics, National Jewish Health University School of Medicine, Denver, CO, USA.

695(PL2-03).A homozygous nonsense mutation of gene for Mattrin, a component of lamellar granule secretory system, produces spontaneous dermatitis in mice** Takashi Sasaki[1, 2], Aiko Shiohama[3, 4], Akiharu Kubo[1], Hiroshi Kawasaki[1], Akemi Ishida-Yamamoto[5], Taketo Yamada[6], Takayuki Hachiya[7], Atsushi Shimizu[8], Hideyuki Okano[9], Jun Kudoh[4], Masayuki Amagai[1]; 1. Dermatol, Keio Univ, Tokyo, Japan; 2. Integrated Med Res, Keio Univ, Tokyo, Japan; 3. MSD Program, Keio Univ, Tokyo, Japan; 4. Gene Med, Keio Univ, Tokyo, Japan; 5. Dermatol, Asahikawa Med Univ, Hokkaido, Japan; 6. Pathol, Keio Univ, Tokyo, Japan; 7. MBL Co., Nagoya, Japan; 8. Mol Biol, Keio Univ, Tokyo, Japan; 9. Physiol, Keio Univ, Tokyo, Japan.

696.Metabolomic analysis of the skin: Development of cell lysage techniques for optimal extraction Julie Wu, April Armstrong; Dermatology, Univeristy of Calfornia Davis, Sacramento, CA, USA.

697*(CM16-10).Mitochondrial generation of reactive oxygen species promotes epidermal differentiation and hair follicle development Robert Hamanaka[1], Andrea Glasauer[1], Paul Hoover[2], Shuangni Yang[2], Hanz Blatt[2], Spiro Getsios[2], Cara Gottardi[1], Robert Lavker[2], Navdeep Chandel[1]; 1. Medicine, Northwestern University, Chicago, IL, USA; 2. Dermatology, Northwestern University, Chicago, IL, USA.

698.Topical glucocorticoid or pimecrolimus suppresses thymic stromal lymphopoietin (TSLP)-related allergic inflammatory mechanism in oxazolone-induced atopic dermatitis animal model Na Young Yoon[1], Minyoung Jung[1], Dong Hye Kim[1], Hae-Jin Lee[1], Jong-Kyung Youm[2], Eung Ho Choi[1]; 1. Departments of Dermatology, Yonsei University Wonju College of Medicine, Wonju, Republic of Korea; 2. Cosmax R&I, Seongnam, Republic of Korea.

699.Evaluation of golden silk-derived extract epidermal barrier markers, caspase-14 and related genes in human skin equivalent models Kenji Hattori[1], Akira Date[2], Kazumi Tohyama[2], Hiroomi Tamura[1]; 1. Faculty of Pharmacy, Keio University, Tokyo, Japan; 2. Kobe Technical Center, P&G Japan, Kobe, Japan.

700.Paradoxical benefits of psychological stress in mouse models of inflammatory dermatoses Juan-Luis Santiago[1], Tzu-Kai Lin[2], Mao-Quiang Man[3], Melanie Hupe[3], Gemma Martín-Ezquerra[4], Peter Elias[3]; 1. Dermatology, Hospital General de Ciudad Real, Ciudad Real, Spain; 2. Dermatology, National Cheng Kung University Hospital, and Graduate Institute of Clinical Medicine, College of Medicine, National Cheng Kung University, Tainan, Taiwan; 3. Dermatology, Department of Veterans Affairs Medical Center, and Department of Dermatology, UCSF, San Fracisco, CA, USA; 4. Dermatology, Hospital del Mar-IMIM, Universitat Autonoma de Barcelona, Barcelona, Spain.

701.Altered cutaneous neural innervation in pruritic dermatoses Sarina Elmariah[1], Tara Conniff[2], Tuanlian Luo[1], Ehsan Azimi[1], Vemuri Reddy[1], Ethan Lerner[1], Deon Wolpowitz[2]; 1. Dermatology, Massachusetts General Hospital, Charlestown, MA, USA; 2. Dermatology, Boston University School of Medicine, Boston, MA, USA.

702.Knockdown of filaggrin in a three-dimensional reconstructed human epidermis impairs keratinocyte terminal differentiation program Valérie Pendaries[1, 2, 3], Rachida Nachat[1, 2, 3], Jérémy Malaisse[4], Yves Poumay[4], Guy Serre[1, 2, 3], Michel Simon[1, 2, 3]; 1. UMR5165 CNRS, Toulouse, France; 2. U1056 INSERM, Toulouse, France; 3. University of Toulouse, Toulouse, France; 4. Cell and tissue laboratory, University of Namur, Namur, Belgium.

703.Study of epidermal barrier restoration in human organotypic skin models Tiziana Petrachi, Alessandra Marconi, Francesca Truzzi, Roberta Lotti, Annalisa Saltari, Paolo Morandi, Carlo Pincelli; Dermatology, University of Modena and Reggio Emilia, Modena, Italy.

704.*In vitro, ex vivo* and *in vivo* evaluation of barrier function and skin lipid modulation - from active ingredient to formula Jocelyne Franchi, Isabelle Krolikiewicz-Renimel, Philippe Schaeffer, Emmanuelle Leblanc, Michele Neveu, Sylvianne Schnebert; LVMH-Research, Saint Jean de Braye, France.

705.Lysates of probiotic bacteria augment tight junction barrier function in human primary epidermal keratinocytes Reshma Sultana[1], Andrew McBain[2], Catherine O'Neill[1]; 1. Medicine, University of Manchester, Manchester, United Kingdom; 2. Pharmacy and Pharmaceutical Sciences, University of Manchester, Manchester, United Kingdom.

706.Epidermal keratinocytes form a functional skin barrier in the absence of autophagy Heidemarie Rossiter[1], Ulrich König[1], Caterina Barresi[1], Maria Buchberger[1], Minoo Ghannadan[1], Cheng-Feng Zhang[1, 2], Veronika Mlitz[1], Ramona Gmeiner[1], Supawadee Sukseree[1, 3], Dagmar Födinger[1], Leopold Eckhart[1], Erwin Tschachler[1]; 1. Dermatology, Medical University of Vienna, Vienna, Austria; 2. Dermatology, Huashan Hospital, Fu Dan University, Shanghai, China; 3. Faculty of Medicine, Srinakharinwirot University, Bangkok, Thailand.

707.Paradoxical induction of keratinocyte hyper-proliferation by a differentiation associated protein Keratin 10 Haris Mirza, Keith Choate; Dermatology, Yale University, New Haven, CT, USA.

708.Akt-1 mediates nuclear lamin degradation in keratinocytes and the expression of Cathepsin H a novel epidermal protease involved in profilaggrin processing Aishath Naeem[1, 2], Yanan Zhu[1, 2], John Harper[1], Wei-Li Di[1, 2], Ryan O'Shaughnessy[1, 2]; 1. Livingstone Centre for Skin Research, UCL Institute of Child Health, London, United Kingdom; 2. Immunobiology and Dermatology, UCL Institute of Child Health, London, United Kingdom.

709.Atopic dermatitis-like inflammation: Role of acute versus chronic epidermal barrier impairment Verena Martinz, Matthias Schmuth, Sandrine Dubrac; Department of Dermatology and Venereology, Innsbruck Medical University, Innsbruck, Austria.

710.Computational studies of the regulation of peroxisome proliferator-activated receptors (PPARs) on epidermal barrier function and hydration Nandou Lu, Jean Adamus, Helen Meldrum, Carol Bosko; Unilever, Trumbull, CT, USA.

711.Novel clinical studies lead to new insights on barrier differences between healthy and dry skin and the effects of skin moisturizers on barrier property Nandou Lu, Prem Chandar, Li Feng, John Bajor, Carol Vincent, Shuliang Zhang; Unilever, Trumbull, CT, USA.

712.Improvement of transdermal delivery of caffeine through human skin Nabila Belhaj[1], Virginie Ollier[2], Carine Bezivin[1], Estelle Loing[3]; 1. R&D, Lucas Meyer Cosmetics, Champlan, France; 2. R&D, Lucas Meyer Cosmetics, Ramonville St Agne, France; 3. R&D, Lucas Meyer Cosmetics, Québec, QC, Canada.

713*(CM3-06).Kallikreins 5 and -7 are coordinately transferred with glucosylceramides into lamellar bodies by ABCA12 Lei Zhang[1], Dennis Roop[1], Melanie Hupe[2], Debra Crumrine[2], Peter Elias[2], Walter Holleran[2]; 1. Department of Dermatology, Charles C. Gates Center for Regenerative Medicine and Stem Cell Biology, University of Colorado Anschutz Medical Campus, Aurora, CO, USA; 2. Department of Dermatology, School of Medicine, University of California, San Francisco, CA, USA.

714.Melatoninergic pathway in human skin: Metabolism and phenotypic activity Andrzej Slominski[1], Tae-Kang Kim[1], Konrad Kleszczynski[2], Zorica Janjetovic[1], Trevor Sweatman[3], Wei Li[4], Russel Reiter[5], Tobias Fischer[2]; 1. Pathology and Laboratory Medicine, Center for Cancer Research, UTHSC, Memphis, TN, USA; 2. Dermatology, University of Lubeck, Lubeck, Germany; 3. Pharmacology, UTHSC, Memphis, TN, USA; 4. Pharmaceutical Sciences, UTHSC, Memphis, TN, USA; 5. Cellular & Structural Biology, UT Health Science Center, San Antonio, TX, USA.

715.Cyclophilin B, expressed in the granular layer of epidermis, regulates human keratinocyte differentiation, growth and homeostasis Aparna Sinha[1], Ann Lonsdale-Eccles[1], Paula Fearon[1], Alison Forrester[1], Carole Todd[1], Fabrice Allain[2], Nick Reynolds[1]; 1. Institute of Cellular Medicine, Newcastle University, Newcastle-upon-Tyne, United Kingdom; 2. Université des Sciences et Technologies de Lille, Lille, France.

716.EGFR inhibitor treatment in pemphigus vulgaris provides a clinical study design with crucial insights into signal molecule inhibition for epidermal homeostasis Beyza Sayar[1, 4], Enno Schmidt[2], Maria Sibilia[3], Maja Suter[1, 4], Arnaud Galichet[1, 4], Eliane Müller[1, 4]; 1. Molecular Dermatology, Institute of Animal Pathology, University of Bern, Bern, Switzerland; 2. Department of Dermatology and Comprehensive Center for Inflammation Medicine, University of Luebeck, Luebeck, Germany; 3. Institute of Cancer Research, Department of Medicine I, Medical University of Vienna, Vienna, Austria; 4. DermFocus, University of Bern, Bern, Switzerland.

717.Leptin affects sebaceous lipid formation and intracellular distribution and induces proinflammatory signaling in SZ95 sebocytes Daniel Torocsik[1], Dora Kovacs[1], Aniko Dozsa[2], Edit Posta[1], Raphael Molinaro[4], Gergely Nagy[3], Ralph Ruhl[5], Gabor Tax[6, 7], Kornelia Szabo[7], Lajos Kemeny[6, 7], Christos Zouboulis[8], Eva Remenyik[1]; 1. Department of Dermatology, University of Debrecen, Medical and Health Science Center, Debrecen, Hungary; 2. Department of Dermatology, Semmelweis Medical and Health Care Center, Miskolc, Hungary; 3. Department of Internal Medicine, University of Debrecen, Medical and Health Science Center, Debrecen, Hungary; 4. Laboratório de Imunofarmacologia, Instituto Oswaldo Cruz, Fundação Oswaldo Cruz, Rio de Janeiro, Brazil; 5. Department of Biochemistry and Molecular Biology, University of Debrecen, Medical and Health Science Center, Debrecen, Hungary; 6. Department of Dermatology and Allergology, University of Szeged, Szeged, Hungary; 7. MTA-SZTE Dermatological Research Group, University of Szeged, Szeged, Hungary; 8. Departments of Dermatology, Venereology, Allergology and Immunology, Dessau Medical Center, Dessau, Germany.

718*(CM16-06).Flightless I overexpression impairs skin barrier development, function and recovery post-blistering Zlatko Kopecki[1, 2], Gink Yang[2], Ruth Arkell[3], Jessica Jackson[2], Hioraki Iwata[4], Ralf Ludwig[4], Detlef Zillikens[4], Dedee Murrell[5], Allison Cowin[1, 2]; 1. Centre for Regenerative Medicine, Mawson Institute, University of South Australia, Adelaide, SA, Australia; 2. Women's and Children's Health Research Institute, North Adelaide, SA, Australia; 3. Research School of Biological Sciences, Australian National University, Canberra, ACT, Australia; 4. Department of Dermatology, University of Lubeck, Lubeck, Germany; 5. Department of Dermatology, St George Hospital, Sydney, NSW, Australia.

719.Novel *ABCA12* splice site deletion mutation and *ABCA12* mRNA analysis in harlequin ichthyosis Takuya Takeichi, Kazumitsu Sugiura, Michihiro Kono, Masashi Akiyama; Department of Dermatology, Nagoya University Graduate School of Medicine, Nagoya, Japan.

720.Regulation of PPAR alpha in models of skin barrier disruption Stefan Blunder, Sandrine Dubrac, Matthias Schmuth; Dermatology, Medical University Innsbruck, Innsbruck, Austria.

721.mRNA and protein expression of filaggrin and loricrin in cultured normal human keratinocytes was increased after treatment with PPAR – agonists Yan Yan, Minao Furumura, Sanae Numata, Kwesi Teye, Bungo Ohyama, Takashi Hashimoto; Department of Dermatology, Kurume University School of Medicine, and Kurume University Institute of Cutaneous Cell Biology, Fukuoka, Japan.

722.Studying keratinocyte functions in atopic dermatitis, by using outer root sheath keratinocytes Gábor Mócsai[1], Erika Lisztes[2], Georgina Nagy[1], Tamás Bíró[2], Andrea Szegedi[1]; 1. Department of Dermatological Allergology, University of Debrecen, MHSC, Debrecen, Hungary; 2. DE-MTA "Lendület" Cellular Physiology Research Group, Department of Physiology, University of Debrecen, MHSC, Debrecen, Hungary.

723.ORAI1 channel orchestrates skin homeostasis via calcium dependent regulation of focal adhesion kinase and directional migration Maylis Raphaël*[1], Matthieu Vandenberghe*[1], V'yacheslav Lehen'kyi*[1], Dmitri Gordienko[1, 2, 3], Ryan Hastie[4], Thierry Oddos[5], Patrick Hogan[4], Anjana Rao[4], Roman Skryma[1], Natalia Prevarskaya[1]; 1. Laboratory of cell Physiology, INSERM U1003, University of Sciences and Technologies of Lille, Villeneuve d'ascq, France; 2. Laboratory of Molecular Pharmacology and Biophysics of Cell Signalling, Bogomoletz Institute of Physiology, Kiev, Ukraine; 3. State Key Laboratory of Molecular and Cell Biology, Kiev, Ukraine; 4. La Jolla Institute for Allergy and Immunology, San Diego, CA, USA; 5. Research and Development Department, Johnson & Johnson Santé Beauté France, Val de Reuil, France.

724.Association of R501X and 2282del4 FLG gene mutations, -137 G/C IL-18 and 1112 C/T IL-13 polymorphisms with AD course and risk M. Trzeciak[1], J. Glen[1], K. Rebala[2], M. Sikorska[1], T. Bandurski[3], R. Nowicki[1]; 1. Depratment of Dermatology, Venereology and Allergology, Medical University of Gdansk, Gdansk, Poland; 2. Department of Forensic Medicine, Medical University of Gdansk, Gdansk, Poland; 3. Department of Radiological Science and Statistics, Medical University of Gdansk, Gdansk, Poland.

725.Free fatty acids and lipid chain length correlate with the impaired skin barrier of atopic eczema patients Jeroen van Smeden[1], Michelle Janssens[1], Rob Vreeken[2], Adriana Lavrijsen[3], Joke Bouwstra[1]; 1. Division of Drug Delivery Technology, Leiden Academic Centre for Drug Research, Leiden, Netherlands; 2. Division of Analytical Biosciences, Leiden Academic Centre for Drug Research, Leiden, Netherlands; 3. Department of Dermatology, Leiden University Medical Center, Leiden, Netherlands.

726*(CM3-09).Keratin 9 is required for the structural integrity and differentiation of palmoplantar epidermis Dun Jack Fu[1], Calum Thomson[2], Declan Lunny[3], Patricia Dopping-Hepenstal[4], John McGrath[5], Frances Smith[1], W.H. Irwin McLean[1], Deena Leslie Pedrioli[1]; 1. Centre for Dermatology and Genetic Medicine, University of Dundee, Dundee, United Kingdom; 2. Microscopy Facility, University of Dundee, Dundee, United Kingdom; 3. Institute of Medical Biology, Singapore, Singapore; 4. St. Thomas' Hospital, London, United Kingdom; 5. King's College London, London, United Kingdom.

727*(CM3-10).The evolutionary origin of loricrin was associated with the transition to fully terrestrial life Bettina Strasser[1], Veronika Mlitz[1], Marcela Hermann[2], Erwin Tschachler[1], Leopold Eckhart[1]; 1. Dermatology, Medical University of Vienna, Vienna, Austria; 2. Medical Biochemistry, Medical University of Vienna, Vienna, Austria.

728.The irritant effects of pharmaceutical excipients used in topical formulations Zsuzsanna Kurgyis[1], Gábor Eros[1, 2], István Németh[1], Eszter Csizmazia[3], Szilvia Berkó[3], Piroska Szabó-Révész[3], Lajos Kemény[1], Erzsébet Csányi[3]; 1. Department of Dermatology and Allergology, University of Szeged, Szeged, Hungary; 2. Department of Oral Biology and Experimental Dental Research, University of Szeged, Szeged, Hungary; 3. Department of Pharmaceutical Technology, University of Szeged, Szeged, Hungary.

729.Hornerin is a new target of calpain-1 Chiung-Yueh Hsu[1, 2, 3], Marie-Claire Méchin[1, 2, 3], Anne-aurélie Raymond[3, 4], Julie Henry[1, 2, 3], Odile Burlet-Schiltz[3, 4], Hidenari Takahara[5], Anne-Marie Schmitt[6], Guy Serre[1, 2, 3], Michel Simon[1, 2, 3]; 1. UMR5165, CNRS, Toulouse, France; 2. U1056, INSERM, Toulouse, France; 3. University of Toulouse, Toulouse, France; 4. UMR5089, CNRS, Toulouse, France; 5. University of Ibaraki, Ibaraki, Japan; 6. Pierre-Fabre dermo-cosmétique, Toulouse, France.

730.POF1B protein distribution in normal and pathological skin Pamela Della Mina[1], Arianna Crespi[2], Luisa Lunardon[3], Antonello Villa[1, 4], Grazia Pietrini[2], Emilio Berti[4, 1]; 1. Consorzio MIA, Monza, Italy; 2. Dipartimento di Biotecnologie Mediche e Medicina Traslazionale, Università degli Studi di Milano, Milan, Italy; 3. Division of Dermatology, Fondazione IRCCS Ca' Granda, Milan, Italy; 4. Dipartimento di Scienze della Salute, Università degli Studi di Milano Bicocca, Milan, Italy.

731.Characterization of the expression of two key epidermal proteins, filaggrin and corneodesmosin, in dog skin Emilie Videmont[1], Marek Haftek[3], Guy Serre[2], Michel Simon[2], Didier Pin[1]; 1. VetAgro Sup Campus Vétérinaire de Lyon, Marcy l'Etoile, France; 2. CNRS-INSERM-University of Toulouse UMR 5165-U1056, Toulouse, France; 3. University of Lyon, EA4169, Lyon, France.

732.Filaggrin knockdown does not affect skin barrier properties of a human skin equivalent Vincent van Drongelen[1, 2], Mogbekeloluwa Danso[1], Joke Bouwstra[1], Abdoelwaheb El Ghalbzouri[2]; 1. Dermatology, LUMC, Leiden, Netherlands; 2. Drug Delivery Technology, LACDR, Leiden, Netherlands.

Posters

733.Fibroblasts contribute to the pathogenesis of atopic dermatitis: Impact of leukemia inhibitory factor Andreas Berroth[1], Jochen Kühnl[1], Nina Kurschat[1], Agatha Schwarz[2], Franz Stäb[1], Thomas Schwarz[2], Horst Wenck[1], Regina Fölster-Holst[2], Gitta Neufang[1]; 1. Research and Development, Beiersdorf AG, Hamburg, Germany; 2. Department of Dermatology and Allergology, Christian-Albrechts University Kiel, Kiel, Germany.

734*(CM16-07).Role of kindlin-2 in epidermal homeostasis Yinghong He[1], Tanja Sonnenwald[2], Gudula Schmidt[2], Anja Fritsch[1], Leena Bruckner-Tuderman[1], Cristina Has[1]; 1. Dermatology, University, Freiburg, Germany; 2. Pharmacology, University, Freiburg, Germany.

735.Crosstalk of nerve endings and keratinocytes in an innervated skin model: Implications for atopic dermatitis Dennis Roggenkamp[1], Sarah Köpnick[1], Franz Stäb[1], Horst Wenck[1], Martin Schmelz[2], Gitta Neufang[1]; 1. Research and Development, Beiersdorf AG, Hamburg, Germany; 2. Department of Anesthesiology Mannheim, Heidelberg University, Mannheim, Germany.

736.Loss of integrin α3 impacts cell-matrix adhesion and migration of keratinocytes Chiara Pazzagli[1], Yinghong He[1], Melanie Boerries[2], Hauke Busche[2], Dimitra Kiritsi[1], Philipp Esser[1], Yannick Gache[3], Leena Bruckner-Tuderman[1], Cristina Has[1]; 1. Dermatology, University, Freiburg, Germany; 2. ZBSA, University, Freiburg, Germany; 3. INSERM U998, University, Nice, France.

737.Regulation of aquaporin expression and localization in keratinocytes of human skin epidermis Elympe Vodouhe[1], Milene Juan[2], Emmanuelle Leblanc[2], Sylviane Schnebert[2], Marc Dumas[2], Jean-Marc Verbavatz[3]; 1. IBITEC-S, CEA/Saclay, Gif sur Yvette, France; 2. LVMH-Recherche, Saint Jean de Braye, France; 3. EM Group, MPI-CBG, Dresden, Germany.

738.Valrubicin increases mRNA expression levels of sphingosine kinase 1 in keratinocytes and skin cancer cells Stine Maria Andersen[1], Karin Stenderup[1], Elisabeth de Darkó[2], Tomas Norman Dam[3], Cecilia Rosada[1]; 1. Department of Dermatology, Aarhus University Hospital, Aarhus, Denmark; 2. Valderm ApS, Lyngby, Denmark; 3. Department of Dermatology, Roskilde Hospital, Roskilde, Denmark.

739.Effects of sleep quality on skin aging and function Patricia Oyetakin-White[1], Brian Koo[2], Mary Matsui[3], Daniel Yarosh[3], Kevin Cooper[1], Elma Baron[1]; 1. Dermatology, Case Western Reserve University/University Hospitals of Cleveland, Cleveland, OH, USA; 2. Pulmonary and Sleep Medicine, Case Western Reserve University/University Hospitals of Cleveland, Cleveland, OH, USA; 3. Estee Lauder Companies Inc, Melville, NY, USA.

740.Protection and repair of skin cell damage caused by exposure to extreme temperatures Jolanta Idkowiak-Baldys, Siming Chen, Teena Jacob, Uma Santhanam; Avon Products Inc. Global R&D, Suffern, NY, USA.

741.The changes in stratum corneum lipid fluidity and packing induced by basic pH are dependent on exposure time David Moore[1, 2], Daniel Moore[4], Gopinathan Menon[3]; 1. TRI/Princeton, Princeton, NJ, USA; 2. Rutgers University, Newark, NJ, USA; 3. California Academy of Sciences, San Francisco, CA, USA; 4. Skidmore College, Saratoga Springs, NY, USA.

742.IASPP is a novel autophagy inhibitor in keratinocytes Anissa Chikh, Catherine Harwood, Daniele Bergamaschi; Cutaneous Research, Queen Mary's University of London, London, United Kingdom.

743.Sensory nerves express Interleukin-31 receptor A to mediate T helper cell-dependent pruritus and neuroimmune communication in atopic dermatitis Ferda Cevikbas[1], Xidao Wang[2], Tasuko Akiyama[3], Terhi Savinko[4], Attila Antal[5], Cordula Kempkes[1], Micha Feld[5], Gabriela Kukova[5], Timo Buhl[1], Harri Alenius[4], Stacey Dillon[6], Earl Carstens[3], Bernhard Homey[5], Allan Basbaum[2], Martin Steinhoff[1]; 1. Depts. of Dermatology and Surgery, University of California San Francisco, San Francisco, CA, USA; 2. Dept. of Anatomy, University of California San Francisco, San Francisco, CA, USA; 3. Dept. of Neurobiology, University of California Davis, Davis, CA, USA; 4. Finnish Institute of Occupational Health, Helsinki, Finland; 5. Dept. of Dermatology, University Hospital Duesseldorf, Duesseldorf, Germany; 6. ZymoGenetics, Seattle, WA, USA.

744.SERCA2 defect in Darier disease causes ER stress leading to impaired trafficking and defective cell-to-cell adhesion strength Magali Savignac[2], Marina Simon[1], Anissa Edir[1], Laure Guibbal[1], Alain Hovnanian[1]; 1. Department of Genetics, INSERM U781, 3Université Paris V René Descartes, Necker Hospital, Paris, France; 2. INSERM, U1043, Toulouse, France.

745.Non-invasive method to study pruritus in mice using iontophoresis Cordula Kempkes, Akihiko Ikoma, Mikael Langner, Ferda Cevikbas, Ron Manlapaz, Timo Buhl, Martin Steinhoff; Depts. of Dermatology and Surgery, University of California San Francisco, San Francisco, CA, USA.

746.Atopic dermatitis confers enhanced skin responses to experimentally-induced tandem repeated irritation *in vivo* I. Angelova-Fischer[1], A. Hoek[1], I. Dapic[3], T. Fischer[1], D. Zillikens[1], S. Kezic[2]; 1. Department of Dermatology, University of Lübeck, Lübeck, Germany; 2. Coronel Institute of Occupational Health, Amsterdam, Netherlands; 3. Faculty of Food Technology and Biotechnology, Zagreb, Croatia.

747.Infrared imaging spectroscopy of *ex vivo* skin David Moore[1, 2], Carol Flach[2]; 1. TRI/Princeton, Princeton, NJ, USA; 2. Rutgers University, Newark, NJ, USA.

748.Controversial effect of *Matricaria chamomilla* aqueous extract associated to an emollient as treatment for dermatitis induced in a murine model Raúl Ortiz-Bautista[1, 3], Laura García-González[1], Marco Ocadiz-González[1], Julia Flores-Tochihuitl[2], Arturo García-Villaseñor[1], Margarita González-Hernández[1], Liliana Muñoz-Hernández[3], Consuelo Ortiz-Figueroa[1], Marisol Ramírez-Anaya[1, 4], Silvia Reyna-Téllez[1], Octavio Villanueva-Sánchez[3]; 1. Universidad de las Américas Puebla, Puebla, Mexico; 2. Benemérita Universidad Autónoma del Estado de Puebla, Puebla, Mexico; 3. Instituto Nacional de Ciencias Médicas y Nutrición "Salvador Zubirán", D.F., Mexico; 4. Hospital General de Puebla, Zona Norte, Puebla, Mexico.

749.Constitutive autophagy as a terminal differentiation mechanism Olufolake Akinduro[1], Katherine Sully[1], Anissa Chikh[1], Ryan O'shaughnessy[2], Daniele Bergamaschi[1], Catherine Harwood[1], Mike Philpott[1], Carolyn Byrne[1]; 1. Cutaneous Research, Blizard Institute, Barts and the London School of Medicine and Dentistry, London, United Kingdom; 2. Institute of Child Health, University College London, London, United Kingdom.

750.Assessment of the sensory threshold in patients with atopic dermatitis and psoriasis Adam Reich[1], Konrad Chabowski[2], Magdalena Krzyzanowska[1], Katarzyna Muszer[1]; 1. Department of Dermatology, Venereology and Allergology, Wroclaw Medical University, Wroclaw, Poland; 2. Faculty of Microsystem Electronics and Photonics,, Wroclaw University of Technology, Wroclaw, Poland.

751.TRP channels govern the balance of keratinocyte proliferation and differentiation *in vitro* and in the context of skin disease Ellen Lumpkin[1], Aislyn Nelson[1, 3], Sarah Wilson[2], David Owens[1], Diana Bautista[2]; 1. Columbia University, New York, NY, USA; 2. UC Berkeley, Berkeley, CA, USA; 3. Baylor College of Medicine, Houston, TX, USA.

752.Neonatal and infant skin surface area expansion and correlation with the developing skin barrier and structure M. Catherine Mack Correa, Preeya Khanna, Russel Walters; Johnson & Johnson Consumer Products Company, Skillman, NJ, USA.

753.Protein kinase D1 negatively regulates epidermal keratinocyte differentiation Vivek Choudhary[1, 2], Lawrence Olala[1, 2], Ismail Kaddour-Djebbar[1, 2], Wendy Bollag[1, 2]; 1. Charlie Norwood VA Medical Center, Augusta, GA, USA; 2. Georgia Health Sciences University, Augusta, GA, USA.

754.Effects of Aspergillus oryzae-challenged germinated soybean extract on skin changes induced by ovariectomy in hairless mice Hyun Jung Shin, Ji Hae Lee, Hyun Woo Jeong, Dae Bang Seo, Sang Jun Lee; Amorepacific R&D Unit, Yongin-si, Gyeonggi-do, Republic of Korea.

755.Multifunctional molecules and the biomechanical function of human stratum corneum Krysta Biniek, Reinhold Dauskardt; Stanford University, Stanford, CA, USA.

756.βKlotho is downregulated in the skin of individuals with atopic dermatitis Zacharias Aloysius Dwi Pramono, Xuejun Mo, Mark Boon Yang Tang; National Skin Centre, Singapore, Singapore.

Genetic Diseases/Gene Regulation/Gene Therapy

All orals designated with an asterisk (*) below are presented in a Concurrent Session (see code). Orals designated with two asterisks (**) will be presented during a Plenary Session (see code).

757.Production of gene engineered epithelia sheets for first-in-man use Wei-Li Di[1], Sumera Ghani[1], David Almarza[1], Lucas Chen[2], Jemima Mellerio[3], Catina Bernadis[3], John Harper[1], Adrian Thrasher[1], Farzin Farzaneh[2], Waseem Qasim[1]; 1. UCL Institute of Child Health, London, United Kingdom; 2. King's College London School of Medicine, London, United Kingdom; 3. St Thomas' Hospital, London, United Kingdom.

758.Carotid intima-media thickness change with magnesium administration in Abcc6-/- mice Erine Kupetsky[1], Jouni Uitto[1], Fred Rincon[2]; 1. Department of Dermatology, Thomas Jefferson University, Philadelphia, PA, USA; 2. Department of Neurosurgery, Thomas Jefferson University, Philadelphia, PA, USA.

759.Disease severity among Asians with pseudoxanthoma elasticum Erine Kupetsky[1], Rachel Brissette[2], Sharon Terry[4], Jin Liang[3], Jouni Uitto[1]; 1. Department of Dermatology and Cutaneous Biology, Thomas Jefferson University, Philadelphia, PA, USA; 2. Mamaroneck HIgh School, Mamaroneck, NY, USA; 3. Department of Dermatology, Xijing Hospital, Fourth Military Medical University, Xi'an, China; 4. PXE International, Washington, DC, DC, USA.

760.*In vitro* reconstruction of epidermis from primary Darier's disease keratinocytes replicates the histopathological phenotype Catherine Lambert de Rouvroit[1], Céline Charlier[1], Damien Lederer[2], Valérie De Glas[1], Evelyne De Vuyst[1], Jean-Louis Dargent[2], Paola Grammatico[3], Francisco Binni[3], Catherine Rousseau[4], Jean-Luc Hennecker[4], Arjen Nikkels[5], Yves Poumay[1]; 1. Cell and Tissue laboratory, NARILIS, University of Namur, Namur, Belgium; 2. Institute of Pathology and Genetics, Gosselies, Belgium; 3. Sapienza Università, Roma, Italy; 4. Clinique ND de Grace, Gosselies, Belgium; 5. University Medical Center, Liège, Belgium.

761.31-year follow-up of Kindler syndrome with severe intestinal involvement Satoko Shimizu[1], Wataru Nishie[2], Kikuo Tsuchiya[1], Daisuke Inokuma[1], Hanako Koguchi[1], Kazuhiro Kikuchi[1], Satoshi Motoya[3], Hideki Nakamura[2], Hiroshi Shimizu[2]; 1. Dermatology, Sapporo City General Hospital, Sapporo, Japan; 2. Dermatology, Hokkaido University School of Medicine, Sapporo, Japan; 3. Gastroenterology, Sapporo-Kosei General Hospital, Sapporo, Japan.

762.Rare variations in IL36RN in severe adverse drug reactions manifesting as acute generalized exanthematous pustulosis Alexander Navarini[1], Laurence Valeyrie-Allanore[3], Niovi Setta-Kaffetzi[1], Jonathan Barker[1], Francesca Capon[1], Daniel Creamer[2], Jean-Claude Roujeau[3], Peggy Sekula[5], Michael Simpson[1], Richard Trembath[1], Maja Mockenhaupt[4], Catherine Smith[1]; 1. Division of Genetics and Molecular Medicine, Guy's Hospital, King's College, London, United Kingdom; 2. King's College Hospital, Denmark Hill, London, United Kingdom; 3. Department of Dermatology, Referral center for toxic and auto-immune blistering diseases, Henri Mondor Hospital, Assistance Publique Hôpitaux de Paris, Université Paris-Est Créteil, Paris, France; 4. Dokumentationszentrum schwerer Hautreaktionen (dZh), Universitäts-Hautklinik / Dept. of Dermatology, Freiburg, Germany; 5. Institute of Medical Biometry and Medical Informatics, University Medical Center Freiburg, Freiburg, Germany.

763.Characterization of 3 novel XPG-defective patients identifies 3 missense mutations that impair repair and transcription Annika Schäfer[1], Steffen Schubert[1], Alexei Gratchev[2], Antje Apel[1], Petra Laspe[1], Lars Hofmann[1], Andreas Ohlenbusch[3], Toshio Mori[4], Nobuhiko Kobayashi[5], Anke Schürer[1], Michael Schön[1], Steffen Emmert[1]; 1. Department of Dermatology, Venerology and Allergology, University Medical Center Göttingen, Göttingen, Germany; 2. Department of Dermatology, Venerology, and Allergology, University Medical Center Mannheim, Mannheim, Germany; 3. Department of Pediatrics, University Medical Center Göttingen, Göttingen, Germany; 4. Radioisotope Research Center, Nara Medical University, Nara, Japan; 5. Department of Dermatology, Nara Medical University, Nara, Japan.

764.New homozygous deletion of the entire *CDSN* gene in a Japanese patient with generalized peeling skin syndrome: First case in human Kwesi Teye, Takahiro Hamada, Sachiko Sakaguchi, Sanae Numata, Norito Ishii, Chika Ohata, Minao Furumura, Takashi Hashimoto; Department of Dermatology, Kurume University School of Medicine, and Kurume University Institute of Cutaneous Cell Biology, Kurume, Japan.

765.Genome-wide expression analysis identifies unique disease and HLA-linked control signatures in pemphigus vulgaris Rama Dey-Rao, Kristina Seiffert-Sinha, Animesh Sinha; Dermatology, University at Buffalo and Roswell Park Cancer Institute, Buffalo, NY, USA.

766.A novel complex insertion-deletion mutation in the FOXC2 gene in a Japanese case with lymphedema-distichiasis syndrome Munenari Itoh, Hidemi Nakagawa; Dermatology, The Jikei University School of Medicine, Tokyo, Japan.

767.Detection of keratin filaments and aggregates in HeLa cells transfected with fluorescently tagged keratin 1 and 10 using a high content imaging assay Hans Törmä[1], Mikael Lindberg[1], Hao Li[1], Marie Virtanen[1], Mirjana Liovic[2], Anders Vahlquist[1]; 1. Department of Medical Sciences/Dermatology, Uppsala University, Uppsala, Sweden; 2. Medical Center for Molecular Biology, University of Ljubljana, Ljubljana, Slovenia.

768.Novel deletion mutation of TRPS1 gene in a Chinese case of Trichorhinophalangeal syndrome type I Shan Dai[1], Xu Nan[2], Chun-ting Li[1], Xue-rong Chen[1], Hong-shan Zhao[2], Feng-shan Zhang[3], Qing-hua Song[1]; 1. dermatology, peking university third hospital, Beijing, China; 2. medical genetics, peking university, Beijing, China; 3. orthopedics, peking university third hospital, Beijing, China.

769.Genetic knockdown of serine protease inhibitor Kazal-type 5 in organotypic human skin culture as a model system for Netherton syndrome: Effect of genetic inhibition of serine proteases Shirley Wang, Nicole Schoefmann, Sabine Olt, Anthony Winiski, Barbara Wolff-Winiski; ATI/Dermatology, Novartis Institutes for BioMedical Research, Vienna, Austria.

770.The genetic analysis of IL36RN differentiates pustular psoriasis from psoriasis vulgaris Niovi Setta-Kaffetzi[1], Dorottya Berki[1], Satveer Mahil[1], Alexander Navarini[1], Varsha Patel[1], Siew-Eng Choon[2], A David Burden[3], Christopher Griffiths[4], Marieke Seyger[5], Brian Kirby[6], Richard Trembath[1, 7], Michael Simpson[1], Catherine Smith[1], Francesca Capon[1], Jonathan Barker[1]; 1. Genetics and Molecular Medicine, King's College London, London, United Kingdom; 2. Department of Dermatology, Hospital S. Aminah, Johor Bahru, Malaysia; 3. Department of Dermatology, University of Glasgow, Glasgow, United Kingdom; 4. Department of Dermatology, University of Manchester, Manchester, United Kingdom; 5. Radboud University, Nijmegen, Netherlands; 6. Department of Dermatology, St. Vincent's University Hospital, Dublin, Ireland; 7. Queen Mary University of London, London, United Kingdom.

771.Keratinocytes express functional common gamma chain Karolin Nowak[1], Adrian Thrasher[1], Wei Di[1], Siobhan Burns[2]; 1. Molecular Immunology Unit, Insitute of Child Health / UCL, London, United Kingdom; 2. Department of Immunology, Royal Free Hospital / UCL, London, United Kingdom.

772.Identification of a novel gene, *UVSSA/KIAA1530*, responsible for UV-sensitive syndrome Yoshito Takahashi[1], Yuka Nakazawa[2, 3], Atsushi Utani[4], Koh-ichiro Yoshiura[5], Tomoo Ogi[2, 3]; 1. Innovative Beauty Science Laboratory, Kanebo Cosmetics Inc., Odawara, Japan; 2. Department of Molecular Medicine, Atomic Bomb Disease Institute, Graduate School of Biomedical Sciences, Nagasaki University, Nagasaki, Japan; 3. Nagasaki University Research Centre for Genomic Instability and Carcinogenesis, Nagasaki, Japan; 4. Department of Dermatology, Graduate School of Biomedical Sciences, Nagasaki University, Nagasaki, Japan; 5. Department of Human Genetics, Atomic Bomb Disease Institute, Graduate School of Biomedical Sciences, Nagasaki University, Nagasaki, Japan.

773.Mutation analysis in benign skin tumors of patients with familial adenomatous polyposis coli (FAP) Danielle Stegmann[1], Philippe Demougin[2], Karl Heinimann[3], Peter Itin[1], Bettina Burger[1]; 1. Department of Biomedicine, University Hospital Basel, Research Group Dermatology, Basel, Switzerland; 2. Division of Molecular Psychology, Pharmacenter, University of Basel, Basel, Switzerland; 3. Department of Biomedicine and Division of Medical Genetics, University Hospital Basel, Research Group Human Genetics, Basel, Switzerland.

774.Molecular characterization of inflammatory processes in acne vulgaris and papulopustular rosacea S. Déret[1], I. Carlavan[1], C. Ménigot[1], P. Reiniche[1], B. Bertino[1], M. Roquet[1], F. Joly[1], B. Gauthier[1], J. Aubert[1], M. Steinhoff[2], U. Blume[3], J. Voegel[1]; 1. Galderma R&D, Sophia-Antipolis, France; 2. Univ of California, San Francisco, CA, USA; 3. Charité - University Medicine Berlin, Berlin, Germany.

775.Loxl1 is hypermethylated in aged dermal fibroblasts by a DNA methyl transferase dependant complex Léa Moulin[1], Valérie Cenizo[2], Valérie Andre-Frei[2], Pascal Sommer[1], Romain Debret[1]; 1. INSTITUT DE BIOLOGIE ET CHIMIE DES PROTEINES, LYON, France; 2. BASF BEAUTY CREATIONS BEAUTY CARE SOLUTION FRANCE SAS, LYON, France.

776.Phenotypic overlap of PXE/GACI and mutations in the *ABCC6* and *ENPP1* genes Qiaoli Li[1], Jill Brodsky[2], Matthew Deardorff[2], Michael Levine[2], Jouni Uitto[1]; 1. Dermatology and Cutaneous Biology, Jefferson Medical College, Philadelphia, PA, USA; 2. Children's Hospital of Philadelphia, Philadelphia, PA, USA.

777.Warfarin accelerates ectopic mineralization in Abcc6$^{-/-}$ mice - clinical relevance to pseudoxanthoma elasticum Qiaoli Li[1], Haitao Guo[1], David Chou[1], Dominic Harrington[2], Leon Schurgers[3], Sharon Terry[4], Jouni Uitto[1]; 1. Dermatology and Cutaneous Biology, Jefferson Medical College, Philadelphia, PA, USA; 2. Nutristasis Unit, St. Thomas' Hospital/King's Healthcare Partners, London, United Kingdom; 3. Department of Biochemistry, Cardiovascular Research Institute/University of Maastricht, Maastricht, Netherlands; 4. PXE International, Washington, DC, USA.

778.Premature termination codon read-through of *ABCC6* nonsense mutations in pseudoxanthoma elasticum Changxia Shao, Yong Zhou, Shunsuke Takahagi, Qiujie Jiang, Jouni Uitto; Dermatology and Cutaneous Biology, Jefferson Medical College, Philadelphia, PA, USA.

779*(CM7-01).Successful therapeutic transplantation of revertant skin in a patient with epidermolysis bullosa Antoni Gostynski, Anna Pasmooij, Jeroen Bremer, Janneke Huizinga, José Duipmans, Marcel Jonkman; Center for Blistering Diseases and Department of Dermatology, University Medical Center Groningen and University of Groningen, Groningen, Netherlands.

780.Characterisation of early-onset psoriasis loci in late-onset psoriasis H. Hébert[1, 2], J. Bowes[1], E. Flynn[1], N. McHugh[3], J. Barker[4], C. Griffiths[2], A. Barton[1], R. Warren[2]; 1. Arthritis Research UK Epidemiology Unit, University of Manchester, Manchester, United Kingdom; 2. Dermatology Research Centre, University of Manchester, Manchester, United Kingdom; 3. Royal National Hospital for Rheumatic Diseases, University of Bath, Bath, United Kingdom; 4. Division of Genetics and Molecular Medicine, King's College London, London, United Kingdom.

781.Pathologic genetic alternations in 4 patients affected by ichthyosis with confetti Iris Spoerri[1], Julie De Mesmaeker[1], Gianluca Tadini[2], Peter Itin[1], Bettina Burger[1]; 1. Research Lab of Dermatology, Department of Biomedicine, University Hospital Basel, Basel, Switzerland; 2. Istituto di Scienze Dermatologiche, IRCCS Ospedale Maggiore, Milano, Italy.

782.The role of galectin-12 in sebaceous gland function Wei-Chen Hsieh[1], Ri-Yao Yang[3], Christos C. Zouboulis[2], Fu-Tong Liu[1]; 1. Institute of Biomedical Sciences, Academia Sinica, Taipei, Taiwan; 2. Departments of Dermatology, Venereology, Allergology and Immunology, Dessau Medical Center, Dessau, Germany; 3. Department of Dermatology, School of Medicine, University of California, Davis, Sacramento, CA, USA.

783.Complete maternal isodisomy of chromosome 5 in a Japanese patient with Netherton syndrome Sanae Numata, Takahiro Hamada, Kwesi Teye, Mitsuhiro Matsuda, Norito Ishii, Minao Furumura, Chika Ohata, Takashi Hashimoto; Department of Dermatology, Kurume University School of Medicine, and Kurume University Institute of Cutaneous Cell Biology, Kurume, Japan.

784.Pachyonychia congenita in Japan: A report of familial cases and results of the national surveillance Nobuo Kanazawa[1], Yutaka Inaba[1], Yumi Nakatani[1], Fukumi Furukawa[1], Hajime Nakano[2], Daisuke Sawamura[2], Takahiro Hamada[3], Takashi Hashimoto[3], Kozo Yoneda[4]; 1. Department of Dermatology, Wakayama Medical University, Wakayama, Japan; 2. Department of Dermatology, Hirosaki University Graduate School of Medicine, Hirosaki, Japan; 3. Department of Dermatology, Kurume University School of Medicine, Kurume, Japan; 4. Department of Dermatology, Kagawa University Faculty of Medicine, Miki-cho, Japan.

785.Role of CRD-BP in the growth of human basal cell carcinoma cells Felicite Noubissi[1], TaeWon Kim[1], Tisha Kawahara[1], Jack Longley[1], Eric Berg[1], Mohammad Athar[2], Vladimir Spiegelman[1]; 1. Dermatology, University of Wisconsin, Madison, WI, USA; 2. Dermatology, University of Alabama, Birmingham, Birmingham, AL, USA.

786.Polymorphisms in interleukin-1β distinguish between early and late-onset psoriasis H. Hébert[1, 2], J. Bowes[1], R. Smith[1], N. McHugh[3], J. Barker[4], C. Griffiths[2], A. Barton[1], R. Warren[2]; 1. ARUK, University of Manchester, Manchester, United Kingdom; 2. Dermatology Centre, University of Manchester, Manchester, United Kingdom; 3. National Hospital for Rheumatic Diseases, University of Bath, Bath, United Kingdom; 4. Division of Genetics and Molecular Medicine, King's College, London, United Kingdom.

Posters

787.Skin features of Hutchinson-Gilford progeria syndrome during the years Angelo Massimiliano D'Erme[1], Nicola Milanesi[1], Maria Francesca Gola[2], Mauro Paradisi[3], Francesca Passarelli[3], Massimo Gola[1]; 1. Department of Critical Care Medicine and Surgery, Division of Dermatology, University of Florence, Florence, Italy; 2. Traditional Chinese Medical Center, "Fior di Prugna", Florence Health Authority, Florence, Florence, Italy; 3. IDI-IRCCS, Rome, Italy.

788.Genetic variants in the promoter region of the human histamine H4 receptor gene are associated with psoriasis Susanne Mommert[1], Ralph Scherer[2], Franziska Glatzer[1], Ralf Gutzmer[1], Thomas Werfel[1]; 1. Department of Dermatology and Allergy, Hannover Medical School, Hannover Germany, Carl-Neuberg-Street 1, D-30625 Hannover, Germany, Division of Immunodermatology and Allergy Research, Hannover, Germany; 2. Hannover Medical School, Hannover Germany, Carl-Neuberg-Street 1, D-30625 Hannover, Germany, Institute for Biometry, Hannover, Germany.

789.The role of CARD14 in the pathogenesis of familial and sporadic pityriasis rubra pilaris Dana Fuchs-Telem[1], Ori Eytan[1], Maurice van Steensel[2], Ofer Sarig[1], Ofer Isakov[3], Shirli Israeli[1], Janna Nousbeck[1], Katharina Richard[4], Reuven Bergman[5], Avner Shemer[3], Veronique Winnepenninckx[2], Marigje Vernooij[2], Noam Shomron[3], Qiaoli Li[4], Jouni Uitto[4], Philip Fleckman[6], Gabriele Richard[7], Eli Sprecher[1]; 1. Tel Aviv Medical Center, Tel Aviv, Israel; 2. Maastricht University, Maastricht, Netherlands; 3. Tel Aviv University, Tel Aviv, Israel; 4. Jefferson University, Philadelphia, PA, USA; 5. Rambam Medical Center, Haifa, Israel; 6. University of Washington, Seattle, WA, USA; 7. GeneDx, Gaithersburg, MD, USA.

790*(CM7-06).Regulation and mechanisms of action of RBM28, a protein deficient in ANE syndrome Emily Warshauer[1], Ofer Sarig[1], Liat Samuelov[1], Dana Fuchs-Telem[1], Noam Shomron[2], Luba Farberov[2], Metsada Pasmanik-Chor[2], Ralf Paus[3], Eli Sprecher[1], Janna Nousbeck[1]; 1. Tel Aviv Medical Center, Tel Aviv, Israel; 2. Tel Aviv University, Tel Aviv, Israel; 3. University of Luebeck, Luebeck, Germany.

791.Aberrant non-lymphoid gene expression and promoter hypomethylation as biomarker for Sezary Syndrome Anjali Mishra[1], Heather Gibson[1], Timothy Hake[2], Pierluigi Porcu[3], Henry Wong[2]; 1. The Ohio State University Comprehensive Cancer Center, Columbus, OH, USA; 2. Department of Dermatology, The Ohio State University, Columbus, OH, USA; 3. Department of Internal medicine, The Ohio State University, Columbus, OH, USA.

792.Eosinophilic chronic proliferative dermatitis in *Sharpin* null mice develops in the absence of B and T lymphocytes and IL4/13 signaling Christopher Potter[1], Kathleen Silva[1], Victoria Kennedy[1], Timothy Stearns[1], Zhe Wang[2], Leonard Shultz[1], Harm HogenEsch[2], John Sundberg[1, 2]; 1. The Jackson Laboratory, Bar Harbor, ME, USA; 2. Department of Comparative Pathobiology, Purdue University, West Lafayette, IN, USA.

793.Maintenance of epidermal progenitor function by the 3'-5' mRNA degradation pathway George Sen, Devendra Mistry, Yifang Chen; Medicine/ CMM, University of California, San Diego, La Jolla, CA, USA.

794.Sensitive skin: Why is it sensitive? Eun Ju Kim[1, 2, 3], Yeon Kyung Kim[1, 2, 3], Dong Hun Lee[1, 2, 3], Jung Yun Kim[1, 2, 3], Min-Kyoung Kim[1, 2, 3], Hee Chul Eun[1, 2, 3], Kyu Han Kim[1, 2, 3], Jin Ho Chung[1, 2, 3]; 1. Department of Dermatology, Seoul National University College of Medicine, Seoul, Republic of Korea; 2. Laboratoryof CutaneousAgingResearch, ClinicalResearchInstitute, Seoul National University Hospital, Seoul, Republic of Korea; 3. Institute of Human-Environment Interface Biology, Seoul National University, Seoul, Republic of Korea.

795.The molecular and biological basis for witch nails (whnl) Pat Ward-Bailey, Herbert Pratt, Christopher Potter, Heather Fairfield, John Sundberg; The Jackson Laboratory, Bar Harbor, ME, USA.

796.Molecular identification of collagen 17a1 as a major genetic modifier of epidermolysis bullosa in mice Thomas Sproule, Jason Bubier, Fiorella Grandi, John Sundberg, Derry Roopenian; The Jackson Laboratory, Bar Harbor, ME, USA.

797.COL7A1 mRNA isolated from peripheral blood mononuclear cells may be available for the detection of COL7A1 mutation in dystrophic epidermolysis bullosa Eijiro Akasaka, Hajime Nakano, Yuriko Takagi, Yuka Toyomaki, Daisuke Sawamura; Dermatology, Hirosaki University Graduate School of Medicine, Hirosaki, Japan.

798.Exon74-skipped collagen VII induces dominant dystrophic epidermolysis bullosa E. Toyonaga[1], W. Nishie[1], H. Onda[2], M. Komine[2], S. Murata[2], S. Shinkuma[1], H. Nakamura[1], M. Ohtsuki[2], H. Shimizu[1]; 1. Department of Dermatology, Hokkaido University Graduate School of Medicine, Sapporo, Japan; 2. Department of Dermatology, Jichi Medical University, Tochigi, Japan.

799.Mutation detection of type II hair cortex keratin gene hHB6 in a Chinese han family with congenital monilethrix Qinghua Song[1], Zhenzhen Ye[1], Xu Nan[2], Hongshan Zhao[2], Xuerong Chen[1]; 1. Department of Dermatology, Peking University Third Hospital, Beijing, China; 2. Department of Medical Genetics, School of Basic Medical Sciences, Peking University, Beijing, China.

800.Birt-hogg-dubé syndrome is a novel ciliopathy Monique Luijten[1], Tijs Claessens[1], Sander Basten[2, 3], Marigje Vernooij[1], Fred Menko[7], Ravi Nookala[8], Claire Scott[4], Michel van Geel[1], Renske Janssen[1], Jennifer Easton[1], Maaike Vreeburg[6], Miriam Kamps[1], Stephen Land[4], Andrew Tee[5], Rachel Giles[2], Barry Coull[1], Maurice van Steensel[1, 6]; 1. Dermatology, Maastricht University Medical Center, Maastricht, Netherlands; 2. Nephrology and Hypertension, University Medical Center Utrecht, Utrecht, Netherlands; 3. Medical Oncology, University Medical Center Utrecht, Utrecht, Netherlands; 4. Division of Cardiovascular and Diabetes Medicine, Ninewells Hospital and Medical School, Dundee, United Kingdom; 5. Institute of Medical Genetics, Cardiff University, Cardiff, United Kingdom; 6. Clinical Genetics, Maastricht University Medical Center, Maastricht, Netherlands; 7. Clinical Genetics, VU Medical Center, Amsterdam, Netherlands; 8. Department of Biochemistry, University of Cambridge, Cambridge, United Kingdom.

801.A founder mutation in the FNIP1 gene causes familial multiple discoid fibromas Tijs Claessens[1], Monique Luijten[1], Fred Menko[2], Theo Starink[3], Emma Kenyon[4], Ferenc Mueller[4], Barry Coull[1], Quinten Waisfisz[2], Maurice van Steensel[1, 5]; 1. Dermatology, Maastricht University Medical Center, Maastricht, Netherlands; 2. Clinical Genetics, VU Medical Center, Amsterdam, Netherlands; 3. Dermatology, VU Medical Center, Amsterdam, Netherlands; 4. School of Clinical and Experimental Medicine, Birmingham University, Birmingham, United Kingdom; 5. Clinical Genetics, Maastricht University Medical Center, Maastricht, Netherlands.

802.Environmental factors have a profound effect on disease severity in skin barrier deficiency and eczema Caoimhe Fahy[1], Sean Saunders[1], WH Irwin McLean[2], Alan Irvine[1], Padraic Fallon[1]; 1. School of Medicine, Trinity College Dublin, Dublin, Ireland; 2. Department of Epithelial Genetics, University of Dundee, Dundee, United Kingdom.

803*(CM7-09).Meta-analysis of psoriasis and psoriatic arthritis identifies three new susceptibility loci Rajan Nair[1], Lam Tsoi[1], Philip Stuart[1], Vinod Chandran[2], Trilokraj Tejasvi[1], Eva Ellinghaus[4], John Voorhees[1], Michael Weichenthal[4], Andre Franke[4], Goncalo Abecasis[1], Proton Rahman[3], Dafna Gladman[2], James Elder[1]; 1. Univ Michigan, Ann Arbor, MI, USA; 2. Toronto Western Hospital, Toronto, ON, Canada; 3. Memorial Univ, St. John's, NF, Canada; 4. Univ Kiel, Kiel, Germany.

804.Histone deacetylase 3 is essential for stepwise differentiation of the epidermis Fang Liu[1], Vivek Sharma[1], Matthew LeBoeuf[1], Mitch Lazar[2], Sarah Millar[2]; 1. Department of Dermatology, University of Pennsylvania, Philadelphia, PA, USA; 2. Division of Endocrinology, Diabetes, and Metabolism, Department of Medicine, University of Pennsylvania, Philadelphia, PA, USA.

805.Translocation of the cytokine HMGB1 coincides with wound healing in fibroblast-injected wounds of recessive dystrophic epidermolysis bullosa W. Yan[1, 3], Supriya Venugopal[1, 3], John Frew[1, 3], Lesley Rhodes[1], W. Melbourne[2], K. Tran[2], Dedee Murrell[1, 3]; 1. Department of Dermatology, St George Hospital, Gray St, Kogarah, Sydney, NSW, Australia; 2. Department of Anatomical Pathology, St George Hospital, Gray St, Kogarah, Sydney, NSW, Australia; 3. University of New South Wales, Sydney, NSW, Australia.

806.Genetic correction of dominant-negative epidermoylsis bullosa simplex by novel trans-splicing molecules Patricia Peking, Thomas Lettner, Stefan Hainzl, Helmut Hintner, Johann Bauer, Verena Wally; Department of Dermatology, EB House Austria, Salzburg, Austria.

807.Are RNA aptamers suitable for the topical treatment of inflammatory skin diseases? Rosella Doble[2], Michael McDermott[1], Özlem Cesur[2], Nicola Stonehouse[2], Miriam Wittmann[1, 3, 4]; 1. Division of Rheumatic and Musculoskeletal Disease, Leeds Institute of Molecular Medicine, University of Leeds, Leeds, United Kingdom; 2. School of Molecular and Cellular Biology, Faculty of Biological Sciences, University of Leeds, Leeds, United Kingdom; 3. Centre for Skin Sciences, School of Life Sciences, University of Bradford, Bradford, United Kingdom; 4. Department of Dermatology, Bradford Teaching Hospitals NHS Foundation Trust, Bradford, United Kingdom.

808.Retinoid metabolism is altered in human and mouse cicatricial alopecia Helen Everts[1, 4], Kathleen Silva[2], Shalise Montgomery[1], Liye Suo[1], Monica Menser[1], Amy Valet[3, 4], Lloyd King[3], David Ong[4], John Sundberg[2, 3]; 1. The Ohio State University, Columbus, OH, USA; 2. The Jackson Laboratory, Bar Harbor, ME, USA; 3. Medicine (Dermatology), Vanderbilt University Medical Center, Nashville, TN, USA; 4. Biochemistry, Vanderbilt University Medical Center, Nashville, TN, USA.

809.Hair density is determined by four genomic regions through modifying the mutant Plcd1 in snthr-1Bao mice Baojin Wu, Weiwei Yang, Yanli Zhang, Gaotian Li, Liping Yu, Peilin Wu; Laboratory of Experimental Animal Science, Hangzhou Normal University, Hangzhou, China.

810.Mutations in *AAGAB* demonstrate genetic and allelic heterogeneity of punctate palmoplantar keratoderma but do not explain phenotype variability Hans Hennies[1, 2], Aysel Önal-Akan[2], Silvia Lechner[1], Marie-Luise Preil[3], Henning Hamm[4], David Kelsell[5], Steffen Emmert[6]; 1. Ctr. for Dermatogenetics, Div. of Human Genetics & Dept. of Dermatology, Innsbruck Med. University, Innsbruck, Austria; 2. Ctr. for Dermatogenetics, Cologne Ctr. for Genomics, Univ. of Cologne, Cologne, Germany; 3. Practice for Dermatology, Ansbach, Germany; 4. Dept. of Dermatology, Univ. Hospital of Würzburg, Würzburg, Germany; 5. Blizard Institute, Barts and The London School of Medicine and Dentistry, London, United Kingdom; 6. Dept. of Dermatology, University Med. Ctr., Göttingen, Germany.

811.Mutations in *CERS3* lead to autosomal recessive ichthyosis and demonstrate the importance of ceramides in healthy and ichthyotic skin Katja Eckl[1, 2], Rotem Tidhar[3], Holger Thiele[4], Vinzenz Oji[5], Ingrid Hausser[6], Susanne Brodesser[7], Marie-Luise Preil[8], Aysel Önal-Akan[2], Friedrich Stock[9], Janine Altmüller[4], Peter Nürnberg[4], Heiko Traupe[5], Anthony Futerman[3], Hans Hennies[1, 2]; 1. Ctr. for Dermatogenetics, Medical Univ. Innsbruck, Innsbruck, Austria; 2. Ctr. for Dermatogenetics, Univ. of Cologne, Cologne, Germany; 3. Biological Chemistry, Weizmann Inst., Rehovot, Israel; 4. Cologne Ctr. for Genomics, Univ. of Cologne, Cologne, Germany; 5. Dermatology, Univ. Hospital of Münster, Münster, Germany; 6. Dermatology, Univ. Hospital of Heidelberg, Heidelberg, Germany; 7. Med. Microbiology, Immunology and Hygiene, Univ. of Cologne, Cologne, Germany; 8. Practice for Dermatology, Ansbach, Germany; 9. Human Genetics, Univ. of Leipzig, Leipzig, Germany.

812.The G45E mutation in connexins 26 & 31 causes a unique cellular phenotype resulting in cell death Jennifer Easton[1, 2], Carey Taylor[3], Miriam Kamps[1, 2], Michel van Geel[1, 2], Patricia Martin[3], Maurice van Steensel[1, 2]; 1. Dermatology, Maastricht University Medical Centre, Maastricht, Netherlands; 2. School for Oncology and Developmental Biology, Maastricht University Medical Centre, Maastricht, Netherlands; 3. Life Sciences, Glasgow Caledonian University, Glasgow, United Kingdom.

813.Identification of a hyperkeratosis "signature" in lamellar ichthyosis: Mdm2 inhibition prevents hyperkeratosis in lamellar ichthyosis models Gehad Youssef[1, 2], Masahiro Ono[2], Stuart Brown[1, 2], Wendy Heywood[3], Veronica Kinsler[1, 3], Neil Sebire[4], Kevin Mills[1, 3], John Harper[1], Ryan O'Shaughnessy[1, 2]; 1. Livingstone Centre for Skin Research, UCL Institute of Child Health, London, United Kingdom; 2. Immunobiology and Dermatology, UCL Institute of Child Health, London, United Kingdom; 3. Clinical and Molecular Genetics Unit, UCL Institute of Child Health, London, United Kingdom; 4. Histopathology, Great Ormond Street Hospital, London, United Kingdom.

814.Rapid genotyping for the prevalent mutation of XPC gene: A useful tool for genetic counseling Cécile Ged[1, 2], Leslie Carrat[2], Emilie Lacanal[2], Hamid Rezvani[1, 2], Salima Bensenouci[3], Hubert de Verneuil[1, 2], Alain Taieb[1, 2], Khaled Ezzedine[1, 2]; 1. INSERM U1035-Université de Bordeaux, Bordeaux, France; 2. Centre des Maladies rares de la Peau-CHU de Bordeaux, Bordeaux, France; 3. CHU d'Oran, Oran, Algeria.

815.Dorfman-Chanarin syndrome: A novel G259D mutation in an Iraqi family and a new Moroccan patient with IVS1+1G>A mutation of *ABHD5* Benjamin Roussel[1], Estelle Breton[2], Juliette Mazereeuw-Hautier[3], Gilles Safa[4], Liliane Laroche[5], Pierre-Olivier Schischmanoff[6], Frédéric Caux[1, 5]; 1. Li2P EA 4222, Paris 13 University, Bobigny, France; 2. Pediatrics, Saint Brieuc, France; 3. Dermatology, Toulouse, France; 4. Dermatology, Saint Brieuc, France; 5. Dermatology, Avicenne Hospital, Bobigny, France; 6. Biochemistry, Bobigny, France.

816.Bone marrow transplantation for pseudoxanthoma elasticum in a murine model (*Abcc6*$^{-/-}$) Qiujie Jiang, Shunsuke Takahagi, Yong Zhou, Jouni Uitto; Dermatology and Cutaneous Biology, Jefferson Medical College, Philadelphia, PA, USA.

817*(CM7-02).AAV-mediated somatic genetic correction of epidermolysis bullosa Sandra Melo[1], Leszek Lisowski[2], Lisa Bashkirova[1], Mark Kay[2], Anthony Oro[1]; 1. Dermatology, Stanford University School of Medicine, Stanford, CA, USA; 2. Pediatrics, Stanford University School of Medicine, Stanford, CA, USA.

818.Transcriptional profiling demonstrates novel therapeutic targets in Langerhans cell histiocytosis Joanne Selway[1], Parvathy Harikumar[1], Giles Yeo[2], Anthony Chu[1], Kenneth Langlands[1]; 1. The Clore Lab, University of Buckingham, Buckingham, United Kingdom; 2. Institute of Metabolic Science, Addenbrookes Hospital, University of Cambridge, Cambridge, United Kingdom.

819(PL6-02).Aquaporin 5 (AQP5), a water channel protein, is mutated in autosomal dominant diffuse non-epidermolytic palmoplantar keratoderma** Diana Blaydon[1], Lisbet Lind[2], Vincent Plagnol[3], Kenneth Linton[1], Andrew South[4], Irene Leigh[4], Edel O'Toole[1], Anita Lundstrom[5], David Kelsell[1]; 1. Blizard Institute, QMUL, London, United Kingdom; 2. Department of Clinical Genetics, University Hospital, Umeå, Sweden; 3. UCL Genetics Institute, UCL, London, United Kingdom; 4. Division of Cancer Research, University of Dundee, Dundee, United Kingdom; 5. Department of Public Health and Clinical Medicine, Umeå University, Umeå, Sweden.

820.The actinic keratosis microRNAome - microRNA expression in actinic keratosis and matched healthy appearing skin T. Litman[1], M. Høyer-Hansen[1], S. Emmert[2], H. Haenssle[2], H. Bertsch[2], M. Schön[2], J. Zibert[1]; 1. LEO Pharma A/S, Ballerup, Denmark; 2. Dpt. of Dermatology, Venereology and Allergology, Georg August University, Göttingen, Germany.

821.Haploinsufficiency of the γ-secretase genes *NCSTN* and *PSENEN* underlies hidradenitis suppurativa in two British pedigrees A. Pink[1], D. Dafou[1], N. Desai[1], C. Smith[1], P. Mortimer[2], M. Simpson[1], R. Trembath[1], J. Barker[1]; 1. Kings College London, London, United Kingdom; 2. St Georg's University of London, London, United Kingdom.

822.Effect of aminoglycosides and non-aminoglycosides on readthrough of stop codons in xeroderma pigmentosum group C cells C. Kuschal[1], J. DiGiovanna[1], S. Khan[1], R. Gatti[2], K. Kraemer[1]; 1. Dermatololgy Branch, NCI, Bethesda, MD, USA; 2. Pathology, UCLA, Los Angeles, CA, USA.

823.Increased expression interleukin-16 in patients with psoriasis Monika Zablotna[1], Boguslaw Nedoszytko[1], Aneta Szczerkowska-Dobosz[1], Michal A Zmijewski[2], Jakub Antosiewicz[2], Roman Nowicki[1]; 1. Dermatrology, Medical University of Gdansk, Gdansk, Poland; 2. Histology, Medical University of Gdansk, Gdansk, Poland.

824.Whole exome sequencing identifies novel genetic variants in inherited skin fragility disorders that elude current Sanger sequencing mutation detection strategies Kenneth Fong[1], Kristina Stone[2], Michael Simpson[2], Amr Salam[1], Lu Liu[3], Linda Ozoemena[3], Patricia Dopping-Hepenstal[3], Jemima Mellerio[1], John McGrath[1]; 1. St John's Institute of Dermatology, London, United Kingdom; 2. Department of Medical and Molecular Genetics, King's College London, London, United Kingdom; 3. GSTS Pathology, St Thomas' Hospital, London, United Kingdom.

825.Psoriasis; severe compared to mild Pernilla Nikamo, Mona Ståhle; Medicine Solna, Karolinska Institutet, Stockholm, Sweden.

826.Revertant mosaicism is common in patients with recessive epidermolysis bullosa simplex Anna Pasmooij, Maja Holy, Miranda Nijenhuis, Marcel Jonkman; Dermatology, University Medical Center Groningen, University of Groningen, Groningen, Netherlands.

827.Th1/Th17 micro-milieu controls epidermal inflammasome activity in psoriasis Stephanie Zwicker[1], Eva Hattinger[1], Andreas Schmidt[2], Thomas Ruzicka[1], Ronald Wolf[1]; 1. Department of Dermatology and Allergology, Ludwig-Maximilian University, Munich, Germany; 2. Institute for Experimental and Clinical Pharmacology and Toxicology, Ludwig-Maximilian University, Munich, Germany.

828*(CM7-04).PDGFRα-positive mesenchymal stem/progenitor cells in bone marrow migrate in RDEB mouse skin by CXCR4/SDF-1α axis to provide type VII collagen after bone marrow cell transplantation Shin Iinuma[1, 4], Eriko Aikawa[1], Yasushi Kikuchi[1], Takenao Chino[1, 5], Ryo Fujita[1], John McGrath[2], Jouni Uitto[3], Ichiro Katayama[1], Yasufumi Kaneda[1], Katsuto Tamai[1]; 1. Osaka University, Suita, Japan; 2. King's College, London, United Kingdom; 3. Jefferson Medical College, Philadelphia, PA, USA; 4. Asahikawa Medical College, Asahikawa, Japan; 5. Fukui University, Fukui, Japan.

829.A TALEN-mediated genome editing strategy for epidermolysis bullosa simplex using patient-specific induced pluripotent stem cells Ganna Bilousova, Igor Kogut, Sandra Ortega, Dennis Roop; Dermatology, University of Colorado Anschutz Medical Campus, Aurora, CO, USA.

830.Meta-analysis of skin disease microarray datasets: Diagnosis, classification and insight into pathogenesis Megan Inkeles[1], Robert Modlin[2, 3], Matteo Pellegrini[1, 4]; 1. Bioinformatics, University of California, Los Angeles, Los Angeles, CA, USA; 2. Dermatology, University of California, Los Angeles, Los Angeles, CA, USA; 3. MIMG, University of California, Los Angeles, Los Angeles, CA, USA; 4. MCDB, University of California, Los Angeles, Los Angeles, CA, USA.

831.Aminoglycosides and non-aminoglycosides suppress premature stop mutations and restore type VII collagen function in RDEB X. Wang[1], J. Cogan[1], Y. Hou[1], M. Khilili[1], E. Paparisto[1], A. South[2], D. Woodley[1], M. Chen[1]; 1. Dermatology, University of Southern California, Los Angeles, CA, USA; 2. Ninewell Hospital and Medical School, Dundee, United Kingdom.

832.Genetic factors related to Japanese patients affected with generalized pustular psoriasis Masahiko Muto, Makoto Ichimiya, Michiya Yamaguchi, Akemi Takemoto, Kenichiro Naniwa; Dermatology, Yamaguchi University Graduate School of Medicine, Ube, Japan.

833.Silencing disease-causing mutant K6a gene in a Japanese patient with pachyonychia congenita via short interfering RNA Takafumi Uchida, Wataru Fujimoto; Dermatology, Kawasaki Medical School, Kurashiki, Japan.

834.A novel mutation in COL7A1, G2269R causing nail only DDEB and RDEB, with a presentation similar to TBDN at birth when coinherited with R2814X COL7A1 mutation Heather Cohn[1, 2], Kim Tran[3], Chung Chow[4], Emma Palmer[5], Anne Turner[5], Andrew South[6], Dedee Murrell[1, 3]; 1. Dermatology, St George Clinical School, University of New South Wales, Sydney, NSW, Australia; 2. Dermatology & Cutaneous Biology, Jefferson Medical College, Thomas Jefferson University, Philadelphia, PA, USA; 3. SEALS, St George Hospital, Sydney, NSW, Australia; 4. Anatomical Pathology, Royal Children's Hospital, Melbourne, VIC, Australia; 5. Medical Genetics, 5Sydney Children's Hospital, Sydney, NSW, Australia; 6. Division of Cancer Research, Ninewells Hospital, Dundee, United Kingdom.

835.Novel somatic mutation in LEMD3 splice site results in Buschke-Ollendorff syndrome with polyostotic melorheostosis Heather Cohn[1], Ashley Kittridge[1], Kord Honda[1], Thomas McCormick[1], Kevin Cooper[1], Anna Mitchell[2]; 1. Dermatology, University Hospitals Case Medical Center, Case Western Reserve University, Cleveland, OH, USA; 2. Genetics, University Hospitals Case Medical Center, Case Western Reserve University, Cleveland, OH, USA.

836.In variegate porphyria, inactivation of both alleles of the protoporphyrinogen oxidase gene by null mutations gives rise to hepatocellular carcinoma Estefanía Uche-Holub[1], Marko Siegesmund[1], Anne-Moniek van Tuyll van Serooskerken[2], Xiaoye Schneider-Yin[3], Michel van Geel[2], Elisabeth Minder[3], Jorge Frank[1]; 1. Department of Dermatology, Heinrich Heine University, Duesseldorf, Germany; 2. Department of Dermatology, Maastricht University Medical Center, Maastricht, Netherlands; 3. Zentrallabor and Swiss Porphyrin Reference Laboratory, Stadtspital Triemli, Zuerich, Switzerland.

837.Systematic identification and characterization of novel human skin-associated genes encoding membrane and secreted proteins Peter Arne Gerber[1, 2], Peter Hevezi[2], Bettina Alexandra Buhren[1, 2], Cynthia Martinez Reyes[1], Holger Schrumpf[1], Bernhard Homey[1], Albert Zlotnik[2]; 1. Dermatology, University of Duesseldorf, Duesseldorf, Germany; 2. Physiology & Biophysics, University of California, Irvine, CA, USA.

838.A novel automated image analysis method for rapidly segmenting and quantifying cutaneous features: Identification of genotypes with clinical features Joanne Selway[1], Osman Osman[1, 2], Malgorzata Kepczynska[1], Amgad Al-Habian[1], Tia Ditommaso[3], Ian Smyth[3], Chris Lelliott[4], Jacqueline White[4], David Melvin[4], The Sanger Mouse Genetics Project[4], Sabah Jassim[2], Kenneth Langlands[1]; 1. The Clore Lab, University of Buckingham, Buckingham, United

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Kingdom; 2. Dept of Applied Computing, University of Buckingham, Buckingham, United Kingdom; 3. Department of Biochemistry and Molecular Biology, Monash University, Melbourne, VIC, Australia; 4. Wellcome Trust Genome Campus, Cambridge, United Kingdom.

839. Dual porphyria comprising porphyria cutanea tarda and acute intermittent porphyria without cutaneous symptoms Marko Siegesmund[1, 2], Estefanía Uche-Holub[1, 2], Gianna Bodden[1, 2], Viola Kuerten[1, 2], Ulrike Thierling[1, 2], René Bogesits-Aufschneider[1, 2], Pascal Bafteh[1, 2], Sandra Hanneken[1, 2], Norbert Neumann[1, 2], Jorge Frank[1, 2]; 1. Department of Dermatology, Heinrich Heine University, Duesseldorf, Germany; 2. European Porphyria Specialist Center, Heinrich Heine University, Duesseldorf, Germany.

840(PL1-03). Higher-order chromatin folding and establishment of a gene regulatory circuitry within the Epidermal Differentiation Complex (EDC) locus in keratinocytes** Joanne Yarker[1], Krzysztof Poterlowicz[1], Natalia Naumova[2], Bryan Lajoie[2], Andrei Mardaryev[1], Andrei Sharov[3], Vladimir Botchkarev[1, 3], Job Dekker[2], Michael Fessing[1]; 1. University of Bradford, Bradford, United Kingdom; 2. University of Massachusetts School of Medicine, Worcester, MA, USA; 3. Boston University School of Madicine, Boston, MA, USA.

841. Matrix metalloproteinase 11 (MMP11) is elevated in skin and serum from individuals with recessive dystrophic epidermolysis bullosa (RDEB) Laura Proudfoot, Venu Pullabhatla, Jemima Mellerio, Frank Nestle, John McGrath; St John's Institute of Dermatology, King's College London, London, United Kingdom.

842. Serum levels of high mobility group box 1 are elevated in individuals with recessive dystrophic epidermolysis bullosa and correlate with disease severity Gabriela Petrof, Alya Abdul-Wahab, Laura Proudfoot, Rashida Pramanik, Jemima Mellerio, John McGrath; St John's Institute of Dermatology, King's College London, London, United Kingdom.

843*(CM7-03). Gene therapy for recessive dystrophic epidermolysis bullosa using COL7A1 gene corrected autologous fibroblasts Alya Abdul-Wahab[1, 2], Christos Georgiadis[1], Waseem Qasim[1], Adrian Thrasher[1], John McGrath[2], Wei-Li Di[1]; 1. Institute of Child Health, London, United Kingdom; 2. Kings College London, London, United Kingdom.

844*(CM7-07). Topical formulation for delivery of therapeutic RNA into the epidermis Vikas Hegde[1], Sitheswaran Nainamalai[1], Paul Campbell[1, 2], Frances Smith[1], Irwin McLean[1], Deena Leslie Pedrioli[1]; 1. Centre for Dermatology and Genetic Medicine, University of Dundee, Dundee, United Kingdom; 2. Carnegie Physics Laboratory, University of Dundee, Dundee, United Kingdom.

845. Rat model for dominant dystrophic epidermolysis bullosa: Glycine substitution reduces collagen VII stability and shows gene-dosage effect Alexander Nyström, Jens Buttgereit, Michael Bader, Ingrid Hausser, Leena Bruckner-Tuderman, Johannes Kern; Dermatology, University Freiburg Medical Center, Freiburg, Germany.

846. Linear morphea fibroblasts possess distinct TGFβ responsiveness Stuart Brown[1, 2], Lisa Weibel[3], John Harper[1, 2], Ryan O'Shaughnessy[1, 2]; 1. Immunobiology and Dermatology, UCL Institute of Child Health, London, United Kingdom; 2. Livingstone Centre for Skin Research, UCL Institute of Child Health, London, United Kingdom; 3. Dermatology, University of Zurich, Zurich, Switzerland.

847. Expanding the phenotypic spectrum of Olmsted Syndrome Neil Wilson[1], Christian Cole[1], Leonard Milstone[2], C. Hansen[3], Mary Schwartz[4], Willliam McLean[1], Frances Smith[1]; 1. Centre for Dermatology and Genetic Medicine, University of Dundee, Dundee, United Kingdom; 2. Yale University, New Haven, CT, USA; 3. University of Utah, Salt Lake, UT, USA; 4. PC Project, Salt Lake, UT, USA.

848. A novel nonsense mutation in CDSN responsible for peeling skin disease with expression of a truncated corneodesmosin Alicia Mallet[1, 2, 3], Magdalini Kypriotou[4], Kimberley George[4], Emilie Leclerc[1, 2, 3], Dianelys Rivero[4], Juliette Mazereeuw-Hautier[1, 2, 3], Guy Serre[1, 2, 3], Marcel Huber[4], Nathalie Jonca[1, 2, 3], Daniel Hohl[4]; 1. UMR 5165 CNRS, Toulouse, France; 2. U 1056 INSERM, Toulouse, France; 3. Toulouse III University, Toulouse, France; 4. laboratory of Cutaneous Biology, Service of Dermatology and Venereology, Beaumont Hospital CHUV, Lausanne, Switzerland.

849. A genome-wide approach to skin aging Sigrid Le Clerc[1], Lieng Tiang[1], Khaled Ezzedine[2, 3], Anne Bernard[4], Julie Latreille[4], Denis Malvy[5], Randa Jdid[4], Pilar Galan[2], Serge Hercberg[2, 6], Frédérique Morizot[4], Christiane Guinot[4, 7], Erwin Tschachler[4, 8], Jean-François Zagury[1]; 1. Dpt Bioinformatics, CNAM, Paris, France; 2. UMR U557 INSERM/U1125 INRA/CNAM, University Paris 13, Bobigny, France; 3. Dpt Dermatol, CHU Saint-André, Bordeaux, France; 4. CERIES, Neuilly sur Seine, France; 5. Dpt Internal Med Trop Dis, CHU Saint-André, Bordeaux, France; 6. Dpt Public Health, Hosp Avicenne, Bobigny, France; 7. Comput Sci Lab, University François Rabelais, Tours, France; 8. Dpt Dermatol, Med University Vienna, Vienna, Austria.

850. Exon skipping restores functional type VII collagen in dystrophic epidermolysis bullosa Sandrina Turczynski[1, 2], Matthias Titeux[1, 2], Laure Tonasso[3], Alain Hovnanian[1, 2, 4]; 1. INSERM U781 and Imagine Institute of Genetic Diseases, Paris, France; 2. University Paris Descartes Sorbonne Cité, Paris, France; 3. CNRS UMR5288, Toulouse, France; 4. Department of Genetics, Necker hospital, Paris, France.

851. HOXC13-dependent regulatory network of hair follicle differentiation includes members of the MHC gene complex Alexander Awgulewitsch[1], Christopher Potter[2], John Sundberg[2]; 1. Medicine, Medical University of South Carolina, Charleston, SC, USA; 2. The Jackson Laboratory, Bar Harbor, ME, USA.

852. Identification of a possible risk gene in Sneddon Syndrome Elli Greisenegger[1], Alexander Zimprich[2], Tim Strom[3], Tamara Kopp[1]; 1. Dermatology, DIAID, Medical University of Vienna, Vienna, Austria; 2. Department of Neurology, Medical University of Vienna, Vienna, Austria; 3. Institute of Human Genetics, Helmholtz Zentrum München, Munich, Germany.

853. Immunological abnormalities in Netherton syndrome patients: Evidence for cutaneous and systemic enhanced expression of pro-allergic and pro-inflammatory cytokines Laetitia Furio[1, 2], Anaïs Briot[1, 2], Madeleine Jaillet[1, 2], Lisa Weibel[3], Marie-Anne Morren[4], Satu-Leena Laasanen[5], Katarina Hannula-Jouppi[6], Annamari Ranki[6], Alain Hovnanian[1, 2, 7]; 1. INSERM U781 and Imagine Institute of Genetic Diseases, Paris, France; 2. Univ. Paris Descartes Sorbonne Cite, Paris, France; 3. Dermatology, Zurich, Switzerland; 4. Dermatology, Leuven, Belgium; 5. Dermatology, Tampere University Hospital, Tampere, Finland; 6. Dermatology and Allergology, HUCH, Helsinky, Finland; 7. Genetics, Paris, France.

854*(CM7-08). A nonsense mutation in the mattrin gene causes the matted mouse phenotype and is a predisposing gene for atopic dermatitis in humans Christabelle Goh[1], Sean Saunders[2], Christian Cole[1], Stephan Weidinger[3], Hansjörg Baurecht[3], Young-Ae Lee[4], Nick Reynolds[5], Jonathan Barker[6], Heather Cordell[5], Sara Brown[1], Alan Irvine[2], Irwin McLean[1], Aileen Sandilands[1], Padraic Fallon[2]; 1. University of Dundee, Dundee, United Kingdom; 2. Trinity College Dublin, Dublin, Ireland; 3. University of Kiel, Kiel, Germany; 4. Charité, Berlin, Germany; 5. Newcastle University, Newcastle upon Tyne, United Kingdom; 6. King's College London, London, United Kingdom.

855. The COL7A1 gene locus specific database for epidermolysis bullosa Cezary Kowalewski[1], Katarzyna Wertheim-Tysarowska[2], Agnieszka Sobczynska-Tomaszewska[2], Katarzyna Wozniak[1], Michal Skronski[3], Gerzegorz Swieckowski[2], Anna Kutkowska-Kazmierczak[2], Jerzy Bal[2]; 1. Department of Dermatology, Warsaw Medical University, Warsaw, Poland; 2. Department of Medical Genetics, Institute of Mother and Child, Warsaw, Poland; 3. National Institute of Tuberculosis and Lung Diseases, Warsaw, Poland.

856. Genes coding for dermal-epidermal junction proteins have altered expression with age Daniel Glass[1], Abigail Langton[2], Ana Vinuela[1], C. Keeble[2], Neil Gibbs[2], Tim Spector[1], Michael Sherratt[3], Rachel Watson[2], Veronique Bataille[1], Christopher Griffiths[2]; 1. Department of Twin Research and Genetic Epidemiology, King's College London, London, United Kingdom; 2. Centre for Dermatology, University of Manchester, Manchester, United Kingdom; 3. Centre for Regenerative Medicine, University of Manchester, Manchester, United Kingdom.

857. Inactivating AP1 transcription factor function in suprabasal epidermis produces a loricrin keratoderma phenotype associated with enhanced Th1 chemokine production Christina Young, Ellen Rorke, Janice Babus, Richard Eckert; Biochemistry and Molecular Biology, University of Maryland, Baltimore, Baltimore, MD, USA.

858. p38α and p38δ MAPK regulation of p21Cip1 gene expression in human keratinocytes Kamalika Saha, Richard Eckert; Biochemistry and Molecular Biology, University of Maryland, Baltimore, MD, USA.

859. Production of a progressive symmetric erythrokeratoderma-like phenotype in the absence of nuclear loricrin accumulation Ellen Rorke[3], Gautam Adhikary[1], Christina Young[1], Dennis Roop[2], Richard Eckert[1]; 1. Biochemistry and Molecular Biology, University of Maryland School of Medicine, Baltimore, MD, USA; 2. University of Colorado, Denver, CO, USA; 3. Microbiology and Immunology, University of Maryland School of Medicine, Baltimore, MD, USA.

860. Adducted thumb - clubfoot syndrome (Ehlers-Danlos-type VIb; dermatan-4-O-sulfotransferase-deficiency) in an American patient Peter Heil, Thomas Markello, Hanna Carleson-Donohoe, William Gahl, Cynthia Tifft; National Human Genome Research Institute (NHGRI), National Institutes of Health, Bethesda, MD, USA.

861*(CM7-10). Functional genomics and targeted next generation sequencing points to ULBP6 as a critical node in the NKG2D axis in alopecia areata L. Petukhova[1, 3], E. Drill[2, 3], M. Duvic[6], M. Hordinsky[7], D. Norris[8], V. Price[9], R. Clynes[4, 5], A. Christiano[3, 5]; 1. Epidemiology, Columbia, NY, NY, USA; 2. Biostatistics, Columbia, NY, NY, USA; 3. Dermatology, Columbia, NY, NY, USA; 4. Medicine, Columbia, NY, NY, USA; 5. Genetics&Dev, Columbia, NY, NY, USA; 6. Dermatology, MDAnderson, Houston, TX, USA; 7. Dermatology, U MN, Minneapolis, MN, USA; 8. Dermatology, U CO, Denver, CO, USA; 9. Dermatology, UCSF, San Francisco, CA, USA.

862. Characterization of a human cell derived 3D psoriatic tissue model Seyoum Ayehunie[1], Michael Bachelor[1], Cristy Hedin[1], Timothy Landry[1], AnnMarie Cataldo[1], Maureen Spratt[1], Rachel Clark[2], Thomas Kupper[2], Mitchell Klausner[1]; 1. MatTek Corporation, Ashland, MA, USA; 2. Brigham & Women's Hospital, Boston, MA, USA.

863. Heterozygous loss-of-function mutations in the *AAGAB* gene cause punctate palmoplantar keratoderma type 1 and impair receptor tyrosine kinase protein turnover Elizabeth Pohler[1], Catriona Harkins[1, 2], Julio Salas[3], Mozheh Zamiri[4], Neil Wilson[1], Frances Smith[1], Sara Brown[1], Irwin McLean[1]; 1. Centre for Dermatology and Genetic Medicine, University of Dundee, Dundee, United Kingdom; 2. Department of Dermatology, Ninewells Hospital, Dundee, United Kingdom; 3. Dermatology, DEBRA Mexico, Guadalupe Nuevo León, Mexico; 4. Department of Dermatology, University Hospital Crosshouse, Kilmarnock, United Kingdom.

864*(CM7-05). Targeted gene correction of type VII collagen in recessive dystrophic epidermolysis bullosa patient-specific induced pluripotent stem cells Satoru Shinkuma[1], Noriko Umegaki[1], Munenari Itoh[1, 2], Rodolfo Murillas[3], Marcela Del Río[3, 4], Fernando Larcher[3], Angela Christiano[1, 5]; 1. Department of Dermatology, Columbia University, New York, NY, USA; 2. Department of Dermatology, Jikei University School of Medicine, Tokyo, Japan; 3. Epithelial Biomedicine Division, CIEMAT-CIBERER, Madrid, Spain; 4. Department of Bioengineering, CIEMAT-CIBERER, Madrid, Spain; 5. Department of Genetics and Development, Columbia University, New York, NY, USA.

865. *In vivo* analysis of homologous recombination-mediated AAVS1 locus targeting in regenerated human skin Fernando Larcher[1], Blanca Duarte[2], Marcela Del Rio[3, 1], Fulvio Mavilio[4, 5], Alesandra Recchia[5]; 1. Epithelial Biomedicine, CIEMAT-CIBERER, Madrid, Spain; 2. Epithelial Biomedicine, CIEMAT-CIBERER, Madrid, Spain; 3. Biomedical Engineering, UC3M, Madrid, Spain; 4. Genethon, Evry, France; 5. Department of Biomedical Sciences, UNIMORE, Modena, Italy.

866. Regulation of expression and putative autocrine homeostatic function of the chemokine CXCL14 in human keratinocytes Olga Ryabinina, Eli Magun, Mihail Iordanov; Dermatology, Oregon Health & Science University, Portland, OR, USA.

867. Alteration of pain-related gene expression in pachyonychia congenita skin lesion biopsies Yu-An Cao, Brandon Seegmiller, Robyn Hickerson, Manuel Flores, Tycho Speaker, Roger Kaspar; TransDerm Inc, Santa Cruz, CA, USA.

868. *In vivo* visualization of siRNA skin delivery and functional activity by dual-fluorescence confocal microscopy Tycho Speaker, Robyn Hickerson, Manuel Flores, Roger Kaspar; TransDerm Inc., Santa Cruz, CA, USA.

869(PL6-04). Modulation of a locus control region in the EDC chromatin architecture is required for epidermal differentiation** Inez Oh, Danielle Albea, Ashley Quiggle, Breeana Baker, Ann Guggisberg, Grace Kroner, Cristina de Guzman Strong; Washington University School of Medicine, Saint Louis, MO, USA.

870. Development of topical rapamycin formulations for the treatment of pachyonychia congenita Yu-An Cao[1], Tycho Speaker[1], Brandon Seegmiller[1], Robyn Hickerson[1], Manual Flores[1], Roger Kaspar[1, 2]; 1. TransDerm, Santa Cruz, CA, USA; 2. Dept. of Pediatrics, Stanford University, Stanford, CA, USA.

871. Ethnical differences in clinical manifestations of primary hyperhidrosis Yuanshen Huang[1], Mingwan Su[1], Youwen Zhou[1, 2]; 1. Dermatology and Skin Science, University of British Columbia, Vancouver, BC, Canada; 2. Institute of Dermatology, Anhui Medical University, Hefei, China.

Growth Factors, Cell Adhesion and Matrix

All orals designated with an asterisk (*) below are presented in a Concurrent Session (see code). Orals designated with two asterisks (**) will be presented during a Plenary Session (see code).

872. A differential response between normal and psoriatic keratinocytes' N-methyl-D-aspartate receptor subtype 2C following tumor necrosis factor alpha exposure V. Morhenn[1], J. Mansbridge[2], W. Nahm[3]; 1. Medicine Div. Dermatology, UCSD, San Diego, CA, USA; 2. Histogen Inc., San Diego, CA, USA; 3. University Clinical Trials, San Diego, CA, USA.

873. Enhanced cellular internalization of FGF1/CPPC fusion protein promoted its radioprotective effect in the hair follicles Fumiaki Nakayama[1], Sachiko Umeda[1], Takeshi Yasuda[2], Masahiro Asada[3], Toru Imamura[3], Takashi Imai[1]; 1. Advanced Radiation Biology Research Program, Research Center for Charged Particle Therapy, National Institute of Radiological Sciences, Chiba, Japan; 2. Department of Radiation Emergency Medicine, Research Center for Radiation Emergency Medicine, National Institute of Radiological Sciences, Chiba, Japan; 3. Signaling Molecule Research Group, Biomedical Research Institute, National Institute of Advanced Industrial Science and Technology, Tsukuba, Japan.

874. Dysregulated iRHOM2/ADAM17 in Tylosis with oesophageal cancer affects Ephrin- and EGF-family-mediated keratinocyte adhesion and migration Matthew Brooke[1], Sarah Etheridge[1], Diana Blaydon[1], Spiro Getsios[2], David Kelsell[1]; 1. Centre for Cutaneous Research, Blizard Institute, QMUL, London, United Kingdom; 2. Skin Disease Research Centre, Northwestern University, Chicago, IL, USA.

875. Sustained β-catenin activity leads to dermal fibrosis by promoting expression of various pro-fibrotic mediators Emily Hamburg[1], Demeng Chen[1], Eduardo Torres[2], Howard Chang[2], Radhika Atit[1]; 1. Case Western Reserve University, Cleveland, OH, USA; 2. Stanford University, Stanford, CA, USA.

876. HOXD10 is a major mediator of VEGF-C-induced lymphangiogenesis Sarah Krampitz[1], Anthony Mathelier[2], Lothar Dieterich[1], Adriana Primorac[1], Jay Shin[3], Hideya Kawaji[3], Wyeth Wasserman[2], Michael Detmar[1]; 1. ETH Zurich, Zurich, Switzerland; 2. University British Columbia, Vancouver, BC, Canada; 3. RIKEN Center, Yokohama, Japan.

877. Ethnic differences in dermal extracellular matrix Abigail Langton[1], Michael Sherratt[2], Christopher Griffiths[1], Rachel Watson[1]; 1. Centre for Dermatology, Institute of Inflammation and Repair, The University of Manchester, Manchester Academic Health Science Centre, Manchester, United Kingdom; 2. Centre for Regenerative Medicine, Institute of Inflammation and Repair, The University of Manchester, Manchester Academic Health Science Centre, Manchester, United Kingdom.

878*(CM16-02). The spontaneous development of dermal fibrosis in mice with double heterozygous deficiency of *Klf5* and *Fli1* Shinji Noda, Yoshihide Asano, Katsuhito Fujiu, Ichiro Manabe, Ryozo Nagai, Shinichi Sato; The University of Tokyo, Tokyo, Japan.

879. Anti-aging properties of the association of "Retinaldehyde, Pretocopheryl glucopyranosyl, Glycylglycine oleamide" Patrick Bogdanowicz, Marie-José Haure, Sandrine Bessou-Touya, Nathalie Castex-Rizzi; Dermo Cosmetic Department, Pierre FABRE R&D Center, Toulouse, France.

880. Age-dependent increase of caveolae and caveolae-mediated endocytosis contributes to fibroblast dysfunction in elderly skin Yong Li, Wei Xia, Ken Calderone, Toru Okubo, Patrick Robichaud, Dan Lei, John Voorhees, Gary Fisher; Department of Dermatology, University of Michigan, Ann Arbor, MI, USA.

881. Orai1-dependant Ca2+ signals control epidermal proliferation Basile Darbellay[1, 2], Laurent Barnes[2], Jean Hilaire Saurat[2, 1], Gürkan Kaya[2, 1]; 1. University of Medicine, Geneva, Switzerland; 2. University Hospital, Geneva, Switzerland.

882. Comparative study of various growth factors and cytokines on type I collagen and hyaluronan production in human dermal fibroblasts Hae Jin Song, Sang Hwa Lee, Mi Sun Kim; Bio Research Team, R&D Center, LG Household & Healthcare Ltd., Daejeon, Republic of Korea.

883. Disassembly of desmosomes by an E-cadherin function-blocking antibody Ning Li, Moonhee Park, Zhi Liu, Luis Diaz; Dermotology, University of North Carolina, Chapel Hill, NC, USA.

884. Surface plasmon resonance biosensor detects the altered patterns of signals in the fibroblasts expressing oncogenic H-Ras Takaaki Hiragun[1, 2], Tetsuji Yanase[1], Tomoko Kawaguchi[1], Makiko Hiragun[1], Yuhki Yanase[1], Michihiro Hide[1]; 1. Department of Dermatology, Integrated Health Sciences, Institute of Biomedical and Health Sciences, Hiroshima University, Hiroshima, Japan; 2. Natural Science Center for Basic Research and Development, Hiroshima University, Hiroshima, Japan.

885. Essential role of collagen XVII in basement membrane formation and keratinocyte migration Machiko Nishimura[1], Wataru Nishie[1], Yoshinori Shirafuji[2], Satoru Shinkuma[1], Ken Natsuga[1], Hideki Nakamura[1], Daisuke Sawamura[3], Keiji Iwatsuki[2], Hiroshi Shimizu[1]; 1. Department of Dermatology, Hokkaido University Graduate School of Medicine, Sapporo, Japan; 2. Department of Dermatology, Okayama University Graduate School of Medicine, Dentistry, and Pharmaceutical Sciences, Okayama, Japan; 3. Department of Dermatology, Hirosaki University Graduate School Of Medicine, Hirosaki, Japan.

886. Upregulation of periostin by histamine via ERK1/2 pathway is essential for histamine-induced collagen production in dermal fibroblasts Lingli Yang, Hiroyuki Murota, Saki Matsui, Mika Terao, Ichiro Katayama; Department of Dermatology, Graduate School of Medicine, Osaka University, Osaka, Japan.

887. An *in vitro* method for identifying agents with lipofilling-like activity: Parallel assessment of lipid accumulation, toxicity and gene expression D. Kern[1], H. Knaggs[1], R. Gopaul[1], D. Bevis[4], R. Kilkuskie[4], E. Lehigh[2], A. Langerveld[2], W. Pfund[3]; 1. Center for Anti-Aging Research, Nu Skin Enterprises, Inc., Provo, UT, USA; 2. Genemarkers, LLC, Kalamazoo, MI, USA; 3. Reach LifeScience Consulting, LLC, Portage, MI, USA; 4. Michigan High Throughput Screening Center, Kalamazoo, MI, USA.

888(PL4-02). The dynein light chain Tctex-1 is a novel interacting protein of desmoglein 1 that regulates epidermal morphogenesis** Oxana Nekrasova[1], Robert Harmon[1], Samantha Lin[2], Spiro Getsios[2], Kathleen Green[1, 2]; 1. Department of Pathology, Northwestern University Feinberg School of Medicine, Chicago, IL, USA; 2. Department of Dermatology, Northwestern University Feinberg School of Medicine, Chicago, IL, USA.

889. Low-coherent quantitative phase microscope reveals a novel therapeutic target of H1 antihistamines Satoshi Hirakawa[1], Toyohiko Yamauchi[2], Yutaka Yamashita[2], Yoshiki Tokura[1]; 1. Dermatology, Hamamatsu University School of Medicine, Hamamatsu, Japan; 2. Hamamatsu Photonics K.K., Hamamatsu, Japan.

890. Cyclic epithelial fibroblast growth factor 18 signaling regulates telogen phase of hair cycle Yuko Oda, Miho Kimura-Ueki, Junko Oki, Akiko Komi-Kuramochi, Masahiro Asada, Masashi Suzuki, Toru Imamura; Signaling Molecules Research Group, Biomedical Research Institute, National Institute of Advanced Industrial Science and Technology (AIST), Tsukuba, Japan.

891. Topical delivery of stem cell derived growth factors by microneedle fractional radiofrequency activates fibroblasts in aged human skin *in vivo* Hee jung Lee, Sang eun Lee; Department of dermatology, CHA Bundang Medical center, CHA University, Gyunggido, Republic of Korea.

892. The impaired response of dermal fibroblasts to anti-fibrotic effect of adiponectin may contribute to the development of skin sclerosis in patients with systemic sclerosis Yuri Masui[1], Yoshihide Asano[1], Sayaka Shibata[1], Takafumi Kadono[1], Toshimasa Yamauchi[2], Naoto Kubota[2], Takashi Kadowaki[2], Shinichi Sato[1]; 1. Department of Dermatology, The University of Tokyo Graduate School of Medicine, Tokyo, Japan; 2. Department of Metabolic Disease, The University of Tokyo Graduate School of Medicine, Tokyo, Japan.

893. Role of endothelin-1/endothelin receptor signaling in fibrosis and calcification in nephrogenic systemic fibrosis Sei-ichiro Motegi, Etsuko Okada, Akihiko Uchiyama, Kazuya Yamada, Akihito Uehara, Sachiko Ogino, Yuko Takeuchi, Osamu Ishikawa; Department of Dermatology, Gunma University Graduate School of Medicine, Maebashi, Japan.

Posters

894. **Notch signaling attenuates epidermal growth factor receptor activation by induction of receptor protein tyrosine phosphatase-kappa in primary human keratinocytes** Yiru Xu, Siliang Xue, Jin Zhou, John Voorhees, Gary Fisher; Department of Dermatology, University of Michigan, Ann Arbor, MI, USA.

895. **The cell-cell adhesion protein Desmoglein 1 and the histone deacetylase inhibitor Trichostatin A aid in recovery of epidermal differentiation after ultraviolet light exposure** Jodi Johnson[1, 2], Jennifer Koetsier[1], Kathleen Green[1, 2]; 1. Pathology, Northwestern University, Chicago, IL, USA; 2. Dermatology, Northwestern University, Chicago, IL, USA.

896. **Down-regulation of type I collagen expression in silibinin-treated human skin fibroblasts through blocking smad2/3-dependent signaling pathway: Its potential therapeutic use in the chemoprevention of keloid** Jae Cho, Han Ryu, Kyu Lee; Dermatology, Keimyung university, School of Medicine, Daegu, Republic of Korea.

897. **NFAT and NFkB activation and keratinocyte migration post-wounding is dependent on extracellular calcium concentration and SOCE** Laura Mottram[1], Malcolm Begg[2], Nick Reynolds[1]; 1. Institute of Cellular Medicine, Newcastle University, Newcastle-Upon-Tyne, United Kingdom; 2. Respiratory Therapy Area Unit, GlaxoSmithKline, Stevenage, United Kingdom.

898. **Functional role for HSP27 in pemphigus acantholysis** Paula Berkowitz[1], David Rubenstein[1, 2, 3]; 1. Dermatology, University of North Carolina-Chapel Hill, Chapel Hill, NC, USA; 2. Pharmacology, University of North Carolina-Chapel Hill, Chapel Hill, NC, USA; 3. Lineberger Comprehensive Cancer Center, University of North Carolina-Chapel Hill, Chapel Hill, NC, USA.

899. **The N terminal domain of BPAG1e and the regulation of keratinocyte migration** Susan Hopkinson[1], Kevin Hamill[1, 2], Jonathan Jones[1, 2]; 1. Cell and Molecular Biology, Feinberg School of Medicine at Northwestern University, Chicago, IL, USA; 2. Dermatology, Feinberg School of Medicine at Northwestern University, Chicago, IL, USA.

900. **The effects of UVB radiation on elastic fiber components in mice** Hiroshi Iwasaka[1], Fumikazu Yamazaki[1], Tadashi Inoue[2], Wakako Inoue[1], Tomoyuki Nakamura[2], Hiroyuki Okamoto[1]; 1. Department of Dermatology, Kansai Medical University, Moriguchi, Japan; 2. Department of Pharmacology, Kansai Medical University, Moriguchi, Japan.

901. **Norepinephrine-induced IL-6 regulates fibrosis in systemic sclerosis** Akihito Uehara, Kazuya Yamada, Akihiko Uchiyama, Sachiko Ogino, Osamu Ishikawa, Sei-ichiro Motegi; Department of Dermatology, Gunma University Graduate School of Medicine, Maebashi, Japan.

902. **New insights in the biochemical properties and possible function of the human OATP5A1 transporter** Katrin Sebastian[1], Silvia Detro-Dassen[2], Natalie Rinis[3], Hans F. Merk[1], Günther Schmalzing[2], Gabriele Zwadlo-Klarwasser[4], Jens Malte Baron[1]; 1. Dermatology and Allergology, University Hospital RWTH Aachen, 52074 Aachen, Germany; 2. Pharmacology and Toxicology, Medical Faculty, RWTH Aachen University, 52074 Aachen, Germany; 3. Biochemistry, Medical Faculty, RWTH Aachen University, 52074 Aachen, Germany; 4. IZKF Aachen, Medical Faculty, RWTH Aachen University, 52074 Aachen, Germany.

903. **Amphiregulin increases sebaceous gland size and tail epidermal thickness but not basal or imiquimod-induced skin inflammation** Yong Li[1], Caroline Talsma[1], Stefan Stoll[1], James Elder[1, 2]; 1. Dermatology, Univ of Michigan, Ann Arbor, MI, USA; 2. VA Hospital, Ann Arbor, MI, USA.

904. **Caveolin-1 has an inverse correlation with collagen I in the skin: Caveolin-1 inhibitors can be novel anti-aging agents in the skin** Seung-Chul Lee, Jung-Ae Lee, Jee-Young Choi, Da-In Choi, Suk-Jung Yun, Jee-Bum Lee; Department of Dermatology, Chonnam National University Medical School, Gwangju, Republic of Korea.

905. **ANGPTL4 is a paracrine factor in tuberous sclerosis tumorigenesis with a potential role in lymphangiogenesis** S. Li[1], S. Rajesh[1], P. Klover[1], C. Dalgard[2], J. Wang[1], R. Thangapazham[1], J. Moss[3], T. Darling[1]; 1. Dermatology, Uniformed Services University, Bethesda, MD, USA; 2. APG, USU, Bethesda, MD, USA; 3. Cardiovascular and Pulmonary Branch, National Heart, Lung, and Blood Institute, NIH, Bethesda, MD, USA.

906*(CM16-01). **Stabilization of integrin-linked kinase by the Hsp90-CHIP axis regulates cellular force generation, migration and the fibrotic response** Korana Radovanac[1], Jessica Morgner[2], Jan-Niklas Schultz[3], Katrin Blumbach[3], Cam Patterson[4], Tamar Geiger[5], Matthias Mann[5], Thomas Krieg[3], Beate Eckes[3], Reinhard Fässler[1], Sara Wickström[2]; 1. Department of Molecular Medicine, Max Planck Institute for Biochemistry, Martinsried, Germany; 2. Max Planck Institute for Biology of Ageing, Cologne, Germany; 3. Department of Dermatology, University of Cologne, Cologne, Germany; 4. Carolina Cardiovascular Biology Center and the Departments of Medicine, Cell and Developmental Biology, and Pharmacology, University of North Carolina, Chapel Hill, NC, USA; 5. Department of Proteomics and Signal Transduction, Max Planck Institute for Biochemistry, Martinsried, Germany.

907. **The interaction of plectin with intermediate filaments is modulated by MAPK-interacting kinase 2 and PKA. Insights into the molecular basis of plectin-related human diseases** Bertrand Favre[1], Jamal-Eddine Bouameur[1], Yann Schneider[2], Prakash Lingasamy[1], Ryan Hobbs[3], Lionel Fontao[2], Kathleen Green[3], Luca Borradori[1]; 1. Department of Dermatology-DCR, INSEL-University Hospital, Berne, Switzerland; 2. Department of Dermatology, University Hospital, Geneva, Switzerland; 3. Department of Pathology, Northwestern University Feinberg School of Medicine, Chicago, IL, USA.

908. **Increased dermal collagen deposition is a feature of chronic plaque psoriasis** David Rutkowski, Rachel Watson, Christopher Griffiths; Dermatology Centre, The University of Manchester, Manchester, United Kingdom.

909*(CM16-09). **Keratinocyte motility is regulated by ganglioside GM3-induced suppression of insulin-like growth factor-1 signaling** Amy Paller[1], Desmond Shipp[1], Jianyun Lu[1], Heather Wilson[1], Pratik Randeria[2], Chad Mirkin[2], Xiaoqi Wang[1]; 1. Dermatology, Northwestern Univ., Chicago, IL, USA; 2. Chemistry, Northwestern Univ., Evanston, IL, USA.

910. **Differential modulation of ECM components and GFR by retinoic acid and a physiologically balanced GF formulation** Virginia Vega[1], Rahul Mehta[1], Michael Bachelor[2], Jonathan Oldach[2], Jennifer Bolmarcich[2], Alexander Armento[2]; 1. Research and Development, SkinMedica, Carlsbad, CA, USA; 2. MatTek Cooporation, Ashland, MA, USA.

911. **Characterization of the molecular mechanisms and cellular phenotypes underlying inversa type of recessive dystrophic epidermolysis bullosa** D. Woodley[1], X. Wang[1], A. Bauskar[1], J. Cogan[1], Y. Hou[1], D. Keene[2], M. Chen[1]; 1. Dermatology, University of Southern California, Los Angeles, CA, USA; 2. Shriners Hospital for Children, Portland, OR, USA.

912. **Decreasing deacetylated ganglioside GM3 prevents AKT3 expression and triggers cell apoptosis in metastatic melanomas** Jian-Yun Lu[1, 2], Daniel Bach[1], Aurora Shehu[1], Heather Wilson[1], Lydia Kim[1], Amy Paller[1], Xiao-Qi Wang[1]; 1. Dermatology, Northwestern University, Chicago, IL, USA; 2. Dermatology, South Central University, Changsha, China.

913. **Expression of Drebrin, an actin binding protein, in basal cell carcinoma, trichoblastoma and trichoepithelioma** Yoko Mizutani[1], Hiroyuki Kanoh[1], Ikuko Iwamoto[2], Mariko Seishima[1], Koh-ichi Nagata[2]; 1. Department of Dermatology, Gifu University Graduate School of Medicine, Gifu, Japan; 2. Department of Molecular Neurobiology, Institute for Developmental Research, Aichi Human Service Center, Kasugai, Japan.

914. **Collagen XII and XIV - new partners of COMP in the skin extracellular matrix suprastructure** P. Agarwal[1], D. Zwolanek[1], D. Keene[2], K. Blumbach[1], J. Schulz[1], C. Mauch[1], S. Eming[1], T. Krieg[1], M. Koch[3], B. Eckes[1]; 1. Univ. of Cologne, Cologne, Germany; 2. Shriners Hospital, Portland, OR, USA; 3. Oral Biology, Univ. of Cologne, Cologne, Germany.

915*(CM16-03). **Reduced fibrotic response in COMP-deficient mice** J. Schulz[1], P. Agarwal[1], K. Blumbach[1], M. Koch[2], T. Krieg[1], B. Eckes[1]; 1. Dermatology, University of Cologne, Cologne, Germany; 2. Oral Biology, University of Cologne, Cologne, Germany.

916. **Resemblances between scleroderma and ageing in skin fibroblasts** Verónica Dumit[1, 2], Victoria Küttner[1, 2, 3], Jakob Käppler[1, 2], Sonsoles Piera-Velazquez[4], Sergio Jimenez[4], Leena Bruckner-Tuderman[1, 2, 3], Jouni Uitto[1, 4], Jörn Dengjel[1, 2, 3]; 1. Freiburg Institute for Advanced Studies (FRIAS), School of Life Science (LifeNet), University of Freiburg, Freiburg, Germany; 2. Center for Biological Systems Analysis (ZBSA), University of Freiburg, Freiburg, Germany; 3. Department of Dermatology, University Medical Center Freiburg, Freiburg, Germany; 4. Department of Dermatology and Cutaneous Biology, Jefferson Medical College, Philadelphia, PA, USA.

917. **MMP1, 2 and 7 but not 9 or 13 promote cutaneous SCC keratinocyte invasion and migration** Celine Pourreyron, Vincent Pautu, Michiel Simons, Charlotte Proby, Irene Leigh, Andrew South; Division of Cancer Research, University of Dundee, Dundee, United Kingdom.

918. **Genetic and *in vitro* observations support the key role of the protease inhibitor cystatin A in basal epidermal adhesion** Daniela Nitoiu, David Kelsell; Centre for Cutaneous Research, Blizard Institute, QMUL, London, United Kingdom.

919. **The association of plectin with epidermal keratins 5 and 14 depends on several COOH terminal subdomains within plectin, the central keratins coil 1 domain, and the quaternary structure induced by K5/K14 polymerization. Molecular insights into plectin- and intermediate filament-associated diseases** Luca Borradori[1], Lionel Fontao[2], Jamal-Eddine Bouameur[1], Nadja Begré[1], Prakash Lingasamy[1], Bertrand Favre[1]; 1. Department of Dermatology-DCR, INSEL-University Hospital, Bern, Switzerland; 2. Department of Dermatology, University Hospital, Geneva, Switzerland.

920. **Stimulation of tensotrophin expression and ECM remodelling in an innervated - dermal equivalent system** Pascale Prouheze, Barbara Morand, Jean-François Nicolaÿ, Mathilde Frechet; Exsymol, Monaco, Monaco.

921. **Type VII collagen regulates front-to-rear polarity in primary cutaneous squamous cell carcinoma keratinocytes** Jasbani Dayal, Celine Pourreyron, Stephen Watt, Irene Leigh, Andrew South; Division of Cancer Research, University of Dundee, Dundee, United Kingdom.

922. **LaNt α31, via interaction with laminin 332, mediates keratinocyte attachment and motility** Kevin Hamill, Jonathan Jones; Cell and Molecular Biology and Dermatology, Northwestern University, Chicago, IL, USA.

923*(CM16-04). **Epidermal EGFR signalling controls cutaneous host defense and prevents inflammation Beate** Maria Lichtenberger[1], Peter Arne Gerber[2, 3], Martin Holcmann[1], Bettina Alexandra Buhren[2, 3], Viktoria Smolle[1], Holger Schrumpf[2], Edwin Boelke[4], Parinaz Ansari[2], Colin Mackenzie[5], Andreas Wollenberg[6], Jens Fischer[7], Juergen Harder[8], Jens Michael Schroeder[8], Bernhard Homey[2], Maria Sibilia[1]; 1. Institute for Cancer Research, Medical University of Vienna, Vienna, Austria; 2. Dermatology, University of Duesseldorf, Duesseldorf, Germany; 3. Physiology & Biophysics, University of California, Irvine, CA, USA; 4. Radiation-Oncology, University of Duesseldorf, Duesseldorf, Germany; 5. Institute of Medical Microbiology, University of Duesseldorf, Duesseldorf, Germany; 6. Dermatology and Allergy, Ludwig-Maximilian University, Munich, Germany; 7. Institute of Pharmacology and Clinical Pharmacology, University of Duesseldorf, Duesseldorf, Germany; 8. Dermatology, University Hospital Schleswig-Holstein, Kiel, Germany.

924. **Regulation of normal epidermal homeostasis by the basement membrane** Supatra Marsh[1], Vera Martins[1], Michael Donaldson[2], Kristin Braun[1], Edel O'Toole[1]; 1. Centre for Cutaneous Research, Queen Mary University of London, London, United Kingdom; 2. Stiefel, a GSK company, Uxbridge, United Kingdom.

925. **Micro-spectroscopic and complementary ultrastructural observations of adipocytes** Laurence Senak[2], Gopi Menon[2], David Moore[1, 3], Guojin Zhang[2], Dawn Brasaesmle[4], M. Hernandez[4]; 1. TRI/Princeton, Princeton, NJ, USA; 2. Ashland Specialty Ingredients, Wayne, NJ, USA; 3. Rutgers University, Newark, NJ, USA; 4. Rutgers University, New Brunswick, NJ, USA.

926*(CM16-08). **Loss of type VII collagen in cutaneous SCC increases angiogenesis** Vera Martins[1], Matthew Caley[1], Kate Moore[2], Zsofia Szentpetery[1], Dedee Murrell[3], Min-Hee Kim[3], John McGrath[4], Rino Cerio[1], Mei Chen[5], John Marshall[2], Edel O'Toole[1]; 1. Centre for Cutaneous Research, Blizard Institute, Queen Mary University of London, London, United Kingdom; 2. Institute of Cancer, Queen Mary University of London, London, United Kingdom; 3. Dermatology, University of NSW, Sydney, NSW, Australia; 4. Guy's, King's College & St Thomas' School of Med, London, United Kingdom; 5. Dermatology, USC, Los Angeles, CA, USA.

927. **Short-term ozone exposure promotes wound healing by stimulating keratinocyte proliferation and migration** Xiao-Qi Wang[1], Jian-Yun Lu[1, 2], Heather Wilson[1], Yoonjung Joo[1], Amy Paller[1]; 1. Dermatology, Northwestern University, Chicago, IL, USA; 2. Dermatology, Central South University, Changsha, China.

928. **Amphiregulin cytoplasmic domain regulates G2/M in human keratinocytes** Stefan Stoll, Laure Rittié, Sylviane Lambert, Andrew Johnston, William Swindell, Philip Stuart, James Elder; Dermatology, University of Michigan, Ann Arbor, MI, USA.

929. **Lipid soluble components of bee venom prevents oxidation-related changes in collagen metabolism in normal human dermal fibroblasts** Eun Ju Choi[1], Jinkyu Park[2], Jongwoon Jeon[2], Pungmi Hyun[2], Kookjin Lim[3], Bumjoon Kim[3], Sangjin Kang[1]; 1. Applied Bioscience, CHA University, Seoul, Republic of Korea; 2. Wissen Co., Daejeon, Republic of Korea; 3. Proteometech Co., Seoul, Republic of Korea.

930. **Nox4 - an emerging target for the future treatment of scleroderma?** Heba Dosoki, Agatha Stegemann, Nina Weiss, Thomas Luger, Markus Böhm; Department of Dermatology, University of Münster, Münster, Germany.

Human Clinical Research and Therapeutics

All orals designated with an asterisk (*) below are presented in a Concurrent Session (see code). Orals designated with two asterisks (**) will be presented during a Plenary Session (see code).

931. **IL-31 is produced by the malignant T cell population in cutaneous T-cell lymphoma and its expression correlates with pruritus** Elisha Singer[1], Leigh Nattkemper[2], Bernice Benoit[1], Rachel Klein[1], Daniel Shin[1], Chuka Didigu[3], Tzvete Dentchev[1], Maria Wysocka[1], Gil Yosipovitch[2], Alain Rook[1]; 1. Dermatology, Perelman School of Medicine at the University of Pennsylvania, Philadelphia, PA, USA; 2. Dermatology, Neurobiology & Anatomy, and Regenerative Medicine, Wake Forest University Health Sciences, Winston-Salem, NC, USA; 3. Microbiology, Perelman School of Medicine at the University of Pennsylvania, Philadelphia, PA, USA.

932. **Predicting treatment response in psoriasis using serum levels of adalimumab and etanercept: A single centre, cohort study** Satveer Mahil[1], Zehra Arkir[2], Gillian Richards[2], Jonathan Barker[1], Catherine Smith[1]; 1. Division of Genetics and Molecular Medicine, St. John's Institute of Dermatology, King's College London and Guys and St Thomas' NHS Foundation Trust, London, United Kingdom; 2. Reference Chemistry, GSTS Pathology, Guy's and St Thomas' NHS Foundation Trust, London, United Kingdom.

933. **Development of a GMP facility for cell therapy of chronic non-healing wounds** Polly Carson[1, 3], Tatyana Yufit[1, 3], Vincent Falanga[1, 3, 2]; 1. Dermatology and Skin Cancer, Roger Williams Medical Center, Providence, RI, USA; 2. Dermatology, Boston University School of Medicine, Boston, MA, USA; 3. NIH Center of Biomedical Research Excellence, Roger Williams Medical Center, Providence, RI, USA.

934. ***In vitro* cytokine expression by PBMCs in the diagnosis of herbal drug-induced skin eruption** Osamu Norisugi, Yoko Yoshihisa, Kyoko Shimizu, Tadamichi Shimizu; Dermatology, University of Toyama, Toyama, Japan.

935*(CM8-02). **12 weeks of treatment with an oral SIRT1 activator, SRT2104, leads to clinical improvement and skin microarray modification in patients with psoriasis** Eric Jacobson[1], Mayte Suárez-Fariñas[2], Inna Cueto[2], Artemis Katcherian[2], Robert Matheson[5], Lawrence Parish[3, 4], Denise Shortino[6], Akanksha Gupta[1], George Vlasuk[1], James Krueger[2]; 1. Sirtris, a GSK company, Cambridge, MA, USA; 2. The Rockefeller University, New York, NY, USA; 3. Jefferson Medical College of Thomas Jefferson University, Philadelphia, PA, USA; 4. Paddington Testing Co, Inc., Philadelphia, PA, USA; 5. Oregon Medical Research Center, PC, Portland, OR, USA; 6. GlaxoSmithKiine, RTP, NC, USA.

936*(CM14-10). **Allogeneic fibroblast cell therapy accelerates wound healing in recessive dystrophic epidermolysis bullosa (RDEB)** Gabriela Petrof[1], Magdalena Martinez-Queipo[1], Jemima Mellerio[1], Paul Kemp[2], John McGrath[1]; 1. King's College London, London, United Kingdom; 2. Intercytex Group Ltd, Manchester, United Kingdom.

937*(CM14-04). **Multiple congenital melanocytic naevi and neurocutaneous melanosis are caused by post-zygotic activating mutations in codon 61 of *NRAS*, increasing the risk of melanoma in affected tissues** Veronica Kinsler[1, 2], Anna Thomas[2], Miho Ishida[2], Neil Bulstrode[3], Philip Stanier[4], Eugene Healy[5], Neil Sebire[6], Gudrun Moore[2]; 1. Paediatric Dermatology, Great Ormond St Hospital for Children, London, United Kingdom; 2. Clinical and Molecular Genetics Unit, UCL Institute of Child Health, London, United Kingdom; 3. Paediatric Plastic Surgery, Great Ormond St Hospital for Children, London, United Kingdom; 4. Neural Development Unit, UCL Institute of Child Health, London, United Kingdom; 5. Dermatopharmacology, University of Southampton, Southampton, United Kingdom; 6. Paediatric Pathology, Great Ormond St Hospital for Children, London, United Kingdom.

938. **Raised serum levels of complements in patients with cutaneous polyarteritis nodosa** Tamihiro Kawakami, Satoko Kimura, Sora Takeuchi, Yoshinao Soma; Department of Dermatology, St. Marianna University School of Medicine, Kawasaki, Japan.

939. **Targeted sun exposure guidance for South Asians living at northerly latitude could assist avoidance of vitamin D deficient status (25[OH]D <10 ng/mL)** Mark Farrar[1], Ann Webb[2], Richard Kift[2], Marie Durkin[1], Donald Allan[1], Annie Herbert[1], Jacqueline Berry[1], Lesley Rhodes[1]; 1. Faculty of Medical & Human Sciences, University of Manchester, Manchester, United Kingdom; 2. School of Earth, Atmospheric & Environmental Sciences, University of Manchester, Manchester, United Kingdom.

940. **Adalimumab effects on C-reactive protein and sleep in patients with moderate to severe psoriasis and suboptimal response to etanercept, methotrexate, or phototherapy: Subanalysis of the PROGRESS study** Yves Poulin[1], Yuzhen Wang[2], Orin Goldblum[2]; 1. Centre Dermatologique du Québec Metropolitain, Québec, QC, Canada; 2. AbbVie Inc., North Chicago, IL, USA.

941. **Non-invasive diagnosis of basal cell carcinoma subtype by reflectance confocal microscopy** Malou Peppelman[1], Esther A.W Wolberink[1], Peter C.M. van de Kerkhof[1], Willeke A.M. Blokx[2], Piet E.J van Erp[1], Marie-Jeanne P Gerritsen[1]; 1. Department of Dermatology, Radboud University Nijmegen Medical Centre, Nijmegen, Netherlands; 2. Department of Pathology, Radboud University Nijmegen Medical Centre, Nijmegen, Netherlands.

942. **Clindamycin 1%/benzoyl peroxide 3% gel, a new topical combination product, is effective in Japanese patients with acne vulgaris** M. Kawashima[1], M. Yamada[2], C. Parish[3]; 1. Tokyo Women's Medical University, Tokyo, Japan; 2. GlaxoSmithKine K.K., Tokyo, Japan; 3. Stiefel, a GSK company, London, United Kingdom.

943. **Medication adherence, healthcare costs and utilization associated with acne drugs in the United States** Xi Tan[2], Amir Al-Dabagh[1], Raj Balkrishnan[2], Scott Davis[1], Steve Feldman[1]; 1. Dermatology, Wake Forest School of Medicine, Winston-Salem, NC, USA; 2. School of Public Health, College of Pharmacy, University of Michigan, Ann Arbor, MI, USA.

944. **Palliative treatment for in-transit cutaneous metastases of Merkel cell carcinoma using surface-mold computer-optimized high-dose-rate brachytherapy** Lilit Garibyan[1, 3], Linda Wang[3, 5], Shane Cotter[4], Andrew Dorosario[2], Philip Devlin[2]; 1. Department of Dermatology, Harvard Medical School, Boston, MA, USA; 2. Department of Radiation Oncology, Dana-Farber/Brigham & Women's Cancer Center, Boston, MA, USA; 3. Department of Dermatology, Brigham & Women's Hospital, Boston, MA, USA; 4. Cancer Center of Santa Barbara, Santa Barbara, CA, USA; 5. Institute for Cancer Care, Mercy Medical Center, Baltimore, MD, USA.

945. **A novel interleukin (IL)-8 reporter cell line, THP-G8, can evaluate anti-tumor necrosis factor (TNF)-α neutralizing activity of patients' sera and predict drug effectiveness during anti-TNF-α antibody therapy** Yutaka Kimura, Ryoko Omori, Toshiya Takahashi, Kenichiro Tsuchiyama, Yoshiyuki Kusakari, Kenshi Yamasaki, Setsuya Aiba; Dermatology, Tohoku University Graduate School of Medicine, Sendai, Japan.

946. **An instrument-applied topical product affects skin microvasculature and may therefore be beneficial for improving the appearance of cellulite** Dale Kern[1], Thomas Stephens[2], Helen Knaggs[1]; 1. Center for Anti-Aging Research, Nu Skin Enterprises, Inc., Provo, UT, USA; 2. Thomas J. Stephens & Associates, Inc., Carrolton, TX, USA.

947. **Debio 0932, a new oral HSP90 inhibitor, prevents inflammatory cytokine release and alleviates psoriasis in a xenograft transplantation model** K. Stenderup[1], C. Rosada[1], B. Gavillet[2], G. Vuagniaux[2], T. Dam[3]; 1. Department of Dermatology, Aarhus University Hospital, Aarhus, Denmark; 2. Debiopharm S.A., Lausanne, Switzerland; 3. Department of Dermatology, Roskilde Hospital, Roskilde, Denmark.

948. **Hyperuricaemia in patients with chronic plaque psoriasis** Paolo Gisondi, Giovanni Targher, Giampiero Girolomoni; Medicine, University of Verona, Verona, Italy.

949. **Topical diphencyprone (DPCP) induces distinct early and late cellular immune reactions in human skin** Nicholas Gulati, Mayte Suárez-Fariñas, Patricia Gilleaudeau, Mary Sullivan-Whalen, Inna Cueto, Hiroshi Mitsui, James Krueger; The Rockefeller University, New York, NY, USA.

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950.Human cathelicidin (hCAP18/LL37) in pustules contributes to the pathogenesis of palmoplantar pustulosis Masamoto Murakami[1], Hidenori Okazaki[1], Yuji Shirakata[1], Takanori Kaneko[2], Akemi Ishida-Yamamoto[2], Hajime Iizuka[2], Vera Morhenn[3], Richard Gallo[3], Koji Sayama[1]; 1. Dermatology, Ehime University, Toon, Japan; 2. Dermatology, Asahikawa Medical University, Asahikawa, Japan; 3. Dermatology, UC San Diego, San Diego, CA, USA.

951.The prevalence of obesity is increased in patients with late compared to early onset psoriasis after adjustment for age Emese Herédi[1], Zsolt Dajnoki[1, 2], Anikó Csordás[1], Marcell Clemens[3], Balázs Ádám[4], Krisztián Gáspár[1, 2], Dániel Töröcsik[1, 2], Georgina Nagy[1, 2], Róza Ádány[4], János Gaál[5], Éva Remenyik[1], Andrea Szegedi[1, 2]; 1. Department of Dermatology, Medical and Health Science Center, University of Debrecen, Debrecen, Hungary; 2. Department of Dermatological Allergology, Medical and Health Science Center, University of Debrecen, Debrecen, Hungary; 3. Department of Cardiology, Medical and Health Science Center, University of Debrecen, Debrecen, Hungary; 4. Department of Preventive Medicine, Medical and Health Science Center, University of Debrecen, Debrecen, Hungary; 5. Department of Rheumatology, Kenézy Gyula Hospital, Debrecen, Hungary.

952.Pilot double blind multi-centre randomised controlled trial of hand held NB-UVB home phototherapy for focal or early vitiligo Viktoria Eleftheriadou[1], Kim Thomas[1], Jane Ravenscroft[2]; 1. Centre of Evidence Based Dermatology, University of Nottingham, Nottingham, United Kingdom; 2. Dermatology Department, Queen's Medical Centre, Nottingham, United Kingdom.

953.Vascular inflammation and innate immunity modulation: Ways for skin blemishes correction Nadège Lachmann, Caroline Baudouin, Johan Rocheteau, Stéphanie Brédif, Marjorie Biassette, Sophie Leclere-Bienfait, Philippe Msika; Innovation, R&D Direction, Laboratoires Expanscience, Epernon, France.

954.After daily application for two weeks, continued presence of naftifine is seen in the stratum corneum up to four weeks following the last application Stefan Plaum, Alan Fleischer, Amit Verma, Bhushan Hardas; Merz Pharmaceuticals, LLC, Greensboro, NC, USA.

955.Both ketoprofen in transfersome (IDEA-070) and drug-free vehicle (TDT 070) improved symptoms in patients with inflammatory skin diseases Thomas Luger[1], Matthias Rother[2]; 1. Department of Dermatology, University Clinics, Münster, Germany; 2. IMR Partner GmbH, Munich, Germany.

956.Clobetasol solution, clobetasol in transfersome (IDEA-068) and the drug-free vehicle (TDT 068) all showed significant treatment effects in a randomised psoriasis plaque study Matthias Rother; IMR Partner GmbH, Munich, Germany.

957.Utility of eosinophil cationic protein levels in early diagnosis of intrinsic atopic dermatitis Soyun Cho[1], Song Youn Park[1], So Hee Oh[2], Eun Ji Kim[1], Hyun Sun Park[1], Hyun-Sun Yoon[1]; 1. Dermatology, Seoul National University Boramae Hospital, Seoul, Republic of Korea; 2. Statistical Institute, Seoul National University Boramae Hospital, Seoul, Republic of Korea.

958*(CM14-08).Oral omega-3 PUFA apparently abrogates solar simulated radiation-induced immunosuppression in a randomised controlled clinical study Suzanne Pilkington[1], Karen Massey[2], Susan Bennett[1], Naser Al-Asswad[2], Khaled Roshdy[1], Neil Gibbs[1], Peter Friedmann[3], Anna Nicolaou[2], Lesley Rhodes[1]; 1. Institute of Inflammation and Repair, University of Manchester, Manchester, United Kingdom; 2. School of Pharmacy and Centre for Skin Sciences, University of Bradford, Bradford, United Kingdom; 3. Faculty of Medicine, University of Southampton, Southampton, United Kingdom.

959.Scleroderma-like cutaneous changes in association with taxanes Stephanie Liu[1], Alisa Femia[1], Lissy Hu[1], E. Brooke Eastham[1], Alvaro Laga[2], Ruth Ann Vleugels[1]; 1. Dermatology, Brigham and Women's Hospital, Harvard Medical School, Boston, MA, USA; 2. Pathology, Brigham and Women's Hospital, Harvard Medical School, Boston, MA, USA.

960.Disruption of the elastic network and emergence of short tropoelastin-rich fibrils in striae gravidarum Frank Wang[1], Ken Calderone[1], Timothy B. Johnson[2], Gary Fisher[1], John Voorhees[1]; 1. Dermatology, University of Michigan, Ann Arbor, MI, USA; 2. Obstetrics & Gynecology, University of Michigan, Ann Arbor, MI, USA.

961.Adalimumab treatment optimization for psoriasis: Results of a long-term Japanese study Akihiko Asahina[1], Mamitaro Ohtsuki[2], Takafumi Etoh[3], Yuji Yamaguchi[4], Hidemi Nakagawa[5]; 1. Sagamihara National Hospital, Kanagawa, Japan; 2. Jichi Medical University School of Medicine, Tochigi, Japan; 3. Tokyo Teishin Hospital, Tokyo, Japan; 4. AbbVie Japan, Tokyo, Japan; 5. The Jikei University School of Medicine, Tokyo, Japan.

962.Risk factors for comorbidities among patients with moderate-to-severe hidradenitis suppurativa Jeffrey Crowley[1], Jan Mekkes[2], Yihua Gu[3], Martin Okun[3]; 1. Bakersfield Dermatology, Bakersfield, CA, USA; 2. University of Amsterdam, Amsterdam, Netherlands; 3. AbbVie Inc., North Chicago, IL, USA.

963.Chronic actinic dermatitis successfully treated with thalidomide Brooke Eastham[1], Alisa Femia[2], John Hanna[3], Ruth Ann Vleugels[2, 1]; 1. Dermatology, Harvard Medical School, Boston, MA, USA; 2. Dermatology, Brigham and Women's Hospital, Boston, MA, USA; 3. Pathology, Brigham and Women's Hospital, Boston, MA, USA.

964.An observational, prospective study of monthly adalimumab therapy for disease maintenance in psoriasis patients: A possible new therapeutic option for good responders to the initial induction treatment Makoto Adachi, Mayako Kitajima, Naomi Takahashi, Takashi Taniguchi, Shinji Noda, Kyoko Mizuno; Kantoh Rosai Hospital, Kawasaki, Japan.

965.Tofacitinib ointment efficacy and biomarker improvement in psoriasis W. Ports[1], R. Bissonnette[2], K. Papp[3], S. Khan[4], S. Lan[1], C. Mamolo[1], K. Masek-Hammerman[1], V. Purohit[1]; 1. Pfizer Inc, Groton, CT, USA; 2. Innovaderm Research, Montreal, QC, Canada; 3. Probity Medical Research, Waterloo, ON, Canada; 4. PharmaNet/i3, Princeton, NJ, USA.

966.Refractory dermatitis herpetiformis Kaisa Hervonen[1, 3], Anna Alakoski[1], Teea Salmi[1, 3], Pekka Collin[2], Timo Reunala[1, 3]; 1. Department of Dermatology, Tampere University Hospital, Tampere, Finland; 2. Department of Gastroenterology, Tampere University Hospital, Tampere, Finland; 3. School of Medicine, Tampere University, Tampere, Finland.

967.A unique active complex for a 3-in1 body skin enhancer Estelle Loing[1], Elisabeth Lamarque[2], Carine Bezivin[3]; 1. R&D, Lucas Meyer Cosmetics, Quebec, QC, Canada; 2. R&D, Lucas Meyer Cosmetics, Ramonville St Anne, France; 3. R&D, Lucas Meyer Cosmetics, Champlan, France.

968.The proportion of Foxp3+ and IL-17+ cells in psoriatic skin Emi Nishida, Saori Kasuya, Chiyo Saito, Takuya Furuhashi, Akiko Nishioka, Yoichi Shintani, Akimichi Morita; Geriatric and Environmental Dermatology, Nagoya City University Graduate School of Medical Sciences, Nagoya, Japan.

969.Sunscreen titanium nanoparticles penetrate stratum corneum in human skin M. Gulbrandsen[1], J. Holm[1], A. Hoenen[2], V. Skaug[3]; 1. Oslo University Hospital, Oslo, Norway; 2. Department of Molecular Bioscience, University of Oslo, Oslo, Norway; 3. National Institute of Occupational Health, Oslo, Norway.

970.Human sweat pores studied using CARS microscopy *in vivo* Xueqin Chen[2], Paulina Gasecka[2], Alicja Gasecka[2], Hervé Rigneault[2], Dominique Pele[1], Florian Formanek[1], Jean-Baptiste Galey[1]; 1. Advanced Research, L'Oréal, Aulnay sous bois, France; 2. Mosaic Group, Institut Fresnel, Marseille, France.

971.Quantitative assessment of clinical and histological differences in atrophic and hypertrophic photoaging Dana Sachs[1], Yolanda Helfrich[1], Yilei Cui[1], Suzanne Fligiel[2], James Varani[2], Gary Fisher[1], John Voorhees[1]; 1. Dermatology, U of Michigan, Ann Arbor, MI, USA; 2. Pathology, U of Michigan, Ann Arbor, MI, USA.

972.Measuring a sustained reduction in scalp Malassezia.spp following treatment with zinc pyrithione shampoo David Jones[1], D. Zhu[2], Y. Huang[2], D. Caravetta[2], M. Hoptroff[2]; 1. Unilever R&D, Port Sunlight, United Kingdom; 2. Unilever R&D, Shanghai, China.

973.Aspects of facial contrast are cues for age and health perception Aurelie Porcheron[1, 2], Emmanuelle Mauger[1], Jennifer Sweda[3], Frederique Morizot[1], Richard Russell[3]; 1. CE.R.I.E.S - Chanel, Pantin, France; 2. LPNC, Université Pierre Mendes France, Grenoble, France; 3. Gettysburg College, Gettysburg, PA, USA.

974.Mood disorders and suicidal ideation associated with 5-α reductase inhibitors: A RADAR report Sabrina Uddin[1], Vishvas Garg[2], Beatrice Nardone[1], Victoria Godinez-Puig[1], Tinatin Kiguradze[1], William Temps[1], Maria Colavincenzo[1], Dennis West[1], Dennis Raisch[2], Steven Belknap[1]; 1. Department of Dermatology, Northwestern University Feinberg School of Medicine, Chicago, IL, USA; 2. Department of Pharmacy Practice and Administrative Sciences, College of Pharmacy, University of New Mexico, Albuquerque, NM, USA.

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976.Pigmentary changes following photodynamic therapy with 5-aminolevulinic acid or methyl aminolevulinate cream Min Soo Jang, Sang Hwa Han, Jong Bin Park, Dong Young Kang, Sang Tae Kim, Kee Suck Suh; Department of Dermatology, Kosin University College of Medicine, Busan, Republic of Korea.

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979.Non-invasive markers of liver fibrosis in patients with psoriasis taking methotrexate may not have sufficient accuracy to replace liver biopsy Catriona Maybury[1], Eleanor Samarasekera[2], Catherine Smith[1], Abdel Douiri[1], Jonathan Barker[1]; 1. King's College, London, United Kingdom; 2. RCP, London, United Kingdom.

980(PL1-04).Link between innate and adaptive immune response in autoinflammatory condition of generalized pustular psoriasis** Akiko Arakawa[1, 2], Burkhard Summer[1], Yoshio Kawakami[1], Besgen Petra[1], Peter Thomas[1], Yoshiki Miyachi[2], Andreas Wollenberg[1], Jürgen Schauber[1], Sigrid Vollmer[1], Thomas Ruzicka[1], Jörg Prinz[1]; 1. Dermatology, Ludwig-Maximilians-Universität, München, Germany; 2. Dermatology, Kyoto University, Kyoto, Japan.

981.A pharmacological model to evaluate the flush in rosacea patients Laurent Petit, Philippe Martel; Galderma R&D, Sophia Antipolis, France.

982.Associations between rosacea subtypes and quantitative details regarding primary and secondary features of rosacea Michel Rivier[1], Philippe Martel[1], Jerry Tan[2]; 1. Galderma R&D, Sophia Antipolis, France; 2. Windsor Hospital Clinical Inc., Windsor, ON, Canada.

983.Subtype progression in rosacea: A retrospective survey of a rosacea cohort Philippe Martel[1], Michel Rivier[1], Jerry Tan[2]; 1. Galderma R&D, Sophia Antipolis, France; 2. Windsor Hospital Clinical Inc., Windsor, ON, Canada.

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985.Clinical and histopathological features of IgG4-related skin manifestations in patients with IgG4-related disease Masahiro Oka[1], Tetsuya Ikeda[1], Hideki Shimizu[1], Mayumi Hatakeyama[1], Haruhisa Kanki[1], Makoto Kunisada[1], Goh Tsuji[2], Akio Morinobu[2], Shunichi Kumagai[2], Atsushi Azumi[3], Akira Negi[3], Chikako Nishigori[1]; 1. Division of Dermatology, Department of Internal Related, Kobe University Graduate School of Medicine, Kobe, Japan; 2. Department of Clinical Laboratory, Kobe University Hospital, Kobe, Japan; 3. Department of Ophthalmology, Kobe University Hospital, Kobe, Japan.

986.Narrow-band ultraviolet B treatment increases serum 25-hydroxyvitamin D and alters marginally cutaneous vitamin D metabolizing enzyme and antimicrobial peptide mRNA expression levels in psoriasis patients on oral vitamin D supplementation Meri Ala-Houhala[1, 3], Toni Karppinen[2], Erna Snellman[2, 3], Yvonne Dombrowski[4], Jurgen Schauber[4], Timo Reunala[1, 3]; 1. Deparment of Dermatology, Tampere University Hospital, Tampere, Finland; 2. Department of Dermatology, Päijät-Häme Central Hospital, Lahti, Finland; 3. Medical School, University of Tampere, Tampere, Finland; 4. Department of Dermatology and Allergology, Ludwig-Maximilian-University, Munich, Germany.

987.Efficacy and safety of indigo naturalis extract in oil in treating nail psoriasis: A randomized, observer-blind, vehicle-controlled, intra-subject trial Yin-ku Lin[1, 2], Mengiui Hsieh[2], Lai-Chu See[3]; 1. Department of Traditional Chinese Medicine, Chang Gung Memorial Hospital, Keelung, Keelung, Taiwan; 2. School of Traditional Chinese Medicine, College of Medicine, Chang Gung University, Taoyuan, Taiwan; 3. Biostatistics Consultation Center, Department of Public Health, Chang Gung University, Taoyuan, Taiwan.

988.Comparison of immunosuppressive cells and cytotoxic cells in cutaneous angiosarcoma: The development of novel supportive therapy for cutaneous angiosarcoma Yumi Kambayashi, Taku Fujimura, Sadanori Furudate, Yutaka Kimura, Akira Hashimoto, Takahiro Haga, Setsuya Aiba; Department of Dermatology, Tohoku University Graduate School of Medicine, Sendai, Japan.

989.Development of OND-1, a safe cyclosporine analog as a hair regrowth drug Sang-Nyun Kim, Tae-Kyun Kim, Wan-Je Park, Ka-Hee Cho, Suk-Jong Choi, Jae-Jin Chang; Haeeun Research Institute OrientBio Inc., Seongnam-si, Republic of Korea.

990*(CM8-05).Filaggrin-null individuals with and without eczema have a higher proportion of CD11c positive antigen presenting cells than wild type individuals Zoe Venables[1], Claire Leitch[1, 2], Nayani Madarasingha[1], Paul Fitch[1], Sarah Howie[1], Jurgen Schwarze[1], Richard Weller[2, 1]; 1. Centre for Inflammation Research, Queen's Medical Research Institute, University of Edinburgh, Edinburgh, United Kingdom; 2. Department of Dermatology, University of Edinburgh, Edinburgh, United Kingdom.

991.Fibroblasts associated with terminal hairs in males are not protective against perional wrinkling Anna Chien, Nancy Cheng, Janis Taube, Haiying Xu, Sewon Kang; Dermatology, Johns Hopkins, Baltimore, MD, USA.

992.Analysis of protein expression *in-situ* using multi-spectral imaging is superior to conventional immunohistochemistry (IHC): A new paradigm for patient selection for targeted therapy K. Salva[1], U. Sundram[2], M. Krathen[2], J. Wu[1], M. Nihal[1], Y. Kim[2], G. Wood[1]; 1. U. Wisconsin & VAMC, Madison, WI, USA; 2. Stanford U., Stanford, CA, USA.

993*(CM8-03).Anti-TNF-alpha treatment reduces circulating Th22 cells and regulatory T cells, but does not reduce circulating Th17 cells in psoriasis patients Takuya Furuhashi, Chiyo Saito, Kan Torii, Emi Nishida, Akimichi Morita; Department of Geriatric and Environmental Dermatology, Nagoya City University Graduate School of Medical Sciences, Nagoya, Japan.

994.Topical resiquimod therapy induces systemic immune activation and regression of both treated and untreated lesions in patients with CTCL: Early results of a phase I trial Alain Rook[1], Maria Wysocka[1], Bernice Benoit[1], Andrea Troxel[1], Jessica Teague[2], Rei Watanabe[2], Rosalie Elenitsas[1], Ellen Kim[1], Rachel Clark[2], Joel Gelfand[1]; 1. University of Pennsylvania, Philadelphia, PA, USA; 2. Dermatology, Harvard Medical School, Boston, MA, USA.

995.One-year follow-up of zoster-associated pain in 764 patients with acute herpes zoster treated using famciclovir Shinichi Imafuku[1], Juichiro Nakayama[1], Kazuo Higa[2], Masutaka Furue[3], Masakazu Takahara[3], Ichiro Katayama[4], Mamoru Tani[4]; 1. Dermatology, Fukuoka University, Fukuoka, Japan; 2. Anesthesiology, Fukuoka University, Fukuoka, Japan; 3. Dermatology, Kyushu University, Fukuoka, Japan; 4. Dermatology, Osaka University, Osaka, Japan.

996*(CM14-01).CD164 and FCRL3 are highly expressed on CD4+CD26-T cells in Sézary syndrome patients Maria Wysocka[1], Andrew Kossenkov[3], Bernice Benoit[1], Andrea Troxel[2], Elisha Singer[1], Andras Schaffer[1], Satoshi Nagata[4], Tomoko Ise[4], Brian Kim[1], Tzvete Dentchev[1], Louise Showe[3], Alain Rook[1]; 1. Dermatology, University of Pennsylvania, Philadelphia, PA, USA; 2. Department of Biostatistics and Epidemiology, University of Pennsylvania, Philadelphia, PA, USA; 3. The Wistar Institute, Philadelphia, PA, USA; 4. Cancer Biology Research Center, Sanford Research/USD, Sioux Falls, SD, USA.

997.Long-tem efficacy and tolerance of an acne clarifying set for cleansing acneic skin Katherine Ortblad[1], Zoe Draelos[2], Gregory Peterson[1], Robert Akridge[1]; 1. Clinical, Pacific Bioscience Labs, L'Oreal, Redmond, WA, USA; 2. Dermatology Constulting services, High Point, NC, USA.

998.Ethnic differences in skin irritation responses between caucasian and asian populations Seoyoung Kim, Eunyoung Lee, Kyeho Shin; Safety Research, Skin Research Institute, AmorePacific Corporation R&D Center, Yonginsi, Republic of Korea.

999.Correlation between age and skin elasticity, at different body sites. *In vivo* study Yolene Guérif-Ferreira, Gilles Oberto, Arlette Berghi, Frederique Portolan, Karine Cucumel, Nouha Domloge; Ashland Specialty Ingredient, Vincience, Global Skin Research Center,, Sophia Antipolis, France.

1000.Dermal stem cell plays an essential role in skin aging. *In vivo* study Yolene Guérif-Ferreira[1], Gilles Oberto[1], Carine Nizard[2], Marc Dumas[2], Arlette Berghi[1], Valerie Lequoy[1], Isabelle Imbert[1], Jean Marie Botto[1], Karine Cucumel[1], Sylvianne Schnebert[2], Nouha Domloge[1]; 1. Ashland Specialty Ingredient, Vincience, Global Skin Research Center, Sophia Antipolis, France; 2. LVMH recherche, Saint Jean de Braye, France.

1001.Anti-BP180 NC16A antibody levels are useful in predicting disease outcomes in Asian patients with bullous pemphigoid Sophie Cai[1], Yen Lim[2], Wenyun Li[1], Suat Tan[2], Mark Tang[2]; 1. Duke-NUS Graduate Medical School, Singapore, Singapore; 2. National Skin Centre, Singapore, Singapore.

1002.Preservation of telomere integrity exhibits protecting effects under stressfull lifestyle condition. *In vivo* study Yolene Guérif-Ferreira, Gilles Oberto, Arlette Berghi, Corinne Coquet-Morel, Karine Cucumel, Nouha Domloge; Ashland Specialty Ingredient, Vincience, Global Skin Research Center, Sophia Antipolis, France.

1003.The neurokinin 1 receptor is up-regulated in pruritic skin diseases Tobias Lotts, Falk Rülander, Sonja Ständer; Department of Dermatology and Competence Center Chronic Pruritus, University Hospital Münster, Münster, Germany.

1004.Triple antibiotic combination therapy may improve but not resolve granuloma annulare Brenda Simpson, Shannon Foster, Jennifer Ku, Eric Simpson, Benjamin Ehst; Dermatology, Oregon Health & Science University, Portland, OR, USA.

1005.MIF in the stratum corneum as a biomarker of skin irritation Chie Yasuda[1], Akiko Enomoto[1], Minako Takahashi[1], Takeshi Tohgasaki[1], Shioji Ishiwatari[1], Yoko Yoshihisa[2], Tadamichi Shimizu[2], Shoko Matsukuma[1]; 1. Safety & Quality Design Research, Fancl Research Institute, Yokohama-City, Japan; 2. Department of Dermatology, Graduate School of Medicine and Pharmaceutical Sciences, University of Toyama, Toyama-City, Japan.

1006.Vitality index as a new marker of skin ageing Michele Neveu[1], Sabine Laquieze[2], Delphine Pellé de Quéral[1], Sylvianne Schnebert[1], Frederic Bonté[1]; 1. LVMH Recherche, Saint Jean de Braye, France; 2. Peritesco, Paris, France.

1007*(CM14-09).Toll-like receptor signaling induces serum amyloid A and IL-6 expression in patients with recessive dystrophic epidermolysis bullosa Shin Morizane, Tetsuya Takiguchi, Kazuko Ikeda, Yumi Aoyama, Keiji Iwatsuki; Dermatology, Okayama University Graduate School of Medicine, Dentistry and Pharmaceutical Sciences, Okayama, Japan.

1008.The use of HF ultrasonography and 3D imaging system for treatment monitoring of striae distensae - preliminary report Sylwia Malinowska[2], Krzysztof Mlosek[3], Agata Dzwigalowska[1], Renata Debowska[1], Irena Eris[1]; 1. Cosmetic Laboratories Dr Irena Eris, Centre for Science and Research Dr Irena Eris, Warsaw, Poland; 2. Life- beauty -private partner, Grodzisk Mazowiecki, Poland; 3. Department of Diagnostic Imaging, II Medical Faculty of the Medical University of Warsaw, Warsaw, Poland.

1009.Impaired barrier function, stress responses and signalling pathway changes induced by filaggrin knockdown in a skin equivalent model Heather Long[1], Martina Elias[1], Carla Newman[2], Paul Wilson[2], Peter Marshall[2], Paul McGill[2], Michael Donaldson[2], Nick Reynolds[1]; 1. Dermatological Sciences, Newcastle University, Newcastle Upon Tyne, United Kingdom; 2. GlaxoSmithKline, UK, Stevenage, United Kingdom.

1010.The efficacy assessment of mature skin cosmetics using the HF ultrasound Krzysztof Mlosek[1], Sylwia Malinowska[2], Renata Debowska[3], Irena Eris[3]; 1. Department of Diagnostic Imaging, II Medical Faculty of the Medical University of Warsaw, Warsaw, Poland; 2. Life- beauty -private partner, Grodzisk Mazowiecki, Poland; 3. Cosmetic Laboratories Dr Irena Eris, Centre for Science and Research, Warsaw, Poland.

1011.Rising educational debt levels in dermatology trainees and effects on subsequent training choices: An update Sarah Sung, Alexa Kimball; Clinical Unit for Research Trials and Outcomes in Skin (CURTIS), Massachusetts General Hospital, Boston, MA, USA.

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1013.Anxiety reduction using hypnotic induction and self-guided imagery during dermatologic procedures Philip Shenefelt; Dermatology and Cutaneous Surgery, University of South Florida, Tampa, FL, USA.

1014.Outcome of patients with follicular mycosis fungoides Shalini Krishnasamy[1], Melvin Chiu[2, 1], Lauren Pinter-Brown[3, 1], Alexanian Serge[4]; 1. David Geffen School of Medicine at UCLA, Los Angeles, CA, USA; 2. Dermatology, David Geffen School of Medicine at UCLA, Los Angeles, CA, USA; 3. Hematology and Oncology, David Geffen School of Medicine at UCLA, Los Angeles, CA, USA; 4. Pathology and Laboratory Medicine, David Geffen School of Medicine at UCLA, Los Angeles, CA, USA.

1015.Circulating TSLP associates with decreased wheezing in non-atopic children Shadmehr Demehri[1], Laura Yockey[1], Cynthia Visness[2], Katy Jaffee[2], Ahu Turkoz[1], Robert Wood[5], George O'Connor[3], Meyer Kattan[4], James Gern[6], Peter Gergen[7], Michael Holtzman[8], Gordon Bloomberg[8], Raphael Kopan[1]; 1. Medicine, Division of Dermatology, Washington University School of Medicine, St. Louis, MO, USA; 2. Rho Federal Systems Division, Inc, Chapel Hill, NC, USA; 3. Boston University School of Medicine, Boston, MA, USA; 4. Columbia University School of Medicine, New York, NY, USA; 5. Johns Hopkins University School of Medicine, Baltimore, MD, USA; 6. University of Wisconsin School of Medicine and Public Health, Madison, WI, USA; 7. Division of Allergy, Immunology, and Transplantation - National Institutes of Health, Bethesda, MD, USA; 8. Washington University School of Medicine, St. Louis, MO, USA.

1016.The depletion of epidermal Langerhans cells is the common pathogenesis to the nutrient deficient trophic skin disorders including pellagra and biotin deficiency Sayaka Yamaguchi[1], Nobuo Kanazawa[2], Yoko Sogabe[3], Seiichi Izaki[4], Atsushi Utani[5], Hiroshi Uezato[1], Kenzo Takahashi[1]; 1. Dermatology, University of the ryukyus, Graduate school of medicine., Okinawa, Japan; 2. Dermatology, Wakayama Medical University, Wakayama, Japan; 3. Dermatology, Tone-Chuou-Hospital, Gunma, Japan; 4. Dermatology, Saitama Medical University Saitama Medical Center, Saitama, Japan; 5. Dermatology, Nagasaki University school of medicine, Nagasaki, Japan.

1017.Primary localized cutaneous amyloidosis: Association with atopic dermatitis Hong Liang Tey[1], Brian Chia[2], Andy Tan[3]; 1. National Skin Centre, Singapore, Singapore; 2. Tan Tock Seng Hospital, Singapore, Singapore; 3. University of Pennsylvania, Philadelphia, PA, USA.

1018.*In vivo* regulation of acneic sebum composition leading to a healthy sebum profile M. Chavagnac-Bonneville[1], M. Picardo[2], C. Zouboulis[3], E. Jourdan[1]; 1. Scientific department, Laboratoire Dermatologique BIODERMA, LYON, France; 2. Laboratory of Cutaneous Physiopathology and Integrated Center of Metabolomics, San Gallicano Dermatologic Institute IRCCS, ROME, Italy; 3. Departments of Dermatology, Venereology, Allergology and Immunology, Dessau Medical Center, DESSAU, Germany.

1019.HPV in non-melanoma skin cancer/pre-cancer in HIV S. Goolamali[1], N. Mladkova[2], K. Purdie[2], T. Shim[1], M. de Koning[3], W. Quint[3], N. Francis[1], N. Morar[1], R. Meys[1], C. Harwood[2], C. Bunker[1]; 1. Chelsea and Westminster Hospital, London, United Kingdom; 2. Queen Mary University of London, London, United Kingdom; 3. DDL, Rijswijk, Netherlands.

1020.Identification of biomarkers of clinical response to Minoxidil topical foam in men with androgenetic alopecia: A microarray approach Pratima Karnik[2], Mary Consolo[2], Patricia Oyetakin-White[2], Elma Baron[2], Paradi Mirmirani[1]; 1. Dermatology, The Permanente Medical Group, Vallejo, CA, USA; 2. Case Western Reserve University, Cleveland, OH, USA.

1021.Increased periostin levels in patients with systemic sclerosis Yukie Yamaguchi[1], Junya Ono[2], Miho Masuoka[3], Shoichiro Ohta[3], Kenji Izuhara[3], Zenro Ikezawa[4], Kazuo Takahashi[1], Michiko Aihara[1]; 1. Yokohama City University Graduate School of Medicine, Yokohama, Japan; 2. Shino-Test Corporation, Sagamihara, Japan; 3. Saga Medical School, Saga, Japan; 4. International University of Health and Welfare Atami Hospital, Atami, Japan.

1022.Comparative study of high resolution multifrequency ultrasound of the plantar skin in patients with various types of hereditary palmoplantar keratoderma Ilan Goldberg[1], Eli Sprecher[1], Mary Schwartz[2], Diana Gaitini[3]; 1. Tel Aviv Medical Center, Tel Aviv, Israel; 2. PC Project, Sal Lake City, UT, USA; 3. Rambam Medical Center, Haifa, Israel.

1023.Not only strawberry but also Bowenoid, hyperkeratotic and featureless-vessel patterns should be recognized as global features on dermoscopy for actinic keratosis Masaru Tanaka[1], Akane Goto[1], Ken Kobayashi[1], Mizuki Sawada[1], Sumiko Ishizaki[1], Mariko Fujibayashi[2]; 1. Dermatology, Tokyo Women's Medical University Medical Center East, Tokyo, Japan; 2. Pathology, Tokyo Women's Medical University Medical Center East, Tokyo, Japan.

1024*(CM8-06).Human keratinocyte proline-rich protein (*hKPRP*) is a novel keratinization-related protein whose deficiency may contribute to development of atopic dermatitis Hiraku Suga[1], Makoto Sugaya[1], Tsuyoshi Ishii[3], Hiroyuki Nishida[3], Shumpei Ishikawa[2], Masashi Fukayama[2], Shinichi Sato[1]; 1. Dermatology, University of Tokyo, Tokyo, Japan; 2. Pathology, University of Tokyo, Tokyo, Japan; 3. Rohto Pharmaceutical Co., LTD., Osaka, Japan.

1025*(CM8-05).Intrinsic atopic dermatitis (AD) shows similar Th2 and higher Th17 immune activation compared to extrinsic AD Mayte Suárez-Fariñas[1], Nikhil Dhingra[1, 2], Julia Gittler[1], Avner Shemer[3], James Krueger[1], Emma Guttman-Yassky[2, 1]; 1. Investigative Dermatology, The Rockefeller University, NY, NY, USA; 2. Dept. of Dermatology, Mount Sinai School of Medicine, NY, NY, USA; 3. Dermatology Department, Tel-Hashomer, Tel-Aviv, Israel.

1026.Predictors of health related quality of life in psoriatic patients Alicja Ograczyk[1], Joanna Miniszewska[2], Anna Kepska[1], Magdalena Kozlowska[3], Jan Chodkiewicz[2], Andrzej Kaszuba[3], Anna Zalewska-Janowska[1]; 1. Psychodermatology Department, Medical University of Lodz, Lodz, Poland; 2. Psychology Institute, University of Lodz, Lodz, Poland; 3. Dermatology, Paedriatrics Dermatology and Oncological Dermatology Clinic, Medical University of Lodz, Lodz, Poland.

1027.Ustekinumab improved psoriasis without altering T cell immunity: Cytokine production, differentiation, and T cell receptor repertoire diversity Keiichi Yamanaka, Kenshiro Tsuda, Kimiko Matsubara, Makoto Kondo, Hitoshi Mizutani; Dermatology, Mie University, Graduate School of Medicine, Tsu, Japan.

1028.A new sensitive scratch recorder for human dermatitis: Evaluation of nocturnal scratching sound of AD patients Yoichi Omoto[1], Yuichi Noro[2], Kimiko Matsubara[1], Kenichi Isoda[1], Koji Umeda[3], Masanao Naka[1], Akisa Yamagiwa[1], Makoto Kondo[1], Tomoko Akeda[1], Keiichi Yamanaka[1], Hitoshi Mizutani[1]; 1. Dermatology, Mie University, Graduate School of Medicine, Tsu, Japan; 2. Department of Physics Engineering, Mie University, Faculty of Engineering, Tsu, Japan; 3. Kinoshokuhin Co, Tsu, Japan.

1029.5-Fluorouracil preconditioning followed by photodynamic therapy enhances apoptotic responses in squamous cell carcinoma through increased levels of p53 Edward Maytin, Sanjay Anand, Kishore Rollakanti; Dermatology & Biomedical Engineering, Cleveland Clinic, Cleveland, OH, USA.

1030.Wound repair process comparison after the Er-Yag, CO2 and the 1064nm Q-switched Nd-yag lasers ablation: The basis of treatment of melanocytic nevus by the 1064 nm Q-switched Nd-yag laser Jong Suk Lee[1], Hyun Jo Kim[2], Jung Hoon Lee[2], Won Bok Choi[2], Young Lip Park[3]; 1. Dermatology, Soonchunhyang University Hospital, Cheonan, Republic of Korea; 2. CNP Skin Clinic, Cheonan, Republic of Korea; 3. Dermatology, Soonchunhyang University Hospital, Bucheon, Republic of Korea.

1031.An investigational study to evaluate sildenafil for the treatment of lymphatic malformations Christina Danial[1], Andrea Tichy[1], Umar Tariq[2], Glenda Swetman[1], Phuong Khuu[1], Thomas Leung[1], Latanya Benjamin[1], Joyce Teng[1], Shreyas Vasanawala[2], Alfred Lane[1]; 1. Dermatology, Stanford University, Stanford, CA, USA; 2. Radiology, Stanford University, Stanford, CA, USA.

1032.The pathogenic role of sweating disturbance in the development of lichen amyloidosis Yurie Komatsu, Yoshiko Mizukawa, Yukiko Ushigome, Yoshimi Yamazaki, Tetsuo Shiohara; Department of Dermatology, Kyorin University School of Medicine, Tokyo, Japan.

1033.Retrospective study of leukemia cutis demonstrates improved survival with stem cell transplantation Sherrie Divito[1], Arturo Saavedra[1, 2]; 1. Dermatology, Brigham and Women's Hospital, Boston, MA, USA; 2. Pathology, Brigham and Women's Hospital, Boston, MA, USA.

1034.Safety, pharmacokinetics and efficacy of AN2728 ointment, 2% in a phase 2 study of adolescents with mild-to-moderate atopic dermatitis Lee Zane[1], Wynnis Tom[2], Sanjay Chanda[1], Liang Liu[1], Van Syoc Merrie[1]; 1. Anacor Pharmaceuticals, Palo Alto, CA, USA; 2. Rady's Children's Hospital, UC San Diego, San Diego, CA, USA.

1035*(CM14-03).Macrophages are critical for tumor formation in a xenograft model of CTCL Xuesong Wu[1], Brian Schulte[1], Dipica Haribhai[2], Calvin Williams[2], Sam Hwang[1]; 1. Dermatology, Med College WI, Milwaukee, WI, USA; 2. Rheumatology, Med College WI, Milwaukee, WI, USA.

1036.Photodynamic therapy serves two ends in the diagnosis and treatment of actinic keratosis with multiple lesions Bo-Kyung Kim, Noo Ri Lee, Sang-Yeon Park, Na Young Yoon, Eung Ho Choi; Department of Dermatology, Yonsei University Wonju College of Medicine, Wonju, Republic of Korea.

1037.Pathogenic cell types, molecular mechanisms and prognostic factors in EB virus-associated cutaneous T/NK lymphoproliferative disorders Keiji Iwatsuki[1], Tomoko Miyake[1], Yoji Hirai[1], Takenobu Yamamoto[1, 2], Kazuyasu Fujii[1], Daisuke Suzuki[1], Kazuhide Tsuji[1], Shin Morizane[1]; 1. Dermatology, Okayama University Graduate School of Medicine, Dentistry and Pharmaceutical Sciences, Okayama, Japan; 2. Dermatology, Kawasaki Medical School, Kurashiki, Japan.

1038.Systematic review of treatments for eczema informs clinical practice and highlights research gaps Helen Nankervis, F. Delamere, H. Williams; Centre of Evidence Based Dermatology, University of Nottingham, Nottingham, United Kingdom.

1039*(CM8-09).Steroid treatment during the acute stage of severe drug eruptions is associated with improved long-term outcomes in the generation of autoantibodies: Longitudinal analysis up to 12 years of autoantibodies against epidermal proteins Aya Ukida[1], Yumi Aoyama[1], Yoshinori Shirafuji[1], Hiroshi Umemura[1], Koji Kamiya[1], Yukiko Ushigome[2], Yoko Kano[2], Tetsuo Shiohara[2], Keiji Iwatsuki[1]; 1. Dermatology, Okayama University, Okayama, Japan; 2. Dermatology, Kyorin University, Mitaka, Japan.

1040.Safety and efficacy of a novel topical herbal-based lotion (KAM-0209) to manage psoriasis symptoms Yonit Bomstein, Sharon Rozenblat; Kamedis, Tel Aviv, Israel.

1041.18-Fluorodeoxyglucose positron emission tomography-computed tomography (FDG PET-CT) as a novel tool for quantification of psoriasis disease activity: Proof of concept from the Vascular Inflammation in Psoriasis (VIP) trial Junko Takeshita[1], Babak Saboury[1], Ali Salavati[1], Drew Torigian[1], Abby Van Voorhees[1], Nehal Mehta[2], Abass Alavi[1], Joel Gelfand[1]; 1. University of Pennsylvania, Philadelphia, PA, USA; 2. National Heart, Lung and Blood Institute, Bethesda, MD, USA.

1042.Biomarkers elevated in atopic dermatitis (AD) are reduced by therapeutic blockade of IL-4 receptor α (IL-4Rα) signaling with REGN668/SAR231893 in patients with severe AD Jennifer Hamilton[1], Lisa Beck[2], Haobo Ren[1], Eric Simpson[3], Ana Kostic[1], Jeffrey Ming[4], Usman Chaudhry[1], Neil Graham[1], Allen Radin[1]; 1. Regeneron Pharmaceuticals, Inc., Tarrytown, NY, USA; 2. University of Rochester, Rochester, NY, USA; 3. Oregon Health and Science University, Portland, OR, USA; 4. Sanofi, Bridgewater, NJ, USA.

1043.Anti-nuclear antibodies and anti-ribonucleoprotein antibodies mirror cutaneous and systemic disease activity in discoid lupus erythematosus patients Andrew Kim, Elisa Song, Lin-chiang Tseng, Benjamin Chong; Dermatology, UT Southwestern Medical Center, Dallas, TX, USA.

1044.Early alteration of microRNA predicts response to extracorporeal photopheresis in cutaneous t-cell lymphoma Laura McGirt[1], Devin Baerenwald[1], Eric Vonderheid[2], John Zic[1], Christine Eischen[3]; 1. Medicine/Dermatology, Vanderbilt University Medical Center, Nashville, TN, USA; 2. Oncology, Johns Hopkins Medical Institute, Baltimore, MD, USA; 3. Pathology, Microbiology and Immunology, Vanderbilt University Medical Center, Nashville, TN, USA.

1045*(CM14-07).Vismodegib as an adjuvant to surgery for basal cell carcinomas Mina Ally, Sumaira Aasi, Anne Chang, Claudia Teng, Erik Anderson, Irene Bailey, Ashley Wysong, Jinah Kim, Jean Tang; Dermatology, Stanford University, Redwood City, CA, USA.

1046*(CM14-05).Soluble DC-HIL protein is a novel and useful blood marker for melanoma Jake Turrentine, Kyoichi Tamura, Kaveh Nezafati, Jin-Sung Chung, Ponciano Cruz, Kiyoshi Ariizumi; Dermatology, UT Southwestern Medical Center, Dallas, TX, USA.

1047(PL2-01).Bone marrow transplantation has better outcomes than umbilical cord blood transplantation in recessive dystrophic epidermolysis bullosa (RDEB)** Jakub Tolar[1], John McGrath[2], Douglas Keene[3], Kristen Hook[4], Mark Osborn[1], Sima Kavand[4], Maria Hordinsky[4], David Woodley[5], Mei Chen[5], Alain Hovnanian[6], Katsuto Tamai[7], Bruce Blazar[1], John Wagner[1]; 1. Pediatric Blood and Marrow Transplantation, University of Minnesota, Minneapolis, MN, USA; 2. King's College, London, United Kingdom; 3. Shriners Hospital, Portland, OR, USA; 4. University of Minnesota, Minneapolis, MN, USA; 5. Dermatology, University of Southern California, Los Angeles, CA, USA; 6. INSERM, Necker Hospital, Paris, France; 7. Stem Cell Science, Osaka University, Osaka, Japan.

1048*(CM8-04).Blocking IL-4Rα signaling with REGN668/SAR231893 rapidly suppresses major pathogenic pathways in severe atopic dermatitis Jennifer Hamilton[1], M. Suarez-Farinas[2], Ana Kostic[1], Jeffrey Ming[3], N. Dhingra[2], Allen Radin[1], J. Krueger[2], Emma Guttman-Yassky[2, 4]; 1. Regeneron Pharmaceuticals, Inc., Tarrytown, NY, USA; 2. Rockefeller University, New York, NY, USA; 3. Sanofi, Bridgewater, NJ, USA; 4. Mount Sinai School of Medicine, New York, NY, USA.

1049(PL3-03).Systemic treatment of patients with severe atopic dermatitis (AD) with an anti IL-4Rα mAb (REGN668/SAR231893) results in rapid and sustained improvements in disease signs and symptoms** Lisa Beck[1], Diamant Thaci[2], Jennifer Hamilton[3], Haobo Ren[3], Ross Rocklin[4], Jeffrey Ming[4], Neil Graham[3], Allen Radin[3]; 1. University of Rochester, Rochester, NY, USA; 2. Johann Wolfgang Goethe-University, Frankfurt/Main, Germany; 3. Regeneron Pharmaceuticals, Tarrytown, NY, USA; 4. Sanofi, Bridgewater, NJ, USA.

1050.IL-4Rα mAb REGN668/SAR231893 for the treatment of severe atopic dermatitis itch Gil Yosipovitch[1], M. Mayo[2], Jennifer Hamilton[3], Jeffrey Ming[4], Haobo Ren[3], Neil Graham[3], Allen Radin[3]; 1. Wake Forest Univ, Winston-Salem, NC, USA; 2. UT Southwestern, Dallas, TX, USA; 3. Regeneron, Tarrytown, NY, USA; 4. Sanofi, Bridgewater, NJ, USA.

1051.Isolated facial vasculopathy responding to pentoxifylline Lissy Hu[1], Christina Alexander[2], Allyson Eastham[1, 3], Sasha Girouard[1, 3], Alisa Femia[1, 3], Ruth Ann Vleugels[1, 3]; 1. Harvard Medical School, Boston, MA, USA; 2. University of Cincinnati College of Medicine, Cincinnati, OH, USA; 3. Brigham and Women's Hospital, Boston, MA, USA.

1052.Treatment of actinic cheilitis with topical photodynamic therapy Sue Kyung Kim, Hyo Sang Song, You Chan Kim; Department of Dermatology, Ajou University School of Medicine, Suwon, Republic of Korea.

1053.A role for VEGF in prurigo? Blood level and expression in the skin is increased and correlates with vascular remodelling and disease activity Clemens Krull, Marcus Maurer, Bernhard Lange-Asschenfeldt, Martin Metz; Charité - Universitätsmedizin Berlin, Berlin, Germany.

1054.Racial/ethnic disparities in the prevalence, severity and health outcomes of childhood atopic dermatitis Jonathan Silverberg[1], Jon Hanifin[2], Eric Simpson[2]; 1. Dermatology, St. Luke's-Roosevelt Hospital and Beth Israel Medical Centers, New York, NY, USA; 2. Dermatology, Oregon Health & Science Univeristy, Portland, OR, USA.

1055.Relationship of TNFalpha and p40 genes promoter polymorphisms with the efficacy to anti TNFalpha therapy Esteban Dauden, Elena Gallo, Teresa Cabaleiro, Manuel Roman, Francisco Abad-Santos, Amaro Garcia-Díez; Dermatology, Hospital Universitario la Princesa, Madrid, Spain.

1056.Reflectance confocal microscopy for the monitoring of actinic keratoses undergoing photodynamic therapy Clara Curiel-Lewandrowski[1, 2], Franz Legat[2], Giovanni Pellacani[3], Edith Arzberger[2], Angelika Hofer[2], Alexandra Gruber-Wachkernagel[2], Rainer Hofman-Wellenhof[2]; 1. Dermatology, University of Arizona/Arizona Cancer Center, Tucson, AZ, USA; 2. Dermatology, University of Graz, Graz, Austria; 3. Dermatology, University of Modena and Reggio Emilia, Modena, Italy.

1057.Itch and pain are prognostic markers for depth of invasion and inflammatory cell constitution in nonmelanoma skin cancer: Results of a large clinicopathological study Shawn Kwatra[1], Kyle Mills[2], Brett Lowenthal[1], Daniel Pearce[1], Phillip Williford[1], Omar Sangueza[1, 2], Ralph D'Agostino[3], Gil Yosipovitch[1]; 1. Dermatology, Wake Forest University School of Medicine, Winston-salem, NC, USA; 2. Pathology, Wake Forest University School of Medicine, Winston-salem, NC, USA; 3. Biostatistics, Wake Forest University School of Medicine, Winston-salem, NC, USA.

1058(PL6-05).Phase II trial of Brentuximab vedotin (SGN-35) for CD30+ cutaneous T-cell lymphomas and lymphoproliferative disorders** M. Duvic[1], M. Tetzlaff[2], P. Gangar[1], Audra Clos[1], R. Talpur[1]; 1. Dermatology, UT MD Anderson Cancer Center, Houston, TX, USA; 2. Dermatopathology, UT MD Anderson Cancer Center, Houston, TX, USA.

1059.Possible predictors of treatment-failure and detailed dynamics of autoantibodies and markers of systemic inflammation in psoriasis patients under treatment with Adalimumab and Etanercept Jochen Hoffmann, Christian Knoop, Alexander Enk, Eva Hadaschik; Department of Dermatology, University of Heidelberg, Heidelberg, Germany.

1060.Pruritus, photosensitivity, and physical and social health impact health-related quality-of-life in patients with cutaneous dermatomyositis Alisa Femia, Stephanie Liu, Allyson Eastham, Abrar Qureshi, Ruth Vleugels; Dermatology, Brigham & Women's Hospital, Harvard Medical School, Boston, MA, USA.

1061.Microneedle pretreatment may reduce incubation time in photodynamic therapy H. Lev-Tov[1, 2], L. Larsen[1], R. Zackria[1], H. Chahal[1], D. Eisen[1], R. Sivamani[1]; 1. UC Davis, Sacramento, CA, USA; 2. VA Northern CA, Mather, CA, USA.

1062.Sticky Platelets Syndrome (SPS). A frequent cause of primary thrombophilia Benjamin Moncada[1], Claudio Castillo-Martínez[1], Guillermo Ruiz-Arguelles[2], Patricia Valdes-Tapia[2], Elsa Arenas-Velazquez[1], Elsa Arenas-Velazquez[1]; 1. Dermatology, Universidad Autónoma de San Luis Potosí, San Luis Potosí, Mexico; 2. Centro de Hematología y Medicina interna Clinica Ruiz, Centro de Hematología y Medicina interna Clinica Ruiz, Puebla, Mexico.

1063.Early ablative carbon dioxide fractional laser for acne scars in asian patients undergoing oral isotretinoin Myeong Gil Jeong, Eun Jin Kim, Jeong Eun Kim, Joo Yeon Ko, Young Suck Ro, Hyun Woo Kim; Dermatology, Hanyang University College of Medicine, Seoul, Republic of Korea.

1064.Reversible suppression of normal thymic output in patients with leukemic cutaneous T cell lymphoma Emmanuella Guenova[1], Rei Watanabe[1], Ahmed Gehad[1], Jessica Teague[1], Natalie Adams[2], Andrew Dorosario[2], Robert Glinert[2], David Walsch[2], Marianne Tawa[2], Joi Carter[2], Keri Chaney[2], David Fisher[2], Corey Cutler[2], Thomas Kupper[1, 2], Rachael Clark[1, 2]; 1. Harvard Skin Disease Research Center, Boston, MA, USA; 2. Dana Farber/Brigham and Women's Cancer Center, Boston, MA, USA.

1065.Treatment with methotrexate does not affect microvascular endothelial function in patients with psoriasis Mette Gyldenløve[1], Peter Jensen[1], Marianne Løvendorf[1], Peter Riis Hansen[2], Claus Zachariae[1], Lone Skov[1]; 1. Department of Dermato-Allergology, Copenhagen University Hospital Gentofte, Hellerup, Denmark; 2. Department of Cardiology, Copenhagen University Hospital Gentofte, Hellerup, Denmark.

1066.Surface cathelicidin expression is a predictor of treatment success in papulopustular rosacea Eugene Huang[1], Anna DiNardo[2], Richard Gallo[2], Scott Caveney[3], Ronald Gottschalk[4]; 1. Therapeutics Clinical Research, San Diego, CA, USA; 2. Dept of Medicine-Dermatology Research, University of California, San Diego, La Jolla, CA, USA; 3. Not applicable, Southlake, TX, USA; 4. Galderma Laboratories, L.P., Fort Worth, TX, USA.

1067.Quantitative evaluation of efficacy of photodynamic therapy for port-wine stains using erythema index image analysis Yi Zhao[1], Jining Tao[2], Ping Tu[1]; 1. Department of Dermatology, Peking University First Hospital, Beijing, China; 2. Fudan-zhangjiang Bio-Pharmaceutical Co. Ltd., Shanghai, China.

1068.The use of hemoglobin saturation ratio as a means of measuring tissue perfusion in the development of heel pressure sores Kristen Aliano, Steve Stavrides, Thomas Davenport; Long Island Plastic Surgical Group, Garden City, NY, USA.

Posters

1069.Genetic factors influencing anti-epidermal growth factor receptor (EGFR) antibody toxicity to the skin Ane Jaka[1], Nerea Ormaechea[1], Araika Gutiérrez-Rivera[2], Susana Vildosola[1], Arantxa López-Pestaña[1], Cristina Sarasqueta[3], Adelaida La Casta[4], Ander Izeta[2], Anna Tuneu[1]; 1. Dermatology, Hospital Universitario Donostia, San Sebastian, Spain; 2. Bioengineering, Hospital Universitario Donostia, San Sebastian, Spain; 3. Research Unit, Hospital Universitario Donostia, San Sebastian, Spain; 4. Oncology, Hospital Universitario Donostia, San Sebastian, Spain.

1070.Recurring nearly deadly mosquito bites in a patient with mast cell activation syndrome Nadine Reiter, Marcus Maurer, Frank Siebenhaar; Dermatology, Charité - Universitätsmedizin Berlin, Berlin, Germany.

1071.Complexity of skin ulcers: Pyoderma gangrenosum and lymphoma dominate in a university hospital in China Wen-Hui Wang, Jin-Zhu Guo, Qing-Hua Song, Dong-Ming Li, Xin Guan, Min-Li Xu, Chun-lei Zhang; Dermatology, Peking University Third Hospital, Beijing, China.

1072.Identification of a targetable CTLA4-CD28 gene fusion in Sézary syndrome Aleksandar Sekulic[1, 2], Tim McDaniel[3, 4], John Carpten[2], Fernando De Castro[5], Winnie Liang[2], Mark Pittelkow[6], Cristophe Legendre[2], Waibhav Tembe[2], Lori Phillips[2], Victoria Zismann[2], Jeffrey Trent[2], John Goman[7], David Craig[2]; 1. Mayo Clinic, Scottsdale, AZ, USA; 2. TGen, Phoenix, AZ, USA; 3. Hunterstown Rd, Versailles, KY, USA; 4. Illumina, San Diego, CA, USA; 5. Dermatology Associates of Kentucky, Lexington, KY, USA; 6. Mayo Clinic, Rochester, MN, USA; 7. Baptist Lexington Oncology Associates, Lexington, KY, USA.

1073.Prevalence of eosinophils in drug eruptions Alexandra Nathan[1], Evgenia Slutsky[1], Dana Fruchter[1], Andrea Gat[2], Eli Sprecher[1], Ilan Goldberg[1]; 1. Dermatology, Tel Aviv Sourasky Medical Center, Tel- Aviv, Israel; 2. Pathology, Tel Aviv Sourasky Medical Center, Tel Aviv, Israel.

1074.Effect of weight loss on the severity of psoriasis: A randomised controlled trial Peter Jensen[1], Claus Zachariae[1], Robin Christensen[2], Nina Geiker[3], Bente Schaadt[4], Steen Stender[5], Peter Hansen[6], Arne Astrup[7], Lone Skov[1]; 1. Dermato-Allergology, Copenhagen University Hospital Gentofte, Hellerup, Denmark; 2. The Parker Institute, Department of Rheumatology, Copenhagen University Hospital Frederiksberg, Frederiksberg, Denmark; 3. Clinical Nutrition, Copenhagen University Hospital Gentofte, Hellerup, Denmark; 4. Clinical Physiology, Copenhagen University Hospital Gentofte, Hellerup, Denmark; 5. Clinical Biochemistry, Copenhagen University Hospital Gentofte, Hellerup, Denmark; 6. Cardiology, Copenhagen University Hospital Gentofte, Hellerup, Denmark; 7. Nutrition, exercise and sports, Copenhagen University, Frederiksberg, Denmark.

1075.Detection of blood involvement in cutaneous T cell lymphoma: Spectrum of clinical practice and reliability of blood markers Jing Huang, Michael Girardi, Kacie Carlson; Dermatology, Yale University School of Medicine, New Haven, CT, USA.

1076.Noninvasive assessment using optical technology of acellular dermal matrices prepared by two different methods. Histopathological correlation Jean Pierre Draye[2], Marc Boone[1], G. Verween[2], jean Pierre Pirnay[2], G. Verbeken[2], Daniel De Vos[2], Thomas Rose[2], Serge Jennes[2], Gregor Jemec[3], Veronique Del Marmol[1]; 1. Dermatology, hopital Erasme,Université Libre de Bruxelles, Brussels, Belgium; 2. Human Cell and Tissue Banks, Laboratory for Molecular and Cellular Technology, Burn Wound Centre, Queen Astrid Military Hospital, Brussels, Belgium; 3. dermatology, Roskilde Hospital, Health Sciences Faculty, University of Copenhagen, Copenhagen, Denmark.

1077.Characterization of adipose tissue inflammation may link psoriasis and cardiometabolic disease Shawn Rose, Karteek Sonti, Pradeep Dagur, Martin Playford, Paul Lee, Francesco Celi, Nehal Mehta; National Institutes of Health, Bethesda, MD, USA.

1078.Selective cryolysis of sebaceous glands H. Ray Jalian[1, 2], Joshua Tam[1], Lilit Garibyan[1], R. Rox Anderson[1]; 1. Dermatology, Massachusetts General Hospital, Boston, MA, USA; 2. Medicine, Division of Dermatology, University of California, Los Angeleles, Los Angeles, CA, USA.

1079.A multiplexed MRM assay panel for high throughput protein quantification in human skin samples Claudia Escher[1], Roland Bruderer[1], Peter Girling[2], Yulia Butscheid[1]; 1. BiognoSYS AG, Zurich, Switzerland; 2. CELLnTEC Advanced Cell Systems AG, Bern, Switzerland.

1080.Cutaneous squamous cell carcinoma derived cell lines are more sensitive to the proteasome inhibitor bortezomib than normal skin cells L. Koerver[1], Z. Tura[1], I. Leigh[1, 2], A. South[1], M. Saville[1]; 1. Division of Cancer Research, University of Dundee, Dundee, United Kingdom; 2. Barts and the London School of Medicine, University of London, Dundee, United Kingdom.

1081.Aurora-A overexpression predicts poor outcome in melanoma Joan Anton Puig-Butille[1, 2], Paula Aguilera[3, 2], Celia Badenas[1, 2], Cristina Carrera[3, 2], Llucia Alós[4], Josep Malvehy[3, 2], Susana Puig[3, 2]; 1. Melanoma Unit-Biochemical and Molecular Genetics Service, Hospital Clinic & IDIBAPS (Institut d'Investigacions Biomèdiques Agustí Pi i Sunyer), Barcelona, Spain; 2. Investigación Biomédica en Red en Enfermedades Raras (CIBERER), Barcelona, Spain; 3. Melanoma Unit-Dermatology Department, Hospital Clinic & IDIBAPS (Institut d'Investigacions Biomèdiques Agustí Pi i Sunyer), Barcelona, Spain; 4. Pathology Department, Hospital Clinic & IDIBAPS (Institut d'Investigacions Biomèdiques Agustí Pi i Sunyer), Barcelona, Spain.

1082.Propranolol cellular targets in infantile hemangiomas Sorilla Prey, Muriel Cario André, Catherine Pain, Christine Leaute-Labreze, Alain Taieb; Inserm U1035, and National Reference Centre for Rare Skin Disorders, Bordeaux University, Bordeaux, France.

1083.Antibody formation to adalimumab in the treatment of psoriasis vulgaris is most often seen before 24 weeks of treatment and has great influence on clinical efficacy: One year data in 59 patients Stef Menting[1], Paula Lumig[2], Anna-Christa Vries[1], Gert-Jan Wolbink[3], Elke Jong[2], Phyllis Spuls[1], Lidian Lecluse[1]; 1. Dermatology, AMC-UvA, Amsterdam, Netherlands; 2. Dermatology, UMC St Radboud, Nijmegen, Netherlands; 3. Sanquin research, Amsterdam, Netherlands.

1084.Therapeutic benefit of topically applied ascorbic acid in basal cell carcinoma Péter Holló[1], Krisztián Németh[1, 2], Hajnalka Jókai[1], Judit Hársing[1], Gyöngyvér Soós[1], Sarolta Kárpáti[1]; 1. Department of Dermatovenerology and Dermatooncology, Semmelweis University, Budapest, Hungary; 2. Craniofacial and Skeletal Diseases Branch, National Institute of Dental and Craniofacial Research, Bethesda, MD, USA.

1085.Short-term *in vivo* protocol and multiphoton microscopy: Non invasive assessment of the effects of retinoids E. Tancrède-Bohin, A. Pena, N. Parent, N. Pineau, T. Baldeweck; L'Oréal R&I, Aulnay sous Bois, France.

1086.*In vivo* multiphoton microscopy assessment of topical corticosteroid-induced skin alterations with age A. Pena[1], T. Baldeweck[1], N. Parent[1], A. Dupuy[2], M. Bagot[2], E. Tancrède-Bohin[1, 2]; 1. L'Oréal R&I, Aulnay sous Bois, France; 2. Dermatologie, Hôpital St Louis, Paris, France.

1087*(CM14-02).The diagnosis of sezary syndrome established by T-plastin, twist, CD158k/KIR3DL2 and NKp46 gene expression Laurence Michel, Francette Jean-Louis, Elodie Begue, Armand Bensussan, Martine Bagot; Dermatology Hôpital Saint-Louis, Inserm U976, Paris, France.

1088.Successful control of adverse events associated with vismodegib treatment of advanced basal cell carcinoma by recognition of hedgehog pathway activity in normal adult tissue James Solomon[1, 2], Daquesha Chever[1], Amy Iarrobino[2], Chauncey Caldwell[2]; 1. Ameriderm Research, Ormond Beach, FL, USA; 2. University of Central Florida College of Medicine, Orlando, FL, USA.

1089*(CM8-01).Transcriptome analysis reveals that severity of psoriasis is correlated with expression of genes involved in epidermal differentiation and proliferation Trilokraj Tejasvi[1, 2], Lam Tsoi[1], Philip Stuart[1], Rajan Nair[1], John Voorhees[1], Goncalo Abecasis[1], James Elder[1, 2]; 1. Dermatology, Univerisity of Michigan, Ann Arbor, MI, USA; 2. Ann Arbor VA Hospital, Ann Arbor, MI, USA.

1090.Involvement of the IL-23/TH17 pathway in non melanoma skin cancers Cristina Pellegrini[1], Tania Costanza[2], Maria Concetta Fargnoli[1], Alessandro Di Stefani[2], Antonella Piccioni[1], Antonella Di Cesare[1], Augusto Orlandi[2], Ketty Peris[1]; 1. Department of Dermatology, University of L'Aquila, L'Aquila, Italy; 2. Department of Pathology, University of Tor Vergata, Rome, Italy.

1091.Automated evaluation of actinic cheilitis severity by measurement of lip border irregularity Panagiota Spyridonos[1], Georgios Gaitanis[2], Margaret Tzaphlidou[1], Ioannis Bassukas[2]; 1. Laboratory of Medical Physics, University of Ioannina Medical School, Ioannina, Greece; 2. Department of Skin and Venereal Diseases, University of Ioannina Medical School, Ioannina, Greece.

1092.A compressed collagen hydrogel results in a mechanical stable, non-contracting *in vitro* skin substitute that enables the integration of a vascular tube and a structured dermal-epidermal junction Florian Groeber[1, 2], Isabel Rütschle[2], Jan Hansmann[2], Heike Walles[2, 3]; 1. Institute for Interfacial Engineering (IGVT) Medical Interfacial Engineering, University of Stuttgart, Stuttgart, Germany; 2. Fraunhofer Institute for Interfacial Engineering and Biotechnology (IGB), Stuttgart, Germany; 3. Chair Tissue Engineering und Regenerative Medicine, University of Würzburg, Würzburg, Germany.

1093.Downregulation of DNA repair by an antimycotic drug leads to a phenotype resembling Xeroderma pigmentosum and increased skin cancer Sara Giovannini[1], York Kamenisch[1], Nikita Kobert[2], Lisa Weibel[2], Mark Berneburg[1]; 1. Dermatology, Eberhard Karls University, Tübingen, Germany; 2. Dermatology, Childrens Hospital Zürich, Zürich, Switzerland.

1094.Increased frequency of diabetes mellitus in patients with pemphigus A. Baican[1], R. Chiorean[1], V. Feldrihan[2], C. Baican[1], D. Leucuta[3], C. Sitaru[4]; 1. Dermatology, University of Medicine and Pharmacy "Iuliu Hatieganu", Cluj-Napoca, Romania, Cluj-Napoca, Romania; 2. Immunology, University of Medicine and Pharmacy "Iuliu Hatieganu", Cluj-Napoca, Romania, Cluj-Napoca, Romania; 3. Medical Informatics and Biostatistics, University of Medicine and Pharmacy "Iuliu Hatieganu", Cluj-Napoca, Romania, Cluj-Napoca, Romania; 4. Dermatology, University of Freiburg, Freiburg, Germany.

1095.Transcriptome profiling identifies novel functions of acitretin in human epidermis Supatra Marsh[1], Matthew Caley[1], Alan Kwan[2], Edel O'Toole[1], Michael Donaldson[3]; 1. Centre for Cutaneous Research, Queen Mary University of London, London, United Kingdom; 2. Platform Technologies, GSK, Collegeville, PA, USA; 3. Stiefel, a GSK company, Uxbridge, United Kingdom.

1096.Physical activity and diet affect systemic inflammation and severity of psoriasis Sarah Churton, Thuzar Shin, Christopher Stocking, Sara Debanne, Tom McCormick, Kevin Cooper, Neil Korman; Murdough Family Center for Psoriasis, Department of Dermatology, University Hospitals Case Medical Center, Cleveland, OH, USA.

1097.Development of a preclinical model for P-glycoprotein based skin absorptive transport for topical drug delivery-a case study with cyclosporin A Luowei Li, Megan Ansbro, Stuart Yuspa; LCBG, National Cancer Institute, Bethesda, MD, USA.

1098.Molecular characterization of S.aureus isolated in children with atopic dermatitis Rosalia Sanmartin[1], Patricia Sanz[1], Carmen Aspiroz[2], Angela Hernandez-Martin[3], Mercedes Alonso[4], Daniel Benito[5], Antonio Torrelo[3], Carmen Torres[5], Yolanda Gilaberte[1]; 1. Dermatology, Hospital San Jorge, Huesca, Spain; 2. Microbiology, Hospital Royo Villanova, Zaragoza, Spain; 3. Dermatology, Hospital Universitario Niño Jesús, Madrid, Spain; 4. Microbiology, Hospital Universitario Niño Jesús, Madrid, Spain; 5. Biochemistry and Mollecular Biology, University of La Rioja, Logroño, Spain.

1099.Rapid healing of venous stasis leg ulcers through stimulation of wound edge closure following cultured epidermal autografting John Wille[1], Jeremy Burdge[2]; 1. Bioplast Medical Inc, Chesterfield, NJ, USA; 2. Wound Healing Clinic, Columbus, OH, USA.

1100.Romidepsin and PUVA therapy in refractory advanced stage CTCL is associated with remission and increased cell death and Fas expression Derek Chan, Daniel Szabo, Julie Frederickson, Rebecca Ziegler, Francisca Kartono, Pierluigi Porcu, Henry Wong; Ohio State University, Columbus, OH, USA.

1101.T-cell related cytokine expression from scalp biopsy RNA samples reveals peaks in cytokine expression in peri-lesional alopecia areata (AA) versus lesional and normal scalp suggesting treatments should be directed to this region to impact the AA process Maria Hordinsky[1], Bemmels Heather[1], Kathleen Kane[1], Sachin Shaw[1], Mark Wilke[1], Judilyn Fuentes-Duculan[2], James Krueger[2]; 1. Dermatology, University of Minnesota, Minneapolis, MN, USA; 2. Laboratory of Investigative Dermatology, The Rockefeller University, New York, NY, USA.

1102.Topical rapamycin therapy is effective against hypomelanotic macules arising in tuberous sclerosis complex: A prospective, self-controlled study Mari Tanaka[1], Mari Wataya-Kaneda[1], Atsushi Tanemura[1], Yorihisa Kotobuki[1], Saori Itoi[1], Ayumi Nakamura[2], Shoji Matsumoto[2], Ichiro Katayama[1]; 1. dermatology, Graduate School of Medicine, Osaka University, Suita-shi, Japan; 2. Pharmacy, Osaka University Hospital, Suita-shi, Japan.

1103.Low-dose local ionizing radiation provides "targeted" therapy and induces durable remission in early stage mycosis fungoides/CTCL Phillip Devlin, Keri Chaney, Joi Carter, Marianne Tawa, David Fisher, Andrew Dorosario, Natalie Adams, Rei Watanabe, Rachael Clark, Thomas Kupper; Dana Farber Brigham and Women's Cancer Center, Boston, MA, USA.

1104.Identification of gene expression biomarker signatures for use as an Alopecia Areata Disease Activity Index (ALADIN) J. Cerise[1], A. Jabbari[1], M. Duvic[2], M. Hordinsky[3], D. Norris[4], V. Price[5], J. Mackay-Wiggan[1], R. Clynes[1], A. Christiano[1]; 1. Columbia, NYC, NY, USA; 2. MD Anderson Cancer Center, Houston, TX, USA; 3. U Minn, Minneapolis, MN, USA; 4. U Colorado, Denver, CO, USA; 5. UCSF, San Francisco, CA, USA.

1105*(CM8-08).Differential effect of butorphanol on histamine itch, cowhage itch and heat pain sensitivity. A combined psychophysical and neuroimaging study Alexandru Papoiu, Leigh Nattkemper, Robert Kraft, Robert Coghill, Gil Yosipovitch; Dermatology, Wake Forest University School of Medicine, Winston Salem, NC, USA.

1106.Incidence of invasion found during treatment of superficial/*in-situ* non-melanoma skin cancers by Mohs micrographic surgery Nima Gharavi, Andrew Breithaupt, Eric Sako, Jenny Kim, Joseph Greco; Dermatology, University of California, Los Angeles, Los Angeles, CA, USA.

1107.Trans epidermal water loss measurement of skin surrounding venous leg ulcers Valentina Dini, Sabrina Barbanera, Marco Romanelli; Dermatology, University of Pisa, Pisa, Italy.

1108.Delusions of parasitosis: A possible neuropathic component Lauren Strazzula, Lilit Garibyan, A. Oaklander, Daniela Kroshinsky; Dermatology, Massachusetts General Hospital, Boston, MA, USA.

1109.Sun-exposed forearm skin in African-Americans is not darker than sun-protected buttock skin, and pigmentation in both sites decreases with age Anna Chien, Jean Suh, Nancy Cheng, Flora Poon, Barbara Summerer, Sherry Leung, Jo Martin, Ginette Hinds, Sewon Kang; Dermatology, Johns Hopkins, Baltimore, MD, USA.

1110.Identification of biofilm in acne vulgaris is an infrequent occurrence, seen more in non-inflammatory comedones than in inflammatory papules Manisha Patel[1], Alessandra Agostinho[2], Garth James[2], Ian Rosenthal[1], Nancy Chang[1], Jo Martin[1], Sherry Leung[1], Anna Chien[1], Sewon Kang[1]; 1. Dermatology, Johns Hopkins School of Medicine, Baltimore, MD, USA; 2. Center for Biofilm Engineering, Montana State University, Bozeman, MT, USA.

1111.Low frequency Vancomycin-specific T cell responses are detectable in non-allergic individuals Marta Polak, Eugene Healy, Michael Ardern-Jones; Faculty of Medicine, University of Southampton, Southampton, United Kingdom.

1112.Grape seed antioxidants for preventing rosacea Patricio Figueroa; Dermatology, World Dermatology Institute, Santiago, Chile.

1113.Non-invasive measures of skin health and assessments of long-term efficacy of a sonic cleansing brush on skin of color Gregory Peterson, Emily Henes, Katherine Ortblad, Robert Akridge, Lauri Tadlock; Clinical Research, Pacific Bioscience Labs, Redmond, WA, USA.

1114.Evaluation of subsurface redness in individuals under long-term care for papulopustular and erythematotelangiectactic rosacea when adding a sonic skin care brush to their daily regimen Lauri Tadlock, Emily Henes, Katherine Ortblad, Robert Akridge, Gregory Peterson; Clinical Research, Pacific Bioscience Labs, Redmond, WA, USA.

1115.Dermatology consultation may decrease telaprevir discontinuation among patients with severe triple therapy-associated rash Lauren Strazzula, Daniel Pratt, Janet Zardas, Daniela Kroshinsky; Massachusetts General Hospital, Boston, MA, USA.

1116.Degos-like lesions in systemic lupus erythematosus treated with Rituximab Frank Vleugels[1], Christina Lam[2], Shayna Gordon[1], Nicole Velez[3], Alisa Femia[3], Arturo Saavedra[3], Ruth Ann Vleugels[3]; 1. Dermatology, Washington University in St. Louis, St. Louis, MO, USA; 2. Dermatology, Boston University, Boston, MA, USA; 3. Dermatology, Brigham and Women's Hospital, Harvard Medical School, Boston, MA, USA.

1117.Induction of procollagen I may not correlate well with clinical improvement in photoaging by retinoids Anna Chien, Sherry Leung, Max Fischer, Haiying Xu, Jung Hyun Kim, Amanda Nelson, Nancy Cheng, Jeonghyun Shin, Manisha Patel, Ginette Hinds, Julie Zang, Hoseok Suh, Barbara Summerer, Sewon Kang; Dermatology, Johns Hopkins, Baltimore, MD, USA.

1118.Combination of topical nitrogen mustard and romidepsin demonstrates therapeutic synergy Sara Story, Brittany O'Neill, Larisaa Geskin; Dermatology, UPMC, Pittsburgh, PA, USA.

1119.Pemphigus erythematosus: A rare entity initially masquerading as toxic epidermal necrolysis Christina Alexander[1], Elena Hawryluk[2], Frank Vleugels[1], Scott Granter[2], Laura Winterfield[3], Ruth Ann Vleugels[2]; 1. University of Cincinnati College of Medicine, Cincinnati, OH, USA; 2. Dermatology and Pathology, Brigham and Women's Hospital, Harvard Medical School, Boston, MA, USA; 3. Division of Dermatology, Loyola University Health System, Chicago, IL, USA.

1120.Intralesional sodium thiosulfate for the treatment of cutaneous calciphylaxis Lauren Strazzula, Sagar Nigwekar, D. Steele, W. Tsiaras, M. Sise, S. Bis, G. Smith, D. Kroshinsky; Massachusetts General Hospital, Boston, MA, USA.

1121.Mechanic's hands are predictive of reduced lung diffusion capacity and interstitial lung disease in patients with dermatomyositis Chia Chun Ang[1, 2, 3], Cynthia Anyanwu[1, 2], Victoria Werth[1, 2]; 1. Philadelphia Veterans Affairs Medical Center, Philadelphia, PA, USA; 2. Department of Dermatology, University of Pennsylvania, Philadelphia, PA, USA; 3. Department of Dermatology, Changi General Hospital, Singapore, Singapore.

1122.Effect of an elderberry extract rich in anthocyanins on skin ageing in postmenopausal women Linda Wainwright[1], Peter Curtis[2], Rachel Holland[1], Aedin Cassidy[2], Gail Jenkins[1]; 1. Colworth Discover, Unilever R&D, Bedfordshire, United Kingdom; 2. School of Medicine, University of East Anglia, Norwich, United Kingdom.

Innate Immunity & Microbiology

All orals designated with an asterisk (*) below are presented in the [Category] Session on [day/date/location]. Orals designated with two asterisks (**) will be presented during a Plenary Session.

1123.Sulfasalazine and thalidomide inhibit extracellular trap formation by human neutrophils Andrew Lin, Ritika Khandpur, MaryBeth Riblett, Allen Bruce; Department of Dermatology, University of Michigan, Ann Arbor, MI, USA.

1124.Selective induction of antimicrobial peptides from keratinocytes by staphylococcal bacteria Rie Ommori, Kio Park, Hideo Asada; Department of Dermatology, Nara Medical University, Kashihara, Japan.

1125.Identification and validation of novel immunomodulators for treatment of common warts Heather Aloor[1], Mi Xie[2], Jeffrey Pouliot[2], Shihyun You[2], Anna Banka[2], Anthony Handlon[1], Hans Hofland[1], Jean-Philippe Therrien[1]; 1. Center for Skin Biology, Stiefel, a GSK company, RTP, NC, USA; 2. Anti-Viral DPU, Glaxosmithkline, RTP, NC, USA.

1126*(CM9-01).Attenuation of cutaneous inflammation in a model of atopic dermatitis by innate immune signals of non-pathogenic bacteria Thomas Volz, Yuliya Skabytska, Susanne Kaesler, Tilo Biedermann; Department of Dermatology, University Hospital, Tübingen, Germany.

1127.Epidermal growth factor receptor inhibitors selectively inhibit the expression of human β-defensins induced by Staphylococci Kio Park[1], Rie Ommori[2], Kyoko Imoto[2], Hideo Asada[2]; 1. Department of Dermatology, Yamato Takada Municipal Hospital, Yamato Takada, Nara, Japan; 2. Department of Dermatology, Nara Medical University, Kashihara, Nara, Japan.

1128.Identification of novel, bacterial peptide-antibiotic-like, S. aureus-killing peptides in stratum corneum Jens Schroeder, J. Bartels, U. Gerstel; Dermatology, University Hospital, Kiel, Germany.

Posters

1129.Skin barrier defect allows more abundant microbiota in skin and induces skin inflammation and the expression of antimicrobial peptides independently of microbiota Ken Natsuga[1, 2], Sara Cipolat[1, 3], Fiona Watt[1, 3, 4]; 1. Cancer Research UK Cambridge Research Institute, Cambridge, United Kingdom; 2. Department of Dermatology, Hokkaido University Graduate School of Medicine, Sapporo, Japan; 3. Centre for Stem Cells and Regenerative Medicine, King's College London, London, United Kingdom; 4. Wellcome Trust Centre for Stem Cell Research, Cambridge, United Kingdom.

1130.Nlrp3-inflammasome activation drives acute graft-versus-host disease Dragana Jankovic[1], Jayanthi Ganesan[2], Abdellatif Bouazzaoui[3], Ernst Holler[3], Lars French[1], Robert Zeiser[2], Emmanuel Contassot[1]; 1. Department of Dermatology, University Hospital Zürich, Zurich, Switzerland; 2. Department of Hematology and Oncology, University Medical Center, Albert-Ludwigs-University, Freiburg, Germany; 3. Department of Haematology and Oncology, University Hospital Regensburg, Regensburg, Germany.

1131.Murine cathelicidin-related antimicrobial peptide regulates iNOS expression via HIF-1α in M1-like macrophages Emi Sato[1, 2], Kazunari Ishii[2], Bin Chou[2], Shinichi Imafuku[1], Juichiro Nakayama[1], Kenji Hiromatsu[2]; 1. Dermatology, Fukuoka University School of Medicine, Fukuoka, Japan; 2. Microbiology and Immunology, Fukuoka University School of Medicine, Fukuoka, Japan.

1132.A specific requirement for a disintegrin and metalloprotease (ADAM) 17 in protection against cutaneous Staphylococcus aureus infection Charlotte Simpson, Matthew Brooke, Olivier Marchès, David Kelsell; Blizard institute, Barts and the London SMD, QMUL, London, United Kingdom.

1133.TNF-α regulates the vitamin D-dependent antimicrobial response in human monocytes Mario Fabri[2, 1], Andrea Sommer[1], Dong-Min Shin[3], Steffen Stenger[4], Eun-Kyeong Jo[3], Robert Modlin[2]; 1. University of Cologne, Cologne, Germany; 2. University of California LA, Los Angeles, CA, USA; 3. Chungnam National University School of Medicine, Daejeon, Republic of Korea; 4. University Hospital of Ulm, Ulm, Germany.

1134.Small colony variants of S. aureus are less susceptible against antimicrobial peptides of the skin Regine Gläser[1], Karsten Becker[2], Ulf Meyer-Hoffert[1], Jürgen Harder[1]; 1. Department of Dermatology, Venerology and Allergology, University Hospital of Schleswig-Holstein, Kiel, Germany; 2. Institute of Medical Microbiology, University Hospital of Münster, Münster, Germany.

1135.Microbiota of Demodex mites differs between rosacea subjects and controls Nathalia Murillo[1], Jérome Aubert[2], Didier Raoult[1]; 1. Aix Marseille Université, URMITE, UM63, CNRS 7278, IRD 198, Inserm 1095, Marseille, France; 2. Galderma R&D, Sofia Antipolis, France.

1136*(CM9-07).Post-septic immune-suppression following Gram positive sepsis is mediated by TLR dependent induction of myeloid derived suppressor cells Martin Köberle, Yuliya Skabytska, Tilo Biedermann; Dermatology, Eberhard Karls University, Tübingen, Germany.

1137.A case report of reactivation of tuberculosis during etanercept treatment in a psoriatic patient Dimitra Koumaki[1, 5], Fanourios Kontos[3], Evangelia Papadavid[1], Maria Dalamaga[4], Theodoros Pittaras[2], Vasiliki Koumaki[2, 6]; 1. Dermatology and Venereology, Attikon Hospital, medical school of Athens, HAIDARI, Greece; 2. Microbiology, medical school of Athens, Goudi, Greece; 3. Clinical Microbiology, Attikon Hospital, medical school of Athens, Haidari, Greece; 4. Clinical Biochemistry, Attikon Hospital, medical school of Athens, Haidari, Greece; 5. Internal Medicine, 1st IKA HOPSITAL, Melissia, Greece; 6. Microbiology, 1st IKA HOPSITAL, Melissia, Greece.

1138.A novel role of ceramide metabolite, sphingosine-1-phosphate, in epidermal innate immunity Kyungho Park[1], Peter Elias[1], Kyoung-Oh Shin[2], Yong-Moon Lee[2], Melanie Hupe[1], Andrew Borkowski[3], Richard Gallo[3], Julie Saba[4], Walter Holleran[1], Yoshikazu Uchida[1]; 1. Dermatology, University of California, San Francisco, San Francisco, CA, USA; 2. Pharmacy, Chungbuk National University, Cheongju, Democratic People's Republic of Korea; 3. Dermatology, University of California, San Diego, San Diego, CA, USA; 4. Children's Hospital Oakland Research Institute, Oakland, CA, USA.

1139.Staphylococcus aureus skin colonization is promoted by barrier disruption and leads to local inflammation Beatrice Kraft[1], Ines Wanke[1], Yuliya Skabytska[1], Andreas Peschel[2], Tilo Biedermann[1], Birgit Schittek[1]; 1. Department of Dermatology, University of Tuebingen, Tuebingen, Germany; 2. Interfaculty Institute of Microbiology and Infection Medicine, University of Tuebingen, Tuebingen, Germany.

1140.*In vitro* CYP inhibition and induction assessments of efinaconazole coupled with low clinical systemic exposure suggest low DDI potential in topical onychomycosis Wiliam Jo Siu[1], Linda Mutter[1], Akinori Aoyama[2], Hiroyuki Yamanaka[2], Noriaki Sugimoto[2], Radhakrishnan Pillai[2]; 1. Dow Pharmaceutical Sciences, Petaluma, CA, USA; 2. Kaken Pharmaceutical Co., Ltd.,, Shizuoka, Japan.

1141.Histological evaluation of impetigo in the hamster model infected with Staphylococcus aureus Stacy Adams, S. Chandra, H. Thibodeaux, E. Klymenova, D. Shelton, R. Willingham, D. Danielson-Borrero, S. Wu, S. Frey, H. Hofland, J. Pace; Center for Skin Biology, Siefel-GlaxoSmithKline, Durham, NC, USA.

1142.Toll-like receptor 2 epidermal barrier enhancement is inhibited by Th2 cytokines found in atopic dermatitis I-Hsin Kuo[1], Takeshi Yoshida[1], Anna De Benedetto[1], Donald Leung[2], Lisa Beck[1]; 1. Dermatology, University of Rochester Medical Center, Rochester, NY, USA; 2. Pediatrics, National Jewish Health, Denver, CO, USA.

1143.Processing of the extracellular matrix component laminin generates peptides with antimicrobial and chemotactic activity Ilknur Senyuerek[1], Wolfgang Kempf[1], Gerd Klein[2], Andreas Maurer[3], Hubert Kalbacher[3], Stefan Stevanovic[4], Patricia Rousselle[5], Claus Garbe[1], Martin Schaller[1], Tilo Biedermann[1], Birgit Schittek[1]; 1. Dermatology, University of Tuebingen, Tuebingen, Germany; 2. Section for Transplantation Immunology and Immunohematology, University of Tuebingen, Tuebingen, Germany; 3. Interfaculty Institute for Biochemistry, Medical and Natural Sciences Research Center, University of Tuebingen, Tuebingen, Germany; 4. Institute for Cell Biology, University of Tuebingen, Tuebingen, Germany; 5. Structure Fédérative de Recherche BioSciences Gerland-Lyon Sud, Institut de Biologie et Chimie des Protéines, Université Lyon 1, Lyon, France.

1144.Resveratrol stimulates sphingosine-1-phosphate signaling of Cathelicidin Antimicrobial Peptide (CAMP) production Kyungho Park[1], Peter Elias[1], Melanie Hupe[1], Andrew Borkowski[2], Richard Gallo[2], Kyoung-Oh Shin[3], Yong-Moon Lee[3], Walter Holleran[1], Yoshikazu Uchida[1]; 1. Dermatology, University of California, San Francisco, San Francisco, CA, USA; 2. University of California, San Diego, San Diego, CA, USA; 3. Chungbuk National University, Cheongju, Democratic People's Republic of Korea.

1145.Immune responses to Propionibacterium acnes Baptiste Janela[1], Philippe Musette[2], Andre Jomard[3], Florent Ginhoux[1]; 1. Singapore Immunology Network, A*STAR, Singapore, Singapore; 2. INSERM U905, Rouen University Hospital, Rouen, France; 3. Galderma R&D, Sophia-Antipolis, France.

1146.Basic fibroblast growth factor, promoting FOXP3 expression in MT2 cells, is a bridge linking UVR and regulatory T cells in psoriasis treatment Ling Chen[1], Xichuan Yang[2], Zhu Shen[2]; 1. Department of Dermatology, Daping Hospital, Third Military Medical University, Chongqing, China; 2. Department of Dermatology, Southwest Hospital, Third Military Medical University, Chongqing, China.

1147(PL1-02).Differential cell intrinsic MyD88- and STAT3-signaling promote immunity against *Staphylococcus aureus* skin infection** John Cho[1], Romela Ramos[2], Yi Guo[2], Jonathan Shahbazian[3], Lloyd Miller[3]; 1. Division of Dermatology, University of California Los Angeles (UCLA), Los Angeles, CA, USA; 2. Department of Translational Immunology, Dirks/Dougherty Laboratory for Cancer Research, John Wayne Cancer Institute, Santa Monica, CA, USA; 3. Department of Dermatology, Johns Hopkins University School of Medicine, Baltimore, MD, USA.

1148.HPV in male genital lichen sclerosus, penile carcinoma-*in-situ* and penile squamous cell carcinoma Tang Ngee Shim[1, 2], M. de Koning[3], A. Muneer[2], S. Minhas[2], N. Francis[1], C. Jameson[2], M. Dinneen[1], K. Purdie[4], S. Goolamali[1], C. Harwood[4], C. Bunker[1, 2]; 1. Chelsea and Westminster Hospital, London, United Kingdom; 2. University College Hospital, London, United Kingdom; 3. DDL, Rijswijk, Netherlands; 4. Queen Mary University, London, United Kingdom.

1149(PL6-07).IL-33 KO mice exhibit the reduced immediate type contact hypersensitivity** Yasutomo Imai[1], Takashi Haneda[1], Koubun Yasuda[2], Tomohiro Yoshimoto[3], Kenji Nakanishi[2], Kiyofumi Yamanishi[1]; 1. Dermatology, Hyogo College of Medicine, Nishinomiya, Japan; 2. Immunology and Medical Zoology, Hyogo College of Medicine, Nishinomiya, Japan; 3. Laboratory of Allergic Diseases, Institute for Advanced Medical Sciences, Hyogo College of Medicine, Nishinomiya, Japan.

1150.Suppressive CD14dimCD16+ monocytes contribute defective anti-viral immune responses in eczema herpeticum Ryo Takahashi[1, 2], Tetsuo Shiohara[2, 1]; 1. Division of FlowCytometry, Kyorin University Graduate School of Medicine, Mitaka, Japan; 2. Department of Dermatology, KYORIN University, School of Medicine, Mitaka, Japan.

1151.Efinaconazole's nail penetration and fungicidal activity may contribute to its therapeutic efficacy as a topical treatment for onychomycosis Keita Sugiura[1], Shinya Hosaka[2], Noriaki Sugimoto[2], Yoshiyuki Tatsumi[1], William Jo Siu[3]; 1. Kaken Pharmaceutical Co., Ltd., Kyoto, Japan; 2. Kaken Pharmaceutical Co., Ltd., Shizuoka, Japan; 3. Dow Pharmaceutical Sciences, a division of Valeant Pharmaceuticals North America LLC, Petaluma, CA, USA.

1152.Strong induction of AIM2 expression in human epidermis in acute and chronic inflammatory skin conditions Heleen de Koning[1, 2, 3], Judith Bergboer[1, 4], Ellen van den Bogaard[1, 3, 4], Ivonne van Vlijmen-Willems[1], Diana Rodijk-Olthuis[1], Anna Simon[2, 3], Patrick Zeeuwen[1, 3, 4], Joost Schalkwijk[1, 3, 4]; 1. Dermatology, Radboud University Nijmegen Medical Centre, Nijmegen, Netherlands; 2. Internal Medicine, Radboud University Nijmegen Medical Centre, Nijmegen, Netherlands; 3. Nijmegen Institute for Infection, Inflammation and Immunity, Nijmegen, Netherlands; 4. Nijmegen Centre for Molecular Life Sciences, Nijmegen, Netherlands.

1153.Programmed cell death induced by CAPS-associated mutant NLRP3 features necrosis that leads to *in vivo* neutrophilic inflammation Takashi Satoh, Naotomo Kambe, Hiroyuki Matsue; Dermatology, Chiba University, Chiba, Japan.

1154*(CM9-09).The alarmin IL-33 derived from HSV-2-infected keratinocytes triggers mast cell-mediated antiviral innate immunity Rui Aoki[1], Tatsuyoshi Kawamura[1], Fumi Goshima[2], Yukihiro Nishiyama[2], Shinji Shimada[1]; 1. Dermatology, University of Yamanashi, Yamanashi, Japan; 2. Virology, Nagoya University Graduate School of Medicine, Nagoya, Japan.

1155.Inhibitory effects of Helicobacter pylori-derived antimicrobial peptide HPA3NT3 against Propionibacterium acnes in the skin Sunhyo Ryu[1], Yoonkyung Park[2], Beomjoon Kim[3], Soo-Muk Cho[4], Cathy Gurley[1], Kyungsup Song[1], Cheryl Armstrong[1], Peter Song[1]; 1. Dermatology, University of Arkansas for Medical Sciences, Little Rock, AR, USA; 2. Biochemistry, Chosun University School of Medicine, Gwangju, Republic of Korea; 3. Dermatology, Chung-Ang University College of Medicine, Seoul, Republic of Korea; 4. Functional Food and Nutrition Division, National Academy of Agricultural Science, Rural Department Administration, Suwon, Republic of Korea.

1156.Alarmin function of cathelicidin antimicrobial peptide LL37 through IL-36s induction and p38 MAPK pathway in keratinocytes Na Li, Sawako Fukushi-Takahashi, Ryoko Shimada-Omori, Masayuki Asano, Rumiko Saito, Kenshi Yamasaki, Setsuya Aiba; Dermatology, Tohoku University Graduate School of Medicine, Sendai, Japan.

1157.Hippo pathway mediates the inhibitory signal on epidermal γδ T cells Youhei Uchida, Kazuhiro Kawai, Atsuko Ibusuki, Takuro Kanekura; Dermatology, Kagoshima University Graduate School of Medical and Dental Sciences, Kagoshima, Japan.

1158.Correlation of rosacea lesions with distribution of skin microflora in face Ryoko Shimada-Omori, Na Li, Kenshi Yamasaki, Setsuya Aiba; Dermatology, Tohoku University Graduate School of Medicine, Sendai, Japan.

1159.Proteomic diversity of five types of *Propionibacterium acnes* strains isolated from human skin Itaru Dekio[1, 2], Renata Culak[1], Min Fang[1], Dunstan Rajendram[1], Eishin Morita[2], Saheer Gharbia[1], Haroun Shah[1]; 1. Department for Bioanalysis and Horizon Technologies, Health Protection Agency, London, United Kingdom; 2. Department of Dermatology, Faculty of Medicine, Shimane University, Izumo, Japan.

1160.Potent and persistent activity of a nucleoside reverse transcriptase inhibitor, 4ᴱ-ethynyl-2-fluoro-2ᴱ-deoxyadenosine, against HIV-1 infection in Langerhans cells Takamitsu Matsuzawa[1], Tatsuyoshi Kawamura[1], Youichi Ogawa[1], Rui Aoki[1], Yoshio Koyanagi[2], Andrew Blauvelt[3], Hiroaki Mitsuya[4], Shinji Shimada[1]; 1. Dermatology, University of Yamanashi, Yamanashi, Japan; 2. Laboratory of Viral Pathogenesis, Institute for Virus Research, Kyoto University, Kyoto, Japan; 3. Oregon Medical Research Center, Portland, OR, USA; 4. Hematology, Kumamoto University, Kumamoto, Japan.

1161*(CM9-06).Dermal adipose tissue participates in skin defense against bacterial infection Ling-juan Zhang, Richard Gallo; Dermatology, University of California San Diego, San Diego, CA, USA.

1162.Inflammatory caspase dependent release of interleukin-1α from herpes simplex virus 1 infected keratinocytes implicates pyroptosis in secondary zosteriform blistering Mireia Uribe-Herranz, Katelynn Milora, Liselotte Jensen; Microbiology & Immunology, Temple University School of Medicine, Philadelphia, PA, USA.

1163.Appearance of eczematous id reactions to molluscum contagiosum virus in children is a harbinger sign for resolution of primary lesions Elena Netchiporouk[1], Bernard Cohen[2]; 1. Dermatology, McGill University Health Centre, Montreal, QC, Canada; 2. Dermatology, The Johns Hopkins School of Medicine, Baltimore, MD, USA.

1164.Interplay between basophils and eosinophils is essential in the development of skin inflammation Chisa Nakashima, Atsushi Otsuka, Kenji Kabashima, Yoshiki Miyachi; Dermatology, Kyoto University Graduate School of Medicine, Kyoto, Japan.

1165*(CM9-03).The immune atlas - a topographical three-dimensional study of the skin immune system using multiphoton microscopy and multi-parameter flow cytometry Philip Tong[1, 2, 3], Rohit Jain[1], Ben Roediger[1], Wolfgang Weninger[1, 2, 3]; 1. Centenary Institute, Newtown, NSW, Australia; 2. Discipline of Dermatology, University of Sydney, Camperdown, NSW, Australia; 3. Department of Dermatology, Royal Prince Alfred Hospital, Camperdown, NSW, Australia.

1166.Attenuated neutrophil axis in atopic dermatitis (AD) compared to psoriasis reflects Th17 pathway differences between these diseases Nikhil Dhingra[1, 2], Mayte Suarez-Fariñas[1], Judilyn Fuentes-Duculan[1], Julia Gittler[1], Avner Shemer[3], James Krueger[1], Emma Guttman-Yassky[2, 1]; 1. Laboratory for Investigative Dermatology, The Rockefeller University, NY, NY, USA; 2. Department of Dermatology, Mount Sinai School of Medicine, NY, NY, USA; 3. Department of Dermatology, Tel-Hashomer, Tel-Aviv, Israel.

1167.Extracellular superoxide dismutase (EC-SOD) inhibits mast cell activation and allergic responses Yun Sang Lee, Tae-Yoon Kim; Dermatology, The Catholic University of Korea, Seoul, Republic of Korea.

1168.Effects of human β-defensins on interleukin-37 production by human keratinocytes Rithee Smithrithee, François Niyonsaba, Chanisa Kiatsurayanon, Toan The Nguyen, Toshihiro Akiyama, Hiroko Ushio, Shigaku Ikeda, Ko Okumura, Hideoki Ogawa; Atopy Research Center and Dept. Dermatology, Juntendo Univ. Graduate Sch. Med., Tokyo, Japan.

1169*(CM9-05).Perivascular macrophages are key regulators of neutrophil recruitment during skin infection and are targeted by a Staphylococcus aureus virulence factor Rohit Jain[1], Arby Abtin[1], Ben Roediger[1], Anthony Brzoska[2], Andrew Mitchell[1], Lai Ng[3], Lois Cavanagh[1, 4], Ulrich von Andrian[5], Neville Firth[2], Wolfgang Weninger[1, 6]; 1. The Centenary Institue, Newtown, NSW, Australia; 2. School of Biological Sciences, University of Sydney, Sydney, NSW, Australia; 3. Singapore Immunology Network, Biopolis, Singapore; 4. Sydney Medical School, Sydney, NSW, Australia; 5. Immune Disease Institute, Harvard Medical School, Boston, MA, USA; 6. Discipline of Dermatology, Sydney Medical School, Sydney, NSW, Australia.

1170.Characterization of virus recognition receptors: RIG-I-like receptors (RLRs) of mast cells Mizuho Takeuchi[1, 3], Minoru Fukuda[2], Hiroko Ushio[1], Junko Kawasaki[1, 3], Francois Niyonsaba[1], Ko Okumura[1], Shigaku Ikeda[1, 3], Hideoki Ogawa[1]; 1. Atopy (Allergy) Research Center, Juntendo University School of Medicine, Tokyo, Japan; 2. Department of Infection Control Science, Juntendo University School of Medicine, Tokyo, Japan; 3. Department of Dermatology, Juntendo University School of Medicine, Tokyo, Japan.

1171.The activation of TLR3 regulates keratinocyte differentiation via the induction of S100A7 in wound repair Lei Hu, Yue Wang, Hongquan Li, Changwei Li, Yuping Lai; East China Normal University, Shanghai, China.

1172.CD16+ patrolling monocytes (pMO) sensing HSV negatively control regulatory T cell (Treg) responses in severe drug eruptions Yukiko Ushigome, Ryo Takahashi, Tetsuo Shiohara; Department of Dermatology, Kyorin University School of Medicine, Tokyo, Japan.

1173.Eradication of cutaneous herpesvirus infections by nucleic acid sensors and cytotoxic T lymphocyte-mediated apoptotic processes Yoji Hirai[1], Takenobu Yamamoto[1, 2], Shin Morizane[1], Tomoko Miyake[1], Tetsuya Takiguchi[1], Keiji Iwatsuki[1]; 1. Department of Dermatology, Okayama University Graduate School of Medicine, Dentistry and Pharmaceutical Sciences, Okayama, Japan; 2. Department of Dermatology, Kawasaki Medical School, Okayama, Japan.

1174.Expression of toll-like receptor 2 but not 1, 4, 5 or 6 is increased by interferon γ in primary human keratinocytes in a concentration and time dependent manner Alla Ljulkina, Ehrhardt Proksch, Rüdiger Panzer; Clinic for dermatology, University clinics Schleswig-Holstein, campus Kiel, Kiel, Germany.

1175.The murine skin microbiome is regulated independently of innate and adaptive immunity Felix Scholz[1], Brian Badgley[2], Michael Sadowsky[2], Daniel Kaplan[1]; 1. Department of Dermatology, Center for Immunology, University of Minnesota, Minneapolis, MN, USA; 2. Department of Soil, Water, and Climate, University of Minnesota, Minneapolis, MN, USA.

1176*(CM9-10).The innate immune defect in atopic dermatitis includes a deficiency in antimicrobial activity produced by the skin microbiome Teruaki Nakatsuji, Daniel MacLeod, Aimee Two, Faiza Shafig, Tissa Hata, Richard Gallo; Dermatology, University of California, San Diego, San Diego, CA, USA.

1177(PL5-01).Regulation of cutaneous inflammation by skin-resident type 2 innate lymphoid cells** Ben Roediger[1], Ryan Kyle[2], Kwok Ho Yip[3], Thomas Victor Guy[1], Nital Sumaria[1], Andrew Mitchell[1], Rohit Jain[1], Elizabeth Forbes-Blom[2], Xi Chen[4], Philip L. Tong[1], Holly Bolton[1], William E. Paul[4], Barbara Fazekas de St. Groth[1], Michele A. Grimbaldeston[3], Graham Le Gros[2], Wolfgang Weninger[1, 5, 6]; 1. Centenary Institute, Sydney, NSW, Australia; 2. Malaghan Institute of Medical Research, Wellington, New Zealand; 3. Centre for Cancer Biology, Adelaide, SA, Australia; 4. National Institutes of Health, Bethesda, MD, USA; 5. Discipline of Dermatology, University of Sydney, Sydney, NSW, Australia; 6. Department of Dermatology, Royal Prince Alfred Hospital, Sydney, NSW, Australia.

1178.Tumour necrosis factor (TNF)-α-dependent and -independent langerhans cell mobilisation during skin sensitisation Aleksandra Metryka[1], Laura Eaton[1], Ian Kimber[1], Ruth Roberts[2], Rebecca Dearman[1]; 1. Faculty of Life Sciences, University of Manchester, Manchester, United Kingdom; 2. Safety Assessment Alderley Park, AstraZeneca, Macclesfield, United Kingdom.

1179.Basal levels of IgE are physiological regulators of innate-type immune responses mediated by connective-tissue mast cells Yoshiko Mizukawa, Tetsuo Shiohara; Dermatology, Kyorin University School of Medicine, Mitala, Japan.

1180.Deficiency in mouse beta-defensin 14 leads to a delay in wound healing Nina Graumann[1], Claudia Neumann[1], Catherine Walker[2], Jürgen Harder[1], Werner Müller[2], Ehrhardt Proksch[1]; 1. Dermatology, University of Kiel, Kiel, Germany; 2. Faculty of Life Sciences, Manchester, United Kingdom.

1181.Could Merkel cell polyomavirus and other human polyomaviruses play a role in primary cutaneous T-cell lymphomas? Aurélie Du-Thanh[1, 3], Vincent Foulongne[2, 3], Bernard Guillot[1, 3], Olivier Dereure[1, 3]; 1. Dermatology, University Montpellier 1, Montpellier, France; 2. Virology, University Montpellier 1, Montpellier, France; 3. Unit 1058, INSERM, Montpellier, France.

1182.Microbial skin and nares communities are markedly different in children and adults Julia Oh[1], Sean Conlan[1], Eric Polley[2], Julia Segre[1], Heidi Kong[3]; 1. Genetics and Molecular Biology Branch, NHGRI, NIH, Bethesda, MD, USA; 2. Biometric Research Branch, Division of Cancer Treatment and Diagnosis, NCI, NIH, Bethesda, MD, USA; 3. Dermatology Branch, Center for Cancer Research, NCI, NIH, Bethesda, MD, USA.

1183.Type I IFN suppresses Type II IFN triggered human antimicrobial responses in leprosy skin lesions Rosane Teles, Robert Modlin; Dermatology, UCLA, Los Angeles, CA, USA.

1184*(CM9-02).Antimicrobial peptide LL-37 produced by HSV-2-infected keratinocytes enhances HIV infection of Langerhans cells Youichi Ogawa[1], Tatsuyoshi Kawamura[1], Takamitsu Matsuzawa[1], Rui Aoki[1], Kenshi Yamasaki[2], Andrew Blauvelt[3], Shinji Shimada[1]; 1. Dermatology, University of Yamanashi, Yamanashi, Japan; 2. Dermatology, Tohoku University Graduate School of Medicine, Sendai, Japan; 3. Oregon Medical Research Center, Portland, OR, USA.

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1185.Zinc chloride exposure modulates cytokine expression and induces heme oxygenase-1 in human keratinocytes Eszter Emri, Edit Miko, Gabor Boros, Eva Remenyik, Gabriella Emri; Department of Dermatology, University of Debrecen MHSC, Debrecen, Hungary.

1186.TSLP elicits IL-33-independent innate lymphoid cell responses to promote skin inflammation Brian Kim[1], Mark Siracusa[3, 2], Steven Saenz[3, 2], Mario Noti[3, 2], Laurel Monticelli[3, 2], Gregory Sonnenberg[3, 2], Matthew Hepworth[3, 2], Abby Van Voorhees[1], Michael Comeau[5], David Artis[2, 3, 4]; 1. Dermatology, Perelman School of Medicine at the University of Pennsylvania, Philadelphia, PA, USA; 2. Institute for Immunology, Perelman School of Medicine at the University of Pennsylvania, Philadelphia, PA, USA; 3. Microbiology, Perelman School of Medicine at the University of Pennsylvania, Philadelphia, PA, USA; 4. Pathobiology, University of Pennsylvania School of Veterinary Medicine, Philadelphia, PA, USA; 5. Inflammation Research, Amgen, Seattle, WA, USA.

1187.A unique TTC repeat base pair loss mutation in cases of pure neural leprosy: A survival strategy of Mycobacterium Leprae? Abhishek De[1], Aarti Sarda[2]; 1. Dermatology, Institute of Post Graduate Medical Education and Research, Kolkata,West Bengal, India; 2. Dermatology, KPC Medical college, Kolkata,West Bengal, India.

1188.Use of fine needle aspiration cytology DNA PCR in the diagnosis of pure neural hansens disease-A pilot study Aarti Sarda[1], Abhishek De[2]; 1. Dermatology, KPC Medical College, Kolkata,West Bengal, India; 2. Dermatology, Institute of Post Graduate Medical Education and Research, Kolkata,West Bengal, India.

1189.Complement modulates host-microbe interactions of the skin Christel Chehoud[1], Stavros Rafail[2], Amanda Tyldsley[1], John Lambris[2], Elizabeth Grice[1]; 1. Department of Dermatology, University of Pennsylvania, Philadelphia, PA, USA; 2. Department of Pathology and Laboratory Medicine, University of Pennsylvania, Philadelphia, PA, USA.

1190.Mast cells control wound healing in skin wound infections with *Pseudomonas aeruginosa* Carolin Sieber, Daniel Tröltzsch, Frank Siebenhaar, Marcus Maurer; Department of Dermatology and Allergy, Charité - Universitätsmedizin Berlin, Berlin, Germany.

1191.Altered skin microbiome profiles in patients with primary immunodeficiency and eczema J. Oh[1], S. Conlan[1], A. Freeman[2], NISC Comparative Sequencing Program[1], F. Candotti[1], S. Holland[2], J. Segre[1], Heidi Kong[3]; 1. Genetics and Molecular Biology Branch, NHGRI, NIH, Bethesda, MD, USA; 2. Laboratory of Clinical Infectious Diseases, NIAID, NIH, Bethesda, MD, USA; 3. Dermatology Branch, CCR, NCI, NIH, Bethesda, MD, USA.

1192*(CM9-08).MyD88 plays a role in deciding between apoptotic and necroptotic cell death after UV irradiation Erin Harberts[1, 2], Rita Fishelevich[2], Juan Liu[2], Sergei Atamas[3], Anthony Gaspari[1, 2]; 1. Microbiology and Immunology, Univ. of MD, Baltimore, MD, USA; 2. Dermatology, Univ. of MD, Baltimore, MD, USA; 3. Medicine, Univ. of MD, Baltimore, MD, USA.

1193.Analysis of distribution patterns of Propionibacterium acnes phylotypes and Peptostreptococcus species identified by PCR-based techniques in association with clinical characteristics of acne vulgaris Dae Hun Suh[1, 2], Hyuck Hoon Kwon[1, 2], Ji Young Yoon[2], Seon Yong Park[1, 2], Seonguk Min[1, 2]; 1. Dermatology, Seoul National University College of Medicine, Seoul, Republic of Korea; 2. Acne Research Laboratory, Seoul National University Hospital, Seoul, Republic of Korea.

1194.Detection of factor XIII subunit A distinguishes dendritic cells and tissue macrophages in non-infectious granulomatous skin lesions Daniel Torocsik[1], Helga Bardos[2], Zsofia Hatalyak[2], Balazs Dezso[3], Imre Veres[1], Lilla Paragh[1], Zoltan Peter[1], Margit Balazs[2], Eva Remenyik[1], Roza Adany[2]; 1. Department of Dermatology, University of Debrecen, Medical and Health Science Centre, Hungary; 2. Department of Preventive Medicine, University of Debrecen, Medical and Health Science Centre, Hungary; 3. Department of Pathology, University of Debrecen, Medical and Health Science Centre, Hungary.

1195.Impact of isotretinoin on the expression of antimicrobial peptides in skin of patients having acne vulgaris Alena Borovaya[1, 2], Yvonne Dombrowski[1], Stephanie Zwicker[1], Olga Olisova[2], Ronald Wolf[1], Thomas Ruzicka[1], Jürgen Schauber[1], Miklos Sardy[1]; 1. Dermatology and Allergology, Ludwig Maximilian University, Munich, Germany; 2. Department of Dermatology and Venerology, I.M. Sechenov First Moscow State Medical University, Moscow, Russian Federation.

1196.Human mast cells kill vaccinia virus when stimulated with commensal bacteria byproduct LTA Zhenping Wang, Daniel MacLeod, Anna Di Nardo; Medicine-Dermatology, university of California San Diego, La Jolla, CA, USA.

1197.The proteomic profiling of TSLP-activated iNKT cells Jung U Shin[1], Chang Ook Park[1], Jin Young Kim[3], Seongmin Noh[1], Shan Jin[1, 2], Nara Lee[1, 2], Jungsoo Lee[1], Hye Ran Kim[1], Yoonsun Lee[1], Kwang Hoon Lee[1]; 1. Department of Dermatology and Cutaneous Biology Research Institute, Yonsei University College of Medicine, Seoul, Republic of Korea; 2. Brain Korea 21 Project for Medical Science, Yonsei University College of Medicine, Seoul, Republic of Korea; 3. Korea Basic Science Institute, Daejeon, Republic of Korea.

1198.Regulation of IL-6 by the inflammasome in ultraviolet B-irradiated human keratinocytes Lisa Hisaw[1, 2], Min Qin[1], Andrew Park[1], Jenny Kim[1, 3]; 1. Department of Medicine, Division of Dermatology, David Geffen School of Medicine at UCLA, Los Angeles, CA, USA; 2. School of Medicine, University of California Irvine, Irvine, CA, USA; 3. Dermatology, Greater Los Angeles Healthcare System Veterans Affairs, Los Angeles, CA, USA.

1199.The role of 9-HODE in Propionibacterium acnes-induced inflammation Andrew Park[1], Min Qin[1], Aslan Pirouz[1], Lisa Hisaw[1], George Agak[1], Weidong Zhu[1], Hermes Garban[1], Jenny Kim[1, 2]; 1. Medicine, Division of Dermatology, David Geffen School of Medicine at UCLA, Los Angeles, CA, USA; 2. Dermatology, David Geffen School of Medicine at UCLA, Los Angeles, CA, USA.

1200.Strain specific and dose dependent effect of various Propionibacterium acnes strains on the cellular functions of HPV-KER cells Gábor Tax[1], Beáta Szilvia Bolla[1], Lilla Erdei[1], Edit Urbán[3], Lajos Kemény[1, 2], Kornélia Szabó[1]; 1. Department of Dermatology and Allergology, University of Szeged, Szeged, Hungary; 2. MTA-SZTE Dermatological Research Group, Szeged, Hungary; 3. Institute of Clinical Microbiology, University of Szeged, Szeged, Hungary.

1201.Identification of negative regulatory elements counteracting the Propionibacterium acnes-induced signaling pathways in *in vitro* cultured immortalized keratinocytes Kornélia Szabó[1], Gábor Tax[2], Lilla Erdei[2], Beáta Szilvia Bolla[2], Edit Urbán[3], Lajos Kemény[1, 2]; 1. MTA-SZTE Dermatological Research Group, Szeged, Hungary; 2. Department of Dermatology and Allergology, University of Szeged, Szeged, Hungary; 3. Institute of Clinical Microbiology, University of Szeged, Szeged, Hungary.

1202.MicroRNA-155 (miR-155) and interleukin 10 (IL-10) regulate proinflammatory cytokine response in Orientia tsutsugamushi-infected human THP-1 macrophages Chung Chang[1, 2], Ming Tsai[2], Yi Hong[3], Tsung Chuang[4]; 1. Dermatology, Kaohsiung Medical University, Kaohsiung, Taiwan; 2. Graduate Institute of Medicine, Kaohsiung Medical University, Kaohsiung, Taiwan; 3. Biochemistry, Kaohsiung Medical University, Kaohsiung, Taiwan; 4. Immunology Research Center, National Health Research Institute, Chu Nan, Taiwan.

1203.Interest of I-modulia, an *Aquaphilus dolomiae* extract, in innate immune response of atopic dermatitis pathology Marie-Francoise Aries, Hélène Hernandez-Pigeon, Clémence Vaissière, Antony Caruana, Thien Nguyen, Sandrine Bessou-Touya, Nathalie Castex-Rizzi; Dermo Cosmetic Department, Pierre FABRE R&D Center, Toulouse, France.

1204.Activation of inflammasomes by tyrosine complexes Stephanie Oehrl, Thomas Doebel, Alexander Enk, Knut Schaekel; Dermatology, University Hospital Heidelberg, 69115 Heidelberg, Germany.

1205.Live *Demodex* mites regulate the inflammatory responses of SZ95 sebocytes Noreen Lacey[1], Adam Russell-Hallinan[1], Christos Zouboulis[2], Frank Powell[1]; 1. Charles Institute of Dermatology, University College Dublin, Dublin, Ireland; 2. Departments of Dermatology, Venereology, Allergology and Immunology, Dessau Medical Center, Dessau, Germany.

1206.Identification of pro-inflammatory monocyte subsets in human psoriasis and a murine psoriasis model Jackelyn Golden[1, 2], Nicole Ward[2], Yunmei Wang[3], Daniel Simon[3], Thomas McCormick[2], Kevin Cooper[2, 4]; 1. Pathology, Case Western Reserve University, Cleveland, OH, USA; 2. Dermatology, Case Western Reserve University, Cleveland, OH, USA; 3. Medicine, Case Western Reserve University, Cleveland, OH, USA; 4. VA Medical Center, Cleveland, OH, USA.

1207.Staphylococcus aureus interaction with the epidermis regulates T cell priming by cutaneous dendritic cells Marta Polak, Emily Swindon, Donna Davies, Eugene Healy, Michael Ardern-Jones; Clinical and Experimental Sciences, University of Southampton, Southampton, United Kingdom.

1208.Modified vaccinia virus Ankara induces type I IFN induction in conventional dendritic cells through a STING-mediated cytosolic DNA sensing pathway that requires IRF3, IRF7 and IFNAR1 Peihong Dai[2, 1], Weiyi Wang[1, 2], Hua Cao[1, 2], Francesca Avogadri[3], Russel Vance[5], Taha Merghoub[3], Stewart Shuman[2], Liang Deng[1, 4]; 1. Dermatology/Medicine, Memorial Sloan-Kettering Cancer Center, New York, NY, USA; 2. Molecular Program, Memorial Sloan-Kettering Cancer Center, New York, NY, USA; 3. Immunology Program, Memorial Sloan-Kettering Cancer Center, New York, NY, USA; 4. Dermatology, Weill Medical College of Cornell University, New York, NY, USA; 5. Molecular & Cell Biology, University of California, Berkeley, Berkeley, CA, USA.

1209.No evidence for viral DNA in whole genome sequence of cutaneous squamous cell carcinoma Michelle Dimon[1], Henry Wood[2], Wilson Liao[1], Raymond Cho[1], Sarah Arron[1]; 1. Dermatology, University of California, San Francisco, CA, USA; 2. Precancer Genomics, Leeds Institute of Molecular Medicine, Leeds, United Kingdom.

1210.Propionobacterium acnes promotes monocyte-derived macrophage M2b polarization Kim MyungHwa[1], Min Qin[2], Aslan Pirouz[2], Faraj Mourad[2], Seung Phil Hong[1], Jenny Kim[2]; 1. Department of Dermatology, Dankook University, School of Medicine, Cheonan, Republic of Korea; 2. Division of Dermatology, Department of Medicine, David Geffen School of Medicine at UCLA, Los Angeles, CA, USA.

1211.Topographical localization of antibody improves the detection limit for nanoscale biosensors M. Lifson[1], D. Basu Roy[2], B. Miller[1, 2, 3]; 1. Biomedical Engineering, University of Rochester, Rochester, NY, USA; 2. Department of Biochemistry and Biophysics, University of Rochester, Rochester, NY, USA; 3. Department of Dermatology, University of Rochester, Rochester, NY, USA.

1212.HIV-1 mediated regulation of the mTOR pathway modulates autophagy flux and dendritic cells immune function Magdalena Czubala, John Mitchell, Fabien Blanchet, Vincent Piguet; Institute of Infection and Immunity, Cardiff University, Cardiff, United Kingdom.

1213.TLR-4 engagement of dendritic cells confers a BST-2/tetherin-mediated restriction of HIV-1 infection to CD4+ T cells across the virological synapse Fabien Blanchet[1], Romaine Stalder[2], Magdalena Czubala[1], Martin Lehmann[2], Laura Rio[2], Bastien Mangeat[2], Vincent Piguet[1]; 1. Institute of Infection and Immunity, Cardiff University, Cardiff, United Kingdom; 2. Dept Microbiology and Molecular Medicine, Medical School of Geneva, Geneva, Switzerland.

1214.IMSA: Integrated metagenomic sequence analysis for identification of exogenous reads in a host genomic background Michelle Dimon, Sarah Arron; Dermatology, University of California, San Francisco, CA, USA.

1215.The chemokine CXCL14 acts as a modulator of CMV dissemination Juliane Noffke[1], Sandeep Nambiar[1], Manuela Fiedler[2], Mario Schulte[1], Robert Kubitza[1], Sabine Kellermann[1], Ulrike Wiesner[1], Stefanie Jeschke[2], Albert Zimmermann[2], Hartmut Hengel[2], Bernhard Homey[1]; 1. Dermatology, Heinrich-Heine University Hospital, Duesseldorf, Germany; 2. Virology, Heinrich-Heine University Hospital, Duesseldorf, Germany.

1216.STING (stimulator of interferon genes) is required for the induction of autophagy in conventional dendritic cells and macrophages in response to infection by modified vaccinia virus Ankara Weiyi Wang[1, 2], Tanvi Parikh[1, 4], Peihong Dai[2, 1], Noor Gammoh[3], Ian Ganley[3], Sung-Eun Kim[3], Russell Vance[5], Herbert Virgin[6], Michael Overholtzer[3], Stewart Shuman[2], Xuejun Jiang[3], Liang Deng[1, 4]; 1. Dermatology/Medicine, Memorial Sloan-Kettering Cancer Center, New York, NY, USA; 2. Molecular Program, Memorial Sloan-Kettering Cancer Center, New York, NY, USA; 3. Cell Biology Program, Memorial Sloan-Kettering Cancer Center, New York, NY, USA; 4. Dermatology, Weill Medical College of Cornell University, New York, NY, USA; 5. Molecular & Cell Biology, University of California, Berkeley, Berkeley, CA, USA; 6. Pathology & Immunology, Washington University School of Medicine, St. Louis, MO, USA.

1217.Sphingosine 1-phosphate induces inflammatory responses in human keratinocytes and dermal fibroblasts through different S1P receptor subtypes Saghi Hamidi, Maja Natek, Monika Schäfer-Korting, Günther Weindl; Institute of Pharmacy (Pharmacology and Toxicology), Freie Universität Berlin, Berlin, Germany.

1218.IL-1 regulates the host immune response against cutaneous vaccinia virus infection Tian Tian[1], Michelle Jin[2], Krista Dubin[3], Sandy King[1], Thomas Kupper[1], Robert Fuhlbrigge[1]; 1. Dermatology, Brigham and Women's Hospital, Boston, MA, USA; 2. Stanford University, Stanford, CA, USA; 3. Weill Cornell Medical College, New York, NY, USA.

1219*(CM9-04).IL-17A-producing mucosa-associated innate T cells are present in psoriatic lesions Marcel Teunissen, Saskia Chielie, Phyllis Spuls, Menno de Rie, Pieter Res; Dermatology, Academic Medical Center, Amsterdam, Netherlands.

1220.Axillary bacterial transplantation and bacteriotherapy as a promising technique to treat bromhidrosis Chris Callewaert[1], Tess Plaquet[1], Jessica Bostoen[2], Tom Van de Wiele[1], Nico Boon[1]; 1. Laboratory of Microbial Ecology and Technology, Ghent University, Ghent, Belgium; 2. Department of Dermatology, Ghent University Hospital, Ghent, Belgium.

1221.Detailed longitudinal sampling of the wound microbiome reveals increased bacterial diversity with antimicrobial treatment and healing Daniel Sprockett, Mashal Akhter, Marie Tuttle; Dermatology, Case Western Reserve University, Cleveland, OH, USA.

1222.Hyper-inflammatory macrophage response delays wound healing and recovery of baseline skin microbiome Marie Tuttle, Daniel Sprockett, Kurt Lu; Department of Dermatology, Case Western Reserve University, Cleveland, OH, USA.

1223.Fluorescent staining in leprosy Smita Ghate, Rachita Dhurat; Department of dermatology, LTM Medical college, Mumbai, India.

1224.Novel fatty acid amide hydrolase inhibitors exert strong anti-inflammatory effects on human keratinocytes Nikolett Vasas[1], Attila Szöllösi[1], Judit Papp[1], Attila Oláh[1], Imre Szabó[1], Erika Lisztes[1], Michael Soeberdt[2], Christoph Abels[2], Tamás Bíró[1]; 1. DE-MTA "Lendület" Cellular Physiology Research Group, University of Debrecen, Hungary, University of Debrecen, Debrecen, Hungary; 2. Dr. August Wolff GmbH & Co. KG Arzneimittel, Bielefeld, Germany.

1225.TLR2-dependent expression of Parathyroid Hormone-related Peptide (PTHrP) in the skin Beda Muehleisen[1, 2], Lars French[1], Richard Gallo[2]; 1. Department of Dermatology, University Hospital Zurich, Zurich, Switzerland; 2. Division of Dermatology, University of California, San Diego, CA, USA.

1226.Primary human skin culture experimentally infected with Bartonella henselae Paulo Velho[2], Ml Cintra[2], Bg Lania[2], A. Almeida[2], Steffan Nye[1], Kalpna Gupta[3], Marna Ericson[1]; 1. Dermatology and Center for Drug Design, University of Minnesota, Minneapoli, MN, USA; 2. Dermatology, University of Campinas, Campinas, Brazil; 3. Department of Vascular Biology Center, Division of Hematology/Oncology/Transplantation, Department of Medicine, University of Minnesota, Minneapolis, MN, USA.

Photobiology

All orals designated with an asterisk (*) below are presented in a Concurrent Session (see code). Orals designated with two asterisks (**) will be presented during a Plenary Session (see code).

1227.Matrix Metalloproteinase (MMP) 12 is a UVA1 specific biomarker Angela Tewari[1, 2], Dimitra Dafou[1], Kasia Grys[1], Robert Sarkany[1, 2], Antony Young[1]; 1. St Johns Institute of Dermatology, King's College, London, United Kingdom; 2. Photodermatology, St Johns Institute of Dermatology, St THomas' Hospital, SE1 7HY, United Kingdom.

1228.Keratinocyte-specific deletion in mice reveals gene dosage-dependent role for SIRT1 in UVB-induced skin tumorigenesis Mei Ming[1], Keyoumars Soltani[1], Christopher Shea[1], Xiaoling Li[2], Yu-Ying He[1]; 1. Dermatology/Medicine, University of Chicago, Chicago, IL, USA; 2. Laboratory of Signal Transduction, NIEHS/NIH, Research Triangle Park, NC, USA.

1229.Astaxanthin, a xanthophyll carotenoid, inhibits ultraviolet-induced apoptosis in keratinocytes Yoko Yoshihisa, Tadamichi Shimizu; Dermatology, University of Toyama, Toyama, Japan.

1230.Characterisation of skin autofluorescence to establish its role in distinguishing between normal and diseased skin Julie Woods[1], Kim Robinson[2], Harry Moseley[1], June Gardner[1], Sally Ibbotson[1]; 1. Photobiology Unit, University of Dundee, Dundee, United Kingdom; 2. School of Medicine, University of Dundee, Dundee, United Kingdom.

1231*(CM15-05).UVA induces the aging-associated progerin through formation of oxidative damage and subsequent alternative splicing of LMNA Hirotaka Takeuchi[1, 2], Thomas Ruenger[1]; 1. Dermatology, Boston University School of Medicine, Boston, MA, USA; 2. Dermatological R&D Skin Research Department, POLA Chemical Industries, Inc., Yokahama, Japan.

1232*(CM15-07).Prostaglandin E2-EP4 signaling mediates the development of a newly established niacin deficiency-induced pellagra model Kazunari Sugita[1, 2], Takashi Nomura[2], Motonobu Nakamura[1], Yoshiki Miyachi[2], Yoshiki Tokura[3], Kenji Kabashima[2]; 1. Department of Dermatology, University of Occupational and Environmental Health, Kitakyushu, Japan; 2. Department of Dermatology, Kyoto University Graduate School of Medicine, Kyoto, Japan; 3. Department of Dermatology, Hamamatsu University School of Medicine, Hamamatsu, Japan.

1233.Impact assessment of energy efficient lamps on individuals with lupus erythematosus versus healthy individuals Leona Fenton[1], James Ferguson[1], Sally Ibbotson[1], Robert Dawe[1], Suzy Silburn[2], Harry Moseley[1]; 1. Photobiology Unit, University of Dundee, Dundee, United Kingdom; 2. Rheumatology Department, NHS Tayside, Dundee, United Kingdom.

1234.Development of an *in vitro* immunosuppression model Marisa Meloni[1], Barbara De Servi[1], Valentina Giannini[2], Franco Gasparri[2]; 1. VitroScreen, Milano, Italy; 2. Dermo-Cosmetic R&D, Rottapharm|Madaus, Monza, Italy.

1235.UVR-induced DNA damage in melanocytes is dependent upon skin constitutive pigmentation Sandra Del Bino, Juliette Sok, Françoise Bernerd; Research & Innovation, L'Oréal, Clichy, France.

1236.Photodynamic therapy (PDT) downregulates the function of regulatory T cells in patients with esophageal squamous cell carcinoma Eleonora Reginato[1], Jörg Lindenmann[2], Isabella Bambach[1], Nina Schweintzger[1], Cord Langner[3], Freyja Smolle-Jüttner[2], Peter Wolf[1]; 1. Department of Dermatology, Medical University of Graz, Graz, Austria; 2. Division of Thoracic and Hyperbaric Surgery, Medical University of Graz, Graz, Austria; 3. Institute of Pathology, Medical University of Graz, Graz, Austria.

1237.Diversity of biological alterations induced by longwave UVA (UVA1) in human reconstructed skin Claire Marionnet, François Lejeune, Cécile Pierrard, Françoise Bernerd; Research and Innovation, L'Oréal, Clichy, France.

1238.Actinic lentigines are characterized by a higher melanin content and a severe disorganization of the cutaneous architecture Christine Duval[1], Stéphanie Nouveau[1], Muriel Monot[1], Philippe Bastien[1], Emilie Warrick[1], Corinne Chagnoleau[1], Jean-Paul Ortonne[2], Olivier De Lacharrière[1], Françoise Bernerd[1]; 1. Biological Research Department, L'Oréal Research & Innovation, Clichy, France; 2. Dermatology Department, Hopital l'Archet, Nice, France.

1239.Deficiency in Nrf2 promotes UVA induced expression of proinflammatory mediators in PUFA supplemented fibroblasts Florian Gruber[1], Cayo Mecking Ornelas[1], Susanne Karner[1], Valery Bochkov[2], Erwin Tschachler[1]; 1. Dermatology, Medical University of Vienna, Vienna, Austria; 2. Vascular Biology and Thrombosis Research, Medical University of Vienna, Vienna, Austria.

1240.Ceramides (Cer) developed for topical application do not further increase UVB-induced caspase 3 activity (Casp3 act) in basal and differentiating human keratinocytes (NHEK) *in vitro* Susanne Grether-Beck[1], Ingo Felsner[1], Mike Farwick[2], Tim Koehler[2], Peter Lersch[2], Anthony Rawlings[3], Jean Krutmann[1]; 1. IUF-Leibniz Research Institute for Environmental Medicine, Düsseldorf, Germany; 2. Evonik Goldschmidt GmbH, Essen, Germany; 3. AVR Consulting Ltd, Northwich, Cheshire, United Kingdom.

1241.PPARγ modulation as a possible approach for counteracting photoaging process Stefania Briganti, Enrica Flori, Barbara Bellei, Enzo Izzo, Mauro Picardo; Cutaneous Physiopatology Laboratory, IRCSS San Gallicano Dermatology Institute, Rome, Italy.

Posters

1242.Evaluation of the protective efficacy of a new sunscreen formulation against solar radiation-induced DNA damage and apoptosis in a reconstructed human epidermis Daniel Bacqueville[1], Laure Duprat[1], Thierry Douki[2], Hélène Dromigny[1], Béatrice Guiraud[1], Sandrine Bessou-Touya[1], Hélène Duplan[1]; 1. Dermo-cosmetic department, Pierre Fabre R&D center, Toulouse, France; 2. Nucleic acid lesion laboratory, Atomic Energy and Alternative Energies Commission, Grenoble, France.

1243(PL5-03).Prostaglandin E2 promotes UV radiation-induced immune suppression via DNA hypermethylation** Santosh Katiyar[1, 2], Ram Prasad[1]; 1. Dermatology, University of Alabama at Birmingham, Birmingham, AL, USA; 2. Birmingham VA Medical Center, Birmingham, AL, USA.

1244.Excimer lamp irradiation induces reduction of intraepidermal nerve fibre: Implications for possible application to intractable pruritus Atsuko Kamo[1], Mitsutoshi Tominaga[1], Yayoi Kamata[1], Kenji Takamori[1, 2]; 1. Institute for Environmental and Gender Specific Medicine, Juntendo University, Urayasu, Japan; 2. Department of Dermatology, Juntendo University Urayasu Hospital, Urayasu, Japan.

1245.Antagonizing effects and mechanisms of afzelin against UVB-induced cell damage Seoung Woo Shin[1], Eunsun Jung[1], Seungbeom Kim[1], Jongsung Lee[2], Deokhoon Park[1]; 1. Efficacy Research Team, Biospectrum, Inc, Seoungnam, Republic of Korea; 2. Department of Dermatological Health Management, Eulji University, Seungnam, Republic of Korea.

1246.Yellow light (590nm) photomodulation reduces UVA-induced metalloproteinase-1 expression Hsin-Su Yu[1], Cheng-Che Lan[1, 2]; 1. Department of Dermatology, Kaohsiung Medical University, Kaohsiung, Taiwan; 2. Department of Dermatology, Kaohsiung Municipal Ta-Tung Hospital,Kaohsiung Medical University, Kaohsiung, Taiwan.

1247.UVA lowers blood pressure and vasodilates the systemic arterial vasculature by mobilisation of cutaneous nitric oxide stores Donald Liu[1], Bernadette Fernandez[3], Ninian Lang[2], Julie Gallagher[4], David Newby[2], Martin Feelisch[3], Richard Weller[1, 5]; 1. Dermatology, University of Edinburgh, Edinburgh, United Kingdom; 2. Cardiology, University of Edinburgh, Edinburgh, United Kingdom; 3. Medicine, University of Southampton, Southampton, United Kingdom; 4. Leithmount Surgery, Edinburgh, United Kingdom; 5. Centre for Inflammation Research, University of Edinburgh, Edinburgh, United Kingdom.

1248.Protective effect of tioproline and its enhancement by other active ingredients on UV-induced skin cells damage Renata Debowska[1], Monika Pasikowska[1], Karolina Bazela[1], Katarzyna Zawada[2], Bozena Tyszczuk[1], Irena Eris[1]; 1. Cosmetic Laboratories Dr Irena Eris, Centre for Science and Research Dr Irena Eris, Warsaw, Poland; 2. Department of Physical Chemistry, Faculty of Pharmacy, Medical University of Warsaw, Warsaw, Poland.

1249.Ultraviolet B irradiation increases phosphorylation of ribosomal protein S6 in human skin Nicole Yager, Eugene Healy; Dermatopharmacology, University of Southampton, Southampton, United Kingdom.

1250.Ultraviolet B (UVB) radiation activates systemic hypothalamus-pituitary-adrenal (HPA) axis expression in C57BL/6 mice Cezary Skobowiat[1], Reza Nejati[1], Jessica Bauman[1], Zane Cooke[1], Andrzej Slominski[1, 2]; 1. Pathology and Laboratory Medicine, University of Tennessee Heath Science Center, Memphis, TN, USA; 2. Medicine, University of Tennessee Heath Science Center, Memphis, TN, USA.

1251.The alpha adrenergic receptor agonist oxymetazoline decreases erythema and inflammation in a UVB-induced sunburn model Mingting Tian, Edward Hsia, Lydia Andrews-Jones, Katherine Manley, Kaveh Azartash, Cindy Cheevers, Daniel Gil; Allergan, Irvine, CA, USA.

1252.Induction of apoptosis by photodynamic therapy using an aluminium-substituted phthalocyanine Mircea Tampa, Clara Matei, Simona-Roxana Georgescu; Dermatology, "Carol Davila" University of Medicine and Pharmacy, Bucharest, Romania.

1253.Curcumin analoge GO-Y030 inhibits UV induced inflammation and carcinogenesis Chiori Miyake[1], Fumikazu Yamazaki[1], Wakako Inoue[1], Manabu Osawa[1], Hirotsugu Tanimura[1], Shuichi Oe[1], Kana Mizuno[1], Hiroyuki Shibata[2], Yoshiharu Iwabuchi[3], Hiroshi Matsunaka[4], Hiroyuki Okamoto[1]; 1. Dermatology, Kansai Medical Unversity, Osaka, Japan; 2. Clinical Oncology, Akita University, Akita, Japan; 3. Organic Chemistry, Laboratory of Synthetic Chemistry, Tohoku University, Sendai, Japan; 4. Tokiwa Pharmaceutical Co Ltd, Tokyo, Japan.

1254.Adult onset Cockayne syndrome appears in two cases of UV sensitive syndrome with C229T CSB mutation Shinichi Moriwaki[1], Eri Makinodan[1], Yuka Nakazawa[2], Tomoo Ogi[2]; 1. Dermatology, Osaka Medical College, Takatsuki, Japan; 2. Molecular Medicine, Atomic Bomb Disease Institute, Nagasaki University School of Medicine, Nagasaki, Japan.

1255*(CM15-08).Repetitive irradiation of infrared-A does not promote ultraviolet induced skin tumor formation in black, yellow, and white K14-SCF mice Shizuka Okazaki, Yoko Funasaka, Satomi Oyama, Seiji Kawana; dermatology, Nippon Medical School, Tokyo, Japan.

1256.Study of photodynamic therapy using intraperitoneal injection of 5-ALA for MRSA infected cutaneous ulcer Kuniyuki Morimoto[1], Toshiyuki Ozawa[1], Makiko Shirakawa[1], Kunio Awazu[3], Hiromi Kobayashi[2], Daisuke Tsuruta[2], Masamitsu Ishii[1, 2]; 1. Plastic and Reconstructive Surgery, Osaka City University, Graduate School of Medicine, Osaka, Japan; 2. Dermatology, Osaka City University, Graduate School of Medicine, Osaka, Japan; 3. Medical Beam Physics Laboratory, Osaka University, Graduate School of Engineering, Suita, Japan.

1257.Time-dependent changes in the cyclobutane pyrimidine dimers (CPDs) level in mice epidermis by UVB irradiation Erika Ito[1], Hiroshi Kumimoto[2], Takuya Furuhashi[1], Akimichi Morita[1]; 1. Geriatric and Environmental Dermatology,, Nagoya City University Graduate School of Medical Sciences, Nagoya, Japan; 2. Central Service Unit, Aichi Cancer Center Research Institute, Nagoya, Japan.

1258*(CM15-04).The aryl hydrocarbon receptor (AHR) suppresses UVB-induced apoptosis in human keratinocytes Thomas Haarmann-Stemmann[1], Katrin Frauenstein[1], Ulrich Sydlik[1], Julia Tigges[1], Marc Majora[1], Helmut Hanenberg[2], Charlotte Esser[1], Ellen Fritsche[1], Jean Krutmann[1]; 1. IUF - Leibniz Research Institute for Environmental Medicine, Duesseldorf, Germany; 2. Otorhinolaryngology, Heinrich Heine University, Duesseldorf, Germany.

1259.The aryl hydrocarbon receptor (AHR) enhances IL-6 expression in UVB-exposed keratinocytes Katrin Frauenstein[1], Jessica Kemmerling[1], Christoph Vogel[2], Jean Krutmann[1], Thomas Haarmann-Stemmann[1]; 1. IUF - Leibniz Research Institute for Environmental Medicine, Duesseldorf, Germany; 2. Department of Environmental Toxicology, University of California Davis, Davis, CA, USA.

1260.Size is not a reliable predictor of tumor grade in a murine UVB-induced carcinogenesis model Erin Burns[1], Kathleen Tober[1], Judith Riggenbach[1], Donna Kusewitt[2], Gregory Young[3], Tatiana Oberyszyn[1]; 1. Pathology, The Ohio State University, Columbus, OH, USA; 2. Molecular Carcinogenesis, MD Anderson Cancer Center, Smithville, TX, USA; 3. Center for Biostatistics, The Ohio State University, Columbus, OH, USA.

1261.Up-regulation of raf kinase inhibitor protein in cultured human keratinocyte after UVB irradiation Chieh-Shan Wu[1, 2, 3], Der-An Tsao[4], Yen-Lin Chu[5], Chen-Ting Hung[5], Yi-Wen Tsai[5], Hsin-Su Yu[2, 3, 6], Huoy-Rou Chang[5]; 1. Department of Dermatology, Kaohsiung Veterans General Hospital, Kaohsiung, Taiwan; 2. Department of Dermatology, Faculty of Medicine, College of Medicine, Kaohsiung Medical University, Kaohsiung, Taiwan; 3. Graduate Institute of Medicine, College of Medicine, Kaohsiung Medical University, Kaohsiung, Taiwan; 4. Department of Medical Technology, Fooyin University, Kaohsiung, Taiwan; 5. Department of Biomedical Engineering, I-Shou University, Kaohsiung, Taiwan; 6. Department of Dermatology, Kaohsiung Medical University Hospital, Kaohsiung, Taiwan.

1262.The inhibitory effect of Spirulina platensis on UVB-induced skin carcinogenesis: Anti-inflammatory and antioxidant mechanisms Flandiana Yogianti[1], Makoto Kunisada[1], Ryusuke Ono[1], Kunihiko Sakumi[2], Yusaku Nakabeppu[2], Chikako Nishigori[1]; 1. Division of Dermatology, Department of Internal Related, Graduate School of Medicine, Kobe University, Kobe, Japan; 2. Division of Neurofunctional Genomics, Medical Institute of Bioregulation, Kyusyu University, Fukuoka, Japan.

1263.Fragmented collagen microenvironment alters expression of matrix metalloproteinases and collagen by dermal fibroblasts in photodamaged human skin Taihao Quan, E. Little, H. Quan, Z. Qin, John Voorhees, Gary Fisher; Department of Dermatology, University of Michigan, Ann Arbor, MI, USA.

1264.Topical estrogen increases the severity of UVB induced squamous cell carcinoma Michelle Creamer[1], Kathleen Tober[2], Erin Burns[2], Judy Riggenbach[2], Donna Kusewitt[3], Tatiana Oberyszyn[2]; 1. University Laboratory Animal Resources, The Ohio State University, Columbus, OH, USA; 2. Pathology, The Ohio State University, Columbus, OH, USA; 3. Molecular Carcinogenesis, Science Park Research Division - The University of Texas MD Anderson Cancer Center, Smithville, TX, USA.

1265*(CM15-01).Activation of the glucocorticoid-induced leucine zipper in human dendritic cells: Implications for immuno-modulation after extracorporeal photochemotherapy Jeffrey Futterleib, Robert Tigelaar, Jaehyuk Choi, Richard Edelson; Dermatology, Yale University School of Medicine, New Haven, CT, USA.

1266.A three-dimensional epidermis model reconstructed from UVB-irradiated keratinocytes mimics premature ageing in human skin Lilian Julia Löwenau, Günther Weindl, Monika Schäfer-Korting; Institute of Pharmacy (Pharmacology and Toxicology), Freie Universität Berlin, Berlin, Germany.

1267.Post-UV delivery of CPD-photolyase mRNA leads to repair of DNA damage in human keratinocytes Gábor Boros[1], Edit Miko[1], Eszter Emri[1], Gijsbertus van der Horst[2], Hiromi Muramatsu[3], Drew Weissman[4], Irén Horkay[1], Gabriella Emri[1], Katalin Karikó[3], Éva Remenyik[1]; 1. Department of Dermatology, University of Debrecen, Debrecen, Hungary; 2. Department of Genetics, Erasmus University Medical Center, Rotterdam, Netherlands; 3. Department of Neurosurgery, University of Pennsylvania, Philadelphia, PA, USA; 4. Department of Medicine, University of Pennsylvania, Philadelphia, PA, USA.

1268.Protein-epitopes formed in sun damaged human skin from lipid peroxidation are mediators of cutaneous photo-oxidative stress Joshua Williams[1], Yira Bermudez[1], Steven Stratton[1], Georg Wondrak[1, 2]; 1. The University of Arizona Cancer Center, University of Arizona, Tucson, AZ, USA; 2. College of Pharmacy, University of Arizona, Tucson, AZ, USA.

1269.Mice exposure to repetitive low UV doses differentially affects the immune system compared to elevated doses, enhancing specific antibody production Eliana Cela, Mariela Paz, Adrián Friedrich, Juliana Leoni, Daniel Gonzalez Maglio; Immunology Department, Pharmacy and Biochemistry School, University of Buenos Aires, Buenos Aires, Argentina.

1270.Improving acne keloidalis nuchae with targeted ultraviolet B irradiation: A prospective, randomized, split-scalp comparison study B. Summerer, G. Hinds, H. Suh, S. Leung, J. Kim, A. Nelson, A. Chien, L. Garza, S. Kang; Dermatology, Johns Hopkins Univ., Baltimore, MD, USA.

1271.Extracorporeal photopheresis in the treatment of localized scleroderma Ulrike Just, Adrian Tanew, Verena Paulitschke, Christian Jantschitsch, Robert Knobler; Dermatology, Medical University of Vienna, Vienna, Austria.

1272.Endoplasmic reticulum-stress induction as an hormetic signal for oxidative stress protection Lionel Valenti[2], Erika Lomonte[2], Frédéric Maccario[2], Jean-François Nicolaÿ[1], Mathilde Frechet[1]; 1. Exsymol, Monaco, Monaco; 2. Sedifa laboratoires, Monaco, Monaco.

1273.miR-24 functionality in skin response to UV radiation Deeba Syed, Jean-Christopher Chamcheu, Rahul Lall, Vaqar Adhami, Mohammad Khan, Hasan Mukhtar; Dermatology, University of Wisconsin-Madison, Madison, WI, USA.

1274.Tropical highland blackberry juice protected against UVB-mediated damage in normal human epidermal keratinocytes and in a reconstituted skin equivalent Laura Calvo-Castro[1, 2], Deeba Syed[2], Jean Christopher Chamcheu[2], Fernanda Maria Pinto Vilela[2], Ana Mercedez Pérez[3], Miguel Rojas[1], Hasan Mukhtar[2]; 1. Laboratorio de Ingeniería de Tejidos, Centro de Investigación en Biotecnología, Instituto Tecnológico de Costa Rica, Cartago, Costa Rica; 2. Dermatology, University of Wisconsin, Madison, WI, USA; 3. Centro Nacional de Clencia y Tecnología de Alimentos, Universidad de Costa Rica, San José, Costa Rica.

1275*(CM15-09).Immediate HIF-1α downregulation following UVB irradiation is triggered by NOX1-mediated ROS generation Ghida Harfouche[1, 2], Mohsen Hosseini[1, 2], Walid Mahfouf[1, 2], Hubert de Verneuil[1, 2], Alain Taieb[1, 2], Frederic Mazurier[1, 2], Hamid Rezvani[1, 2]; 1. Inserm U1035, BORDEAUX, France; 2. University of Bordeaux, BORDEAUX, France.

1276.Energy metabolism affects keratinocyte responses to UVB irradiation Mohsen Hosseini[1, 2], Walid Mahfouf[1, 2], Frederic Mazurier[1, 2], Alain Taieb[1, 2], Hubert de Verneuil[1, 2], Rodrigue Rossignol[2, 3], Hamid Rezvani[1, 2]; 1. Inserm U1035, BORDEAUX, France; 2. University of Bordeaux, BORDEAUX, France; 3. EA4576, BORDEAUX, France.

1277.Fight Infra'aging™: Novel concept to protect skin from sun-induced aging Estelle Loing[1], Elisabeth Lamarque[2], Magali Borel[3], Carine Bezivin[4]; 1. R&D, Lucas Meyer Cosmetics, Québec, QC, Canada; 2. R&D, Lucas Meyer Cosmetics, Ramonville St Agne, France; 3. Marketing, Lucas Meyer Cosmetics, Champlan, France; 4. R&D, Lucas Meyer Cosmetics, Champlan, France.

1278.Activation of antioxidative enzymes via nuclear erythroid 2-related factor (Nrf2) in UV-exposed human keratinocytes is mediated by melatonin Tobias Fischer, Konrad Kleszczynski, Nathalie Kruse, Detlef Zillikens; Department of Dermatology, University of Lubeck, Lubeck, Germany.

1279*(CM15-02).Toll-like receptor-4 promotes ultraviolet radiation induced cutaneous tumor development Eva Simanyi, Israr Ahmad, Heba Rihan, Tahseen Nasti, Craig Elmets, Nabiha Yusuf; Dermatology, University of Alabama at Birmingham, Birmingham, AL, USA.

1280.An *in vitro* assay system for testing sunscreens Sarah Thurstan[1], Patrick Costello[1], Christopher Griffiths[1], Michael Bell[3], Michael Brown[3], Neil Gibbs[1], Rachel Watson[1], Michael Sherratt[2]; 1. Dermatology Centre, The University of Manchester, Manchester, United Kingdom; 2. Regenerative Medicine, The University of Manchester, Manchester, United Kingdom; 3. Research & Development, Alliance-Boots, Nottingham, United Kingdom.

1281*(CM15-03).Toll-like receptor-4 deficiency enhances repair of ultraviolet radiation induced DNA damage in skin Hillary delaRosa[1], Israr Ahmad[1], Eva Simanyi[1], Iman Tamimi[1], Craig Elmets[1, 2], Nabiha Yusuf[1, 2]; 1. Dermatology, University of Alabama at Birmingham, Birmingham, AL, USA; 2. Skin Disease Research Center, University of Alabama at Birmingham, Birmingham, AL, USA.

1282.Evidence that lower epidermal layers of human skin have an inherent resistance to UVB-induced cyclobutane pyrimidine dimer formation Katharine Rankine, Neil Gibbs; Dermatology Centre, University of Manchester, Manchester, United Kingdom.

1283.Abnormal epidermal tight junction protein expression in polymorphic light eruption following UVB irradiation E. Pond, C. O'Neill, L. Rhodes, N. Gibbs; Dermatological Sciences, University of Manchester, Manchester Academic Health Sciences Centre, Manchester, United Kingdom.

1284.Constitutive photomorphogenic protein is involved in the UVB-induced cellular response in human keratinocytes Barbara Fazekas[1], Hilda Polyánka[2], Attila Bebes[1], Gábor Tax[1], Ferenc Nagy[3], Lajos Kemény[2, 1], Éva Ádám[3], Márta Széll[4, 2]; 1. Department of Dermatology and Allergology, Faculty of Medicine, University of Szeged, Szeged, Hungary; 2. MTA-SZTE Dermatological Research Group, University of Szeged, Szeged, Hungary; 3. Institute of Plant Biology, Biological Research Centre of the Hungarian Academy of Sciences, Szeged, Hungary; 4. Institute of Medical Genetic, Faculty of Medicine, University of Szeged, Szeged, Hungary.

1285.Characterization of UV-B induced cellular processes in a keratinocyte cell line (HPV-KER) immortalized with the HPV-E6 oncogene Hilda Polyánka[1], Kornélia Szabó[1], Gábor Tax[2], Anikó Göblös[2], Ágnes Kinyó[2], Vilmos Tubak[3], Zsuzsanna Újfaludi[4], Imre Boros[4], Zsuzsanna Bata-Csörgő[2], Lajos Kemény[1, 2], Márta Széll[1]; 1. MTA-SZTE Dermatological Research Group, Szeged, Hungary; 2. Department of Dermatology and Allergology, University of Szeged, Szeged, Hungary; 3. Institute of Genetics, Biological Research Centre, Hungarian Academy of Sciences, Szeged, Hungary; 4. Department of Biochemistry and Molecular Biology, University of Szeged, Szeged, Hungary.

1286*(CM15-10).UVB-induced p53 mutations are associated with enhanced tumor formation in CHOP/gadd153 knockout mouse skin Sanjay Anand[1, 2], Kishore Rollakanti[1], Nikoleta Brankov[1], Edward Maytin[2, 1]; 1. Biomedical Engineering, Cleveland Clinic, Cleveland, OH, USA; 2. Dermatology, Cleveland Clinic, Cleveland, OH, USA.

1287.The effect of repair mechanisms on risk of DNA damage during *in vivo* two-photon skin imaging Dora Haluszka[1], Kende Lorincz[1], Andras Banvolgyi[1], Nora Gyongyosi[1], Attila Kolonics[2, 3], Robert Szipocs[2, 3], Sarolta Karpati[1], Norbert Wikonkal[1]; 1. Department of Dermatology, Dermatooncology and Venerology, Semmelweis University, Budapest, Hungary; 2. Institute for Solid State Physics and Optics of Wigner RCP, Budapest, Hungary; 3. R&D Ultrafast Lasers Kft., Budapest, Hungary.

1288*(CM15-06).Ultraviolet B (UVB) radiation-mediated loss of p38α mitogen-activated protein kinase (MAPK) facilitates oxidative stress and drives skin tumorigenesis Arianna Kim[1], Liang Liu[1], Hamid Rezvani[2], Walid Mahfouf[2], Mohammad Athar[3], David Bickers[1]; 1. Dermatology, Columbia University, New York, NY, USA; 2. INSERM U1035 Université Bordeaux, Bordeaux, France; 3. Dermatology, University of Alabama at Birmingham, Birmingham, AL, USA.

1289.Tanning beds use and skin cancer biomarkers - a pilot study Shafi Rubina[1], William Camp[1], Jennifer Hermann[1], Wendy Cantrell[1], Alan Cantor[3], Mohammad Athar[1, 2], Craig Elmets[1, 2, 4]; 1. Dermatology, UAB, Birmingham, AL, USA; 2. SDRC, UAB, Birmingham, AL, USA; 3. Division of Preventive Medicine, UAB, Birmingham, AL, USA; 4. Birmingham VA Medical Center, Birmingham, AL, USA.

1290.The UVR-induced up-regulation of Hsp70 is modulated by melatonin in human cultured keratinocytes and *ex vivo* full thickness skin Konrad Kleszczynski[1], Stephanie Zwicker[2], Stefan Tukaj[1], Detlef Zillikens[1], Michael Kasperkiewicz[1], Ronald Wolf[2], Tobias Fischer[1]; 1. Department of Dermatology, University of Lubeck, Lubeck, Germany; 2. Department of Dermatology, Ludwig-Maximilian University, Munich, Germany.

1291.Accelerated photoaging during photochemotherapy in animals deficient for MnSOD in their epidermis András Bánvölgyi[1], Kende Lorincz[1], Dóra Haluszka[1], Nóra Gyöngyösi[1], Meinhard Wlaschek[2], Karin Scharffetter-Kochanek[2], Sarolta Kárpáti[1], Norbert Wikonkál[1]; 1. Department of Dermatology, Venerology and Skin Oncology, Semmelweis University, Budapest, Hungary; 2. Department of Dermatology, University of Ulm, Ulm, Germany.

1292.Abnormal responses to UV-induced DNA damage in Merkel cell carcinoma Shu-Wei Hsu[1, 2], Katherine Ona-Vu[2, 1], Dennis Oh[1, 2]; 1. Department of Dermatology, University of California, San Francisco, San Francisco, CA, USA; 2. Dermatology Research Unity, VA Medical Center, San Francisco, CA, USA.

1293(PL2-06).p63 regulates repair of UV-induced DNA damage in epidermal keratinocytes and squamous cell carcinoma cells** Katherine Ona-Vu[1, 2], Dennis Oh[1, 2]; 1. Dermatology Research Unit, VA Medical Center, San Francisco, CA, USA; 2. Department of Dermatology, University of California, San Francisco, San Francisco, CA, USA.

1294.Encapsulated retinol and RA are equally effective at decreasing UV-damage Rahul Mehta[1], Virginia Vega[1], Michael Bachelor[2], Jonathan Oldach[2], Alexander Armento[2]; 1. Research and Development, SkinMedica, Carlsbad, CA, USA; 2. MatTek Cooporation, Ashland, MA, USA.

1295.*In vivo* siRNA targeting of CD28 enhances expression of nucleotide excision repair genes and diminishes DNA damage, hyperplasia, and inflammation induced by UV radiation Tej Singh, Peter Wolf; Dermatology, Medical University of Graz, Graz, Austria.

1296.TNFα blockade *in vivo* abolishes UVB-induced recruitment of neutrophils and macrophages to skin, expression of MMP8 and MPO, but not MMP1a or collagen fragmentation Meena Sharma[1, 2], Victoria Werth[1, 2]; 1. Univ. of Pennsylvania, Philadelphia, PA, USA; 2. Philadelphia VAMC, Philadelphia, PA, USA.

1297.Functional protein pathway activation mapping of normal skin exposed to solar simulated light Janine Einspahr[1], Clara Curiel-Lewandrowski[1], Emanuel Petricoin[2], Yira Bermudez[1], ChengCheng Hu[1], David Alberts[1], G. Bowden[1], Kathylynn Saboda[1], Valerie Calvert[2], Lance Liotta[2], Steven Stratton[1]; 1. Arizona Cancer Center, University of Arizona, Tucson, AZ, USA; 2. Applied Proteomics and Molecular Medicine, George Mason University, Manassas, VA, USA.

1298.Protection and repair of skin damage from environmental aggressors Siming Chen, Jolanta Idkowiak-Baldys, Joseph DiMaria, Teena Jacob, Uma Santhanam; Cell Biology & In Vitro Toxicology, Avon Products, Inc., Suffern, NY, USA.

1299.Reduction of UVA-induced oxidative stress via regulation of catalase - a novel photoprotective mechanism of α-melanocyte-stimulating hormone in cutaneous biology Markus Böhm[1], Agatha Stegemann[1], Arianna Mastrofrancesco[1, 2], Mauro Picardo[2], Zalfa Abdel-Malek[3], Thomas Luger[1]; 1. Department of Dermatology, University of Münster, Münster, Germany; 2. San Gallicano Dermatological Institute, Rome, Italy; 3. Department of Dermatology, University of Cincinnati, Cincinnati, OH, USA.

Posters

Pigmentation & Melanoma

All orals designated with an asterisk (*) below are presented in a Concurrent Session (see code). Orals designated with two asterisks (**) will be presented during a Plenary Session (see code).

1300.Postinflammatory hyperpigmentation is not a post- but persistent inflammatory process that is influenced by ethnicity and causality Nada Elbuluk, Euphemia Mu, Gulsun Erdag, Elizabeth Colantuoni, Janis Taube, Sewon Kang, Ginette Hinds; Dermatology, Johns Hopkins University, Baltimore, MD, USA.

1301.Regulation of melanin synthesis by *S*-palmitoylation of tyrosinase Yoko Niki[1], Masaki Fukata[2], Yuko Fukata[2], Shinichiro Oku[2], Chieko Okamura[1], Seiji Takeuchi[1, 3], Kazumasa Wakamatsu[4], Shosuke Ito[4], Chikako Nishigori[3], Lieve Decercq[5], Daniel Yarosh[5], Naoaki Saito[1]; 1. Kobe Skin Research Department, Biosignal Research Center, Kobe University, Kobe, Japan; 2. Division of Membrane Physiology, Department of Cell Physiology, National Institute for Physiological Sciences, Okazaki, Japan; 3. Division of Dermatology, Kobe University Graduate School of Medicine, Kobe, Japan; 4. Department of Chemistry, Fujita Health University School of Health Sciences, Toyoake, Japan; 5. Basic Science Research, Estee Lauder Companies, Melville, NY, USA.

1302.Identification of novel cd22- b cell subsets in melanoma with potential anti-tumour effects I. Egbuniwe, M. Hussain-Mohamad, S. Karagiannis, F. Nestle, K. Lacy; St John's Institute of Dermatology, King's College London, London, United Kingdom.

1303.Apoptosis and caspase 3 stimulate melanoma tumor repopulation during vemurafenib and PD0325901 therapy Anne Donato[1, 2], Qian Huang[1], Fang Li[1], Xinjian Liu[1], Chuan-Yuan Li[1]; 1. Dermatology, Duke University Medical Center, Durham, NC, USA; 2. Howard Hughes Medical Institute Medical Research Fellow, Chevy Chase, MD, USA.

1304*(CM10-09).Shedding of CD44 in human melanoma cells - the CD44 ectodomain is released by direct ADAM10-cleavage and binds to vimentin on neighboring cells U. Anderegg, C. Haiduk, T. Eichenberg, J. Simon; Dept. of Dermatology, University of Leipzig, Leipzig, Germany.

1305.Innate immune TLR2 and TLR3 participate in melanogenesis and melanosome transportation in human melanocytes Saaya Koike, Kenshi Yamasaki, Setsuya Aiba; Dermatology, Tohoku University Graduate School of Medicine, Sendai, Japan.

1306*(CM2-04).Melanosome biogenesis protein complexes interact with the WASH complex Pearl Ryder[1], Rachel Vistein[2], Avanti Gokhale[1], Matthew Seaman[3], Manoj Puthenveedu[2], Victor Faundez[1]; 1. Cell Biology, Emory University, Atlanta, GA, USA; 2. Biological Sciences, Carnegie Mellon University, Pittsburgh, PA, USA; 3. Clinical Biochemistry, University of Cambridge, Cambridge, United Kingdom.

1307.NVP-LDE225, a potent and selective smoothened antagonist possesses anti-melanoma activity both *in vitro* and *in vivo* Ahmad Jalili[1], Kirsten Mertz[1], Julia Romanov[1], Christine Wagner[1], Frank Kalthoff[2], Anton Stuetz[2], Gaurav Pathria[1], Melanie Gschaider[1], Georg Stingl[1], Stephan Wagner[1]; 1. Division of Immunology, Allergy and Infectious Diseases (DIAID), Department of Dermatology, Medical University of Vienna, Vienna, Austria; 2. Novartis Institutes for Biomedical Research, Vienna, Austria.

1308.Alcohol intake and risk of incident melanoma: A prospective study Andrew Rivera[1], Jiali Han[2, 3, 4], Tricia Li[2], Abrar Qureshi[2, 3]; 1. Harvard Medical School, Boston, MA, USA; 2. Channing Laboratory, Department of Medicine, Brigham and Women's Hospital, Harvard Medical School, Boston, MA, USA; 3. Department of Dermatology, Brigham and Women's Hospital, Boston, MA, USA; 4. Department of Epidemiology, Harvard School of Public Health, Boston, MA, USA.

1309.Neural-associated melanoma progression genes are induced during melanocyte activation and proliferation Claire Wang, Hideki Fujita, Mayte Suarez-Frinas, Hiroshi Mitsui, James Krueger; Laboratory for Investigative Dermatology, The Rockefeller University, New York, NY, USA.

1310.Melanoma cell regulation of fibroblast hyaluronan synthesis through the release of emmprin and stratifin: A role in modulation of tumour stroma, promoting tumour invasion Jean Quinn[1], Syed Amjed[1, 2], Robert Carachi[1], Michael Edward[2]; 1. Dermatology, University of Glasgow, Glasgow, United Kingdom; 2. Surgical Paediatrics, Yorkhill Hospital, Glasgow, United Kingdom.

1311.Identification of microRNAs involved in the spontaneous regression of cutaneous melanoma in pigs Michael Baco[1, 2], Chia-Ying Chu[3, 5], Yi-Ting Yang[3], Yih-Shien Chiang[4, 5], Sylvain Marthey[1], Fabienne Le Provost[1], Chia-yu Chu[6], Silvia Vincent-Naulleau[1, 2]; 1. UMR1313, Génétique Animale et Biologie Intégrative, INRA AgroParis Tech, Jouy en Josas, France; 2. Laboratoire de Radiologie et Etude du Génome, DSV, IRCM, SREIT, CEA, Jouy en Josas, France; 3. Institute of Zoology, College of Life Science, National Taiwan University, Taipei, Taiwan; 4. Technology Commons, College of Life Science, National Taiwan University, Taipei, Taiwan; 5. Center for Systems Biology, National Taiwan University, Taipei, Taiwan; 6. Department of Dermatology, National Taiwan University Hospital and NTUCM, Taipei, Taiwan.

1312.Modulation of MHC expression by BRAFV600E in melanoma Brian Pollack[1, 2, 3], Bishu Sapkota[1], Charles Hill[4]; 1. Dermatology, Emory University, Atlanta, GA, USA; 2. Atlanta VA Medical Center, Decatur, GA, USA; 3. Winship Cancer Institute, Atlanta, GA, USA; 4. Pathology and Laboratory Medicine, Emory University, Atlanta, GA, USA.

1313.Correlation of vitamin D receptor and E-cadherin expression in human melanomas Anna Brozyna[1], Wojciech Jozwicki[1], Anita Welc[1], Halina Wisniewska[1], Andrzej Slominski[2]; 1. Department of Tumor Pathology and Pathomorphology, Oncology Centre-Prof. Lukaszczyk Memorial Hospital, The Rydygier Collegium Medicum, Nicolaus Copernicus University, Bydgoszcz, Poland; 2. Department of Pathology and Laboratory Medicine, Department of Medicine, University of Tennessee Health Science Center, Memphis, TN, USA.

1314.Loss of ADAM-9 leads to modification of the extracellular matrix favoring tumor growth Anna Abety[1], Jay Fox[2], Nives Moro[1], Cornelia Mauch[1], Paola Zigrino[1]; 1. Dermatology, University of Cologne, Cologne, Germany; 2. Microbiology, University of Virginia, Charlottesville, VA, USA.

1315*(CM2-03).Survivin promotion of melanoma metastasis requires upregulation of α5 integrin Jodi McKenzie[1], Tong Liu[1], Douglas Grossman[1, 2]; 1. Huntsman Cancer Institute, University of Utah, Salt Lake City, UT, USA; 2. Dept. of Dermatology, University of Utah, Salt Lake City, UT, USA.

1316.A gamma secretase inhibitor synergistically kills melanoma cells in combination with ABT-737/ABT-263 through a Noxa-dependent mechanism Adam Almeida, Katie Partyka, Josianna Schwan, Yiqun Shellman, David Norris; Dermatology, University of Colorado, Aurora, CO, USA.

1317.Targeting hyperactivation of the AKT survival pathway to overcome therapy resistance of melanoma brain metastases Heike Niessner[1], Andrea Forschner[1], Annemarie Adam[2], Juergen Bauer[1], Ghazaleh Tabatabai[3], Tobias Sinnberg[1], Daniela Beck[1], Claus Garbe[1], Dagmar Kulms[4], Leticia Quintanilla-Martinez[2], Friedegund Meier[1]; 1. Department of Dermatology, University of Tuebingen, Tuebingen, Germany; 2. Insitute of Pathology, University of Tuebingen, Tuebingen, Germany; 3. Department of Neurology, University Hospital Zuerich, Zuerich, Switzerland; 4. Department of Dresden, University of Dresden, Dresden, Germany.

1318.Vemurafenib potently induces endoplasmic reticulum stress-mediated apoptosis in BRAFV600E melanoma cells Daniela Beck[1], Heike Niessner[1], Keiran S.M. Smalley[2], Kim H.T. Paraiso[2], Claus Garbe[1], Dagmar Kulms[3], Friedegund Meier[1]; 1. Department of Dermatooncology, University of Tuebingen, Tuebingen, Germany; 2. Departments of Molecular Oncology and Cutaneous Onogy, Moffitt Cancer Center & Research Institute, Tampa, FL, USA; 3. Department of Dermatology, University Carl Gustav Carus, Dresden, Germany.

1319.Blockade of phosphorylation of the transcription and translation factor YB-1 inhibits melanoma cell survival and invasion Corinna Kosnopfel, Stephan Forchhammer, Tobias Sinnberg, Birgit Schittek; Department of Dermatology, University of Tübingen, Tübingen, Germany.

1320.Actinic lentigines from European and Japanese volunteers share similar alterations in gene expression profile and biological functions Emilie Warrick[1], Christine Duval[1], Stéphanie Nouveau[1], Claire-Marie Benoit-Jay[1], Philippe Bastien[1], Sophie Deret[2], Akimichi Morita[3], Olivier de Lacharrière[1], Françoise Bernerd[1]; 1. L'Oréal R&I, Clichy, France; 2. Galderma R&D, Sophia-Antipolis, France; 3. Nagoya City University Graduate School of Medical Sciences, Nagoya, Japan.

1321.Identification of inhibitor of beta-catenin and Tcf-4 (ICAT) as a biomarker of malignant melanoma Tobias Sinnberg, Alexandra Stickel, Christina Schubert, Kristian Ikenberg, Birgit Schittek; Dermatology, University of Tübingen, Tübingen, Germany.

1322.Therapeutic potential of miR-26a in treating melanoma and identification of BAG4/SODD as a novel target of miR-26a Yiqun Shellman, Steven Reuland, Shilo Smith, Lynne Bemis, Nathan Goldstein, Adam Almeida, Katie Partyka, Qinghong Zhang, David Norris; University of Colrado, Aurora, CO, USA.

1323.Proanthocyanidins inhibit invasive potential of human melanoma cells by targeting β-catenin signaling Mudit Vaid[1], Santosh Katiyar[1, 2]; 1. Dermatology, University of Alabama at Birmingham, Birmingham, AL, USA; 2. Birmingham VA Medical Center, Birmingham, AL, USA.

1324.The circulating microRNA-221 as a new tumor marker of malignant melanoma Hisashi Kanemaru, Satoshi Fukushima, Masatoshi Jinnin, Junji Yamashita, Azusa Miyashita, Noritoshi Honda, Rie Oyama, Asako Kakimoto, Shinichi Masuguchi, Yuji Inoue, Hironobu Ihn; Department of Dermatology and Plastic Surgery, Faculty of Life Sciences, Kumamoto University, Kumamoto, Japan.

1325.Hidden players in vitiligo pathogenesis: Mitochondria? Mauro Picardo, Barbara Bellei, Emanuela Bastonini, Daniela Kovacs, Monica Ottaviani, Maria Lucia Dell'Anna; Lab Cutaneous Physiopathology & CIRM, San Gallicano Dermatologic Institute, Rome, Italy.

1326.Pulsed ultrasound promotes melanoblast migration through upregulation of the M-CSF/FAK signaling pathway Shiou-Hwa Jee[1, 2], Yi-Hua Liao[1, 2], Yu-Ting Huang[3], Wen-Shiang Cheng[4, 5]; 1. Department of Dermatology, National Taiwan University Hospital, Taipei, Taiwan; 2. Department of Dermatology, College of Medicine, National Taiwan University, Taipei, Taiwan; 3. Graduate Institute of Clinical Medicine, College of Medicine, National Taiwan University, Taipei, Taiwan; 4. Department of Physical Medicine and Rehabilitation, National Taiwan University Hospital, Taipei, Taiwan; 5. Department of Physical Medicine and Rehabilitation, College of Medicine, National Taiwan University, Taipei, Taiwan.

1327.Forkhead Box M1 (FOXM1) transcription factor: A novel target in melanoma Azusa Miyashita, Satoshi Fukushima, Junji Yamashita, Noritoshi Honda, Jun Aoi, Asako Ichihara, Hisashi Kanemaru, Masatoshi Jinnin Jinnin, Yuji Inoue, Hironobu Ihn; Dermatology and Plastic Surgery, Kumamoto University, Kumamoto, Japan.

1328.The analysis of the anti-tumor effect on melanoma by interferon beta Yoshimasa Nobeyama, Hidemi Nakagawa; Dermatology, The Jikei University School of Medicine, Tokyo, Japan.

1329.The effect of hypoxia on the melanogenesis in melanoma cells Hiromi Baba, Yoshimasa Nobeyama, Hidemi Nakagawa; Dermatology, The Jikei University School of Medicine, Tokyo, Japan.

1330.Systems biological identification of effective and safe molecular targets for skin lightening Ho-Sung Lee[1, 2], Myeong-Jin Goh[3], Junil Kim[1], Taejun Choi[1], Hae-Kwang Lee[3], Yongjoo Na[3], Kwang-Hyun Cho[1, 2]; 1. Lab. for Systems Biology and Bio-Inspired Engineering, KAIST, Daejeon, Republic of Korea; 2. Graduate School of Medical Science and Engineering, KAIST, Daejeon, Republic of Korea; 3. Skin Research Institute, Amorepacific R&D Center, Yongin, Republic of Korea.

1331**(PL1-05).**Introduction of the reprogramming factors into B16 murine melanoma cells attenuated *in vivo* metastasis through promoting mesencymal-epithelial transition** Mikiro Takaishi[1], Masahito Tarutani[1], Junji Takeda[2], Shigetoshi Sano[1]; 1. Dermatolgy, Kochi University, Nankoku, Japan; 2. Social and Environmental Medicine, Osaka University, Suita, Japan.

1332.What are the origins of dermal melanophages? Hideya Ando[1], Yusuke Higashi[1], Kaoru Akiyama[2], Masayuki Yagi[3], Masaaki Ito[4], Masamitsu Ichihashi[5]; 1. Department of Applied Chemistry and Biotechnology, Okayama University of Science, Okayama, Japan; 2. Hanaichi Ultrastructure Research Institute Co., Okazaki, Japan; 3. Rosette Co., Shinagawa, Japan; 4. Department of Dermatology, Niigata University, Niigata, Japan; 5. SAISEI MIRAI Clinic Kobe, Kobe, Japan.

1333.Patients with cutaneous malignant melanoma increase their sun exposure in the years following diagnosis Luise Idorn, Pameli Datta, Jakob Heydenreich, Peter Philipsen, Hans Christian Wulf; D, Bispebjerg University Hospital, Copenhagen, Denmark.

1334.Artemisinic acid inhibits melanogenesis through downregulation of C/EBP α-dependent expression of HMG-CoA reductase gene Jongsung Lee[1], Eunsun Jung[2], Deokhoon Park[2]; 1. Dermatological Health Management, Eulji University, Seoungnam, Republic of Korea; 2. Biospectrum Life Science Institute, Seoungnam, Republic of Korea.

1335.Elucidating the temporal dynamics of NF-κB activation by TNF-α in melanoma Rajan Kulkarni[1, 2], David Baltimore[2]; 1. Division of Dermatology, UCLA, Los Angeles, CA, USA; 2. Division of Biology, California Institute of Technology, Pasadena, CA, USA.

1336*(CM2-01).ATG7-dependent autophagy protects melanocytes against premature senescence and contributes to the control of the Nrf2 stress response Cheng-Feng Zhang[1, 2], Florian Gruber[2], Michael Mildner[2], Ulrich Koenig[2], Susanne Karner[2], Caterina Barresi[2], Heidemarie Rossiter[2], Heidemarie Rossiter[2], Heidemarie Rossiter[2], Lionel Larue[3], Leopold Eckhart[2], Erwin Tschachler[2]; 1. Dermatology, Hua Shan Hospital, Fudan University, Shanghai, China; 2. Dermatology, Research Division of Biology and Pathobiology of the Skin, Medical University of Vienna, Vienna, Austria; 3. Institut Curie, Centre de Recherche, Developmental Genetics of Melanocytes, Orsay, France.

1337.Glucosamine attenuates endothelin-1 and stem cell factor-stimulated melanogenesis by abrogating the increased levels of MITF protein due to O-N-acetylglucosaminylation and subsequent down-regulated activation of CREB but not of ERK in normal human melanocytes Genji Imokawa[1], Takahiro Kato[2], Yuki Wakabayashi[2], Hiroaki Nakajima[2]; 1. Chubu University, Aichi, Japan; 2. Tokyo University of Technology, Tokyo, Japan.

1338*(CM2-07).Comprehensive promoter methylation analysis identifies epigenetic silencing of MAPK13 in primary cutaneous melanoma Linda Gao[1], Marjon Smit[2], Joost van den Oord[3], Jelle Goeman[4], Els Verdegaal[5], Sjoerd van der Burg[5], Marguerite Stas[6], Samuel Beck[7], Nelleke Gruis[1], Cornelis Tensen[1], Rein Willemze[1], Daniel Peeper[2], Remco van Doorn[1]; 1. Dermatology, Leiden University Medical Center, Leiden, Netherlands; 2. Molecular Oncology, Netherlands Cancer Institute, Amsterdam, Netherlands; 3. Pathology, KU Leuven, Leuven, Belgium; 4. Medical Statistics, Leiden University Medical Center, Leiden, Netherlands; 5. Clinical Oncology, Leiden University Medical Center, Leiden, Netherlands; 6. Surgical Oncology, KU Leuven, Leuven, Belgium; 7. Leiden Cytology and Pathology Laboratory, Leiden, Netherlands.

1339.Tobacco smoke-induced skin pigmentation is mediated by the Wnt/β-catenin pathway and the aryl hydrocarbon receptor signaling Motoki Nakamura, Yukiko Ueda, Takuya Furuhashi, Akimichi Morita; Department of Geriatric and Environmental Dermatology, Nagoya City University Graduate School of Medical Sciences, Nagoya, Japan.

1340.Decreased melanogenesis through p53 by heme oxygenase-1 inhibitor in normal human melanocytes Sook Jung Yun, Sun A Jin, Jee-Bum Lee; Dermatology, Chonnam National University Medical School, Gwangju, Republic of Korea.

1341.Immunohistochemistry for histone H3 lysine 9 methyltransferase and demethylase proteins in human malignant melanomas Shinpei Miura[1], Chihaya Maesawa[2], Masahikio Shibazaki[2], Shinji Yasuhira[2], Kasai Syuya[2], Kanako Tsunoda[1], Fumihiko Maeda[1], Kazuhiro Takahashi[1], Tomoyuki Masuda[3], Toshihide Akasaka[1]; 1. Dermatology, Iwate Medical University, Morioka, Japan; 2. Tumor Biology, Iwate Medical University, Morioka, Japan; 3. Pathology, Iwate Medical University, Morioka, Japan.

1342.ADAM protease inhibitor regulates chemokine expression in human keratinocytes, and modulates melanogenesis in human melanocytes Masakazu Kawaguchi, Yutaka Hozumi, Tamio Suzuki; Department of Dermatology, Yamagata University School of Medicine, Yamagata, Japan.

1343.Screening of natural medicine effects on melanogenesis in normal human melanocytes Hisae Minami[1], Yoichi Shintani[1], Toshiaki Makino[2], Hajime Mizukami[2], Akimichi Morita[1]; 1. Geriatric and Environmental Dermatology, Nagoya City University Graduate School of Medical Sciences, Nagoya, Japan; 2. Pharmacognosy, Nagoya City University Graduate School of Pharmaceutical Sciences, Nagoya, Japan.

1344.Genetic studies in Japanese patients with oculocutaneous albinism (OCA) Tamio Suzuki, Junko Yoshizawa, Yuko Abe, Yutaka Hozumi, Masahiro Hayashi; Dermatology, Yamagata University Faculty of Medicine, Yamagata, Japan.

1345.Phototoxicity of melanin in skin cells upon visible light Orlando Chiarelli-Neto, Ana Claudia Viotto, Alan Ferreira, Christiane Pavani, Waleska Martins Gardesani, Divinomar Severino, Maurício Baptista; Biochemistry Departament, Universidade de São Paulo, São Paulo, Brazil.

1346.Possible dermal involvement in vitiligo pathogenesis Maria Dell'Anna, Daniela Kovacs, Monica Ottaviani, Emanuela Bastonini, Mauro Picardo; Lab Cutaneous Physiopathology & CIRM, San Gallicano Dermatologic Institute, Rome, Italy.

1347.Enriched tumor vascularity and high density mast cells correlate with a poor prognosis in melanoma Berta Pérez-Tato[1], Laura Nájera[2], Federico Rojo[3], Paloma Fernández[1], Alicia Zamarrón[4], Ángeles Juarranz[4], Yolanda Gilaberte[5], Salvador González[6]; 1. Dermatology, Hospital Universitario de Móstoles, Móstoles, Spain; 2. Pathology, Hospital Universitario de Fuenlabrada, Fuenlabrada, Spain; 3. Pathology, Fundación Jimenez Díaz, Madrid, Spain; 4. Biology, Facultad de Ciencias. Universidad Autónoma., Madrid, Spain; 5. Dermatology, Hospital San Jorge, Huesca, Spain; 6. Dermatology, Memorial Sloan-Kettering Cancer Center, New York, NY, USA.

1348.The relative ratio of Nestin compared to HMB-45 can have prognostic significance in oral malignant melanoma In-Ho Kwon[1], Su-Kyung Kuk[2], Wui-Jung Shin[2], Hye-Jung Yoon[2], Seong-Doo Hong[2], Sam-Pyo Hong[2], Jae-Il Lee[2]; 1. Department of Dermatology, Hallym University Dongtan Sacred Heart Hospital, Hwaseong, Republic of Korea; 2. Department of Oral Pathology, School of Dentistry and Dental Research Institute, Seoul National University, Seoul, Republic of Korea.

1349.Melanoma incidence in children and adolescents: Decreasing trends from 2000-2009 in the U.S Laura Campbell, Jill Barnholtz-Sloan, Kyle Strodtbeck, Jeremy Bordeaux; Case Western Reserve University, School of Medicine, Cleveland, OH, USA.

1350.Intratumoral lymphatic and blood microvessel density can predict the occurrence of metastases in melanoma patients Marija Buljan[1], Davor Tomas[2], Milan Milošević[3], Bozo Krušlin[2], Mirna Šitum[1]; 1. Department of Dermatovenerology, «Sestre milosrdnice» University Hospital Centre, Zagreb, Croatia; 2. Ljudevit Jurak Department of Pathology, «Sestre milosrdnice» UHC, Zagreb, Croatia; 3. Department of Environmental and Occupational Health, University of Zagreb, Medical School; Andrija Stampar School of Public Health, Zagreb, Croatia.

1351*(CM10-08).New candidate oncomiRs for malignant melanoma Animesh Bhattacharya[1], Ulf Schmitz[2], Yvonne Raatz[1], Madeleine Schönherr[1], Manfred Kunz[1]; 1. Department of Dermatology, Venereology and Allergology, University of Leipzig, Leipzig 04103, Germany; 2. Department of Computer Science, University of Rostock, Rostock, 18051, Germany.

1352*(CM10-06).Melanomas resist T-cell therapy through inflammation-induced reversible dedifferentiation Judith Kohlmeyer[1], Jenny Landsberg[1], Marcel Renn[1], Tobias Bald[1], Meri Rogava[1], Mira Cron[1], Martina Fatho[2], Volker Lennerz[2], Thomas Wölfel[2], Thomas Tüting[1]; 1. Laboratory of Experimental Dermatology, Dermatology and Allergy, University of Bonn, Bonn, Germany; 2. Department of Medicine, University of Mainz, Mainz, Germany.

1353.Differential expression of SOX9 and SOX10 in melanoma Phil Cheng[1], Olga Shakhova[2], Lukas Sommer[2], Reinhard Dummer[1], Mitchell Levesque[1]; 1. Dermatology, University Hospital Zurich, Zurich, Switzerland; 2. Cell and Developmental Biology, University of Zurich, Zurich, Switzerland.

1354.MicroRNA expression profiling identifies potential serum biomarkers for non-segmental vitiligo Yuling Shi[1, 2, 3], Matthew Weiland[1, 2], Jia Li[1, 2], Iltefat Hamzavi[2], Marsha Henderson[2], Richard H Huggins[2], Bassel H Mahmoud[2], Oma Agbai[2], Xiaofan Mi[1, 2], Henry W Lim[2], Qing-Sheng Mi[1, 2], Li Zhou[1, 2]; 1. Henry Ford Immunology Program, Henry Ford Hospital, Detroit, MI, USA; 2. Multicultural Dermatology Center, Department of Dermatology, Henry Ford Hospital, Detroit, MI, USA; 3. Department of Dermatology, Shanghai Tenth People's Hospital, Tongji University School of Medicine, Shanghai, China.

1355.Intronic miR-330 targets tyrosinase and induces depigmentation Florian Rambow[1], Audrey Bechadergue[1], Gaelle Saintigny[2], Frederique Morizot[2], Christian Mahé[2], Lionel Larue[1]; 1. Developmental Genetics of Melanocytes, Institut Curie UMR3347 CNRS, U1021 INSERM, Orsay, France; 2. Parfums Beauté, CHANEL, PANTIN, France.

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1356.The effect of validamycin A on tyrosinase: Inhibition kinetics and computational simulation Zhi-Rong Lü[1], Yong-Doo Park[1, 2], Jun-Mo Yang[2]; 1. Zhejiang Provincial Key Laboratory of Applied Enzymology, Yangtze Delta Region Institute, Tsinghua University, Jiaxing, China; 2. Dermatology, Samsung Medical Center, Sungkyunkwan University, Seoul, Republic of Korea.

1357.Computational prediction for the protein interaction of Tyrosinase: Protein experimental interactome MAP Zhi-Rong Lü[1], Hyun-Tae Shin[2], Jiho Park[2], Dong-Youn Lee[2], Yong-Doo Park[1, 2], Jun-Mo Yang[2]; 1. Zhejiang Provincial Key Laboratory of Applied Enzymology, Yangtze Delta Region Institute, Tsinghua University, Jiaxing, China; 2. Dermatology, Samsung Medical Center, Sungkyunkwan University, Seoul, Republic of Korea.

1358*(CM2-08).Hippo pathway oncogenic effectors YAP and TAZ in cutaneous melanoma Flore Nallet-Staub[1], Veronique Marsaud[1], Ling Li[2], Cristele Gilbert[1], Sophie Dodier[1], Veronique Bataille[3], Marius Sudol[4], Meenhard Herlyn[2], Alain Mauviel[1]; 1. Team "TGF-beta and Oncogenesis", Institut Curie, ORSAY, France; 2. Wistar Institute, Philadelphia, PA, USA; 3. West Herts NHS Trust, London, United Kingdom; 4. Geisinger Clinic, Danville, PA, USA.

1359.Live imaging analysis of melanosome transfer using lipophilic tracer Seiji Takeuchi[1, 2], Chikako Nishigori[2], Lieve Declercq[3], Daniel Yarosh[3], Naoaki Saito[1]; 1. Kobe Skin Research Department, Biosignal Research Center, Kobe University, Kobe, Japan; 2. Division of Dermatology, Kobe University Graduate School of Medicine, Kobe, Japan; 3. Basic Science Research, Estée Lauder Companies, Melville, NY, USA.

1360.Integrated microarray analysis reveals COL11A1, CXCL13 and PTPRF as three new potential biomarkers of metastatic melanoma Wanting Liu[2, 1], Desmond Tobin[1], Yonghong Peng[2, 1]; 1. Centre for Skin Sciences, School of Life Sciences, University of Bradford, Bradford, United Kingdom; 2. Department of Computing, University of Bradford, Bradford, United Kingdom.

1361.Biomarkers of canities-affected human scalp gray hair follicles Stephen Sikkink[1], Olga Freis[2], Louis Danoux[2], Desmond Tobin[1]; 1. Centre for Skin Sciences, School of Life Sciences, University of Bradford, Bradford, United Kingdom; 2. BASF Beauty Care Solutions France S.A.S, BASF, Pulnoy, France.

1362.ATM is a marker of oxidative stress in melanocytes of the canities-affected human scalp hair bulb Stephen Sikkink[1], Olga Freis[2], Louis Danoux[2], Desmond Tobin[1]; 1. Centre for Skin Sciences, School of Life Sciences, University of Bradford, Bradford, United Kingdom; 2. BASF Beauty Care Solutions France S.A.S., BASF, Pulnoy, France.

1363.Periorbital hyperchromia in a caucasian and chinese study population Caroline Pollefliet[1], Ming Lu[2], Katrin Van Rillaer[1], Hugo Corstjens[1], Lieve Declercq[1], Daniel Yarosh[3]; 1. Estée Lauder Companies, Oevel, Belgium; 2. Estée Lauder Companies, Shanghai, China; 3. Estée Lauder Companies, Melville, NY, USA.

1364.EMMPRIN mediates VEGF activation of VEGFR-2 in melanoma cells Farah Khayati[1], Faten Bougatef[1], Suzanne Menashi[2], Ben youssef Naimi[6], Raphael Porcher[3], Marie pierre Podgorniak[1], Anne Janin[4], Fabien Calvo[1], Celeste Lebbe[5, 1], Samia Mourah[1]; 1. INSERM U940, Paris, France; 2. CRRET, CNRS-UMR 7149, Creteil, France; 3. INSERM U717, Paris, France; 4. INSERM U728, Paris, France; 5. Departement of dermatology, Hopital Saint Louis, Paris, France; 6. Université paris 12, Creteil, France.

1365.Peri-tumoural expression of pro-autophagic Ambra-1 as a prognostic biomarker for melanoma Stamatina Verykiou[1], Robert Ellis[1], Priya Prajapati[1], Johnathon Lumsdon[1], Thomas Ness[2], Jane Armstrong[1], Penny Lovat[1], Nigel Kirkham[2]; 1. Institute of Cellular Medicine, Newcastle University, Newcastle-upon-Tyne, United Kingdom; 2. Cellular Pathology, Royal Victoria Infirmary, Newcastle-upon-Tyne, United Kingdom.

1366.MC1R variants increase melanoma risk independent from previous ultraviolet radiation Judith Wendt[1], Sabine Rauscher[1], Sebastian Burgstaller-Mühlbacher[1], Ingrid Fae[2], Gottfried Fischer[2], Hubert Pehamberger[1], Ichiro Okamoto[1]; 1. Department of Dermatology, Division of General Dermatology, Medical University of Vienna, Vienna, Austria; 2. Department of Transfusion Medicine, Division of Blood Group Serology, Medical University of Vienna, Vienna, Austria.

1367.Insulin-like growth factor II mRNA-binding protein 3 (IMP-3) expression promotes tumor migration, invasion and predicts poor prognosis in melanoma Chia-Yu Chu[1], Yi-Shuan Sheen[1], Meng-Chen Hsieh[1], Pin-Chun Chen[1], Min-Liang Kuo[2], Shiou-Hwa Jee[1]; 1. Department of Dermatology, National Taiwan University Hospital and National Taiwan University College of Medicine, Taipei, Taiwan; 2. Graduate Institute of Toxicology, College of Medicine, National Taiwan University, Taipei, Taiwan.

1368.GD1b, GT1b, GQ1b gangliosides mediate the progression of melanoma Corina-Daniela Nicolae[1], Ilinca Nicolae[2], Oana Coman[1]; 1. University of Medicine and Pharmacy Carol Davila, Bucharest, Romania; 2. Research Department, Victor Babes Hospital of Tropical and Infectious Diseases, Bucharest, Romania.

1369.DC-HIL expressed by osteoblasts mediates these cells' ability to inhibit hematopoietic stem cell proliferation in an integrin-dependent manner Kyoichi Tamura, Jin-Sung Chung, Ponciano Cruz, Kiyoshi Ariizumi; Dermatology, UT Southwestern Medical Center, Dallas, TX, USA.

1370*(CM2-09).PD-1 expression by melanoma cells modulates antitumor immunity and promotes cancer progression Sonja Kleffel[1], Nayoung Lee[1], Vikram Juneja[2], Hansgeorg Mueller[1], Steven Barthel[1], Arlene Sharpe[2], Markus Frank[1, 3], Thomas Kupper[1], Tobias Schatton[1, 3]; 1. Department of Dermatology, Brigham and Women's Hospital, Harvard Medical School, Boston, MA, USA; 2. Department of Microbiology and Immunology, Harvard Medical School, Boston, MA, USA; 3. Transplantation Research Center, Children's Hospital, Harvard Medical School, Boston, MA, USA.

1371.MITF regulates the proliferative architecture of the melanoma microenvironment Nikolas Haass[1, 2, 3], Kimberley Beaumont[1], Andrea Anfosso[1], David Hill[1], Russell Jurek[4], Paulus Mrass[1], Marcia Munoz[1], Ichiko Kinjyo[1], Atsushi Miyawaki[5], Wolfgang Weninger[1, 2, 3]; 1. Experimental Melanoma Therapy, Centenary Institute, Newtown, NSW, Australia; 2. Discipline of Dermatology, University of Sydney, Sydney, NSW, Australia; 3. Department of Dermatology, Royal Prince Alfred Hospital, Camperdown, NSW, Australia; 4. Astronomy & Space Sciences, CSIRO, Epping, NSW, Australia; 5. Life Function and Dynamics, ERATO, Wako-city, Japan.

1372.Peri-orbital dark circles in Brazilian women: Risk factors and hyperspectral image analysis Mary Matsui[1], Garrett Vanderover[1], Chris Ennis[1], Christina Fthenakis[1], Patricia Bombarda[3], Juliana Bueno[3], Bianca Viscomi[3], Mário Bombarda[3], Sergio Schalka[2, 3]; 1. R&D BSR, The Estee Lauder Co's., Melville, NY, USA; 2. Dermatology, Univ. Sao Paulo, Sao Paulo, Brazil; 3. Dermatology, Medcin Clinic, Osasco, Brazil.

1373.Specific KIT mutation is present in melanomas with dark homogeneous streaks pattern Margaret Sanchez[1, 2], Harold Rabinovitz[1], Margaret Oliviero[1], George Elgart[1], James Grichnik[1, 2]; 1. Dermatology and Cutaneous Surgery, University of Miami, Miami, FL, USA; 2. Anna Fund Melanoma Program, SCCC, University of Miami, Miami, FL, USA.

1374.Involvement of Src kinase in fisetin mediated melanoma growth inhibition: Studies in 3-D melanoma model Deeba Syed, Jean-Christopher Chamcheu, Rahul Lall, Mohammad Khan, Vaqar Adhami, Hasan Mukhtar; Dermatology, UNiversity of Wisconsin-Madison, Madison, WI, USA.

1375.Lack of clinical response of recalcitrant melasma to triple combination cream (Tretinoin, Fluocinolona and Hidroquinone) due to abnormal concentration of melanin Elsa Arenas-Velazquez[1], Francisco González[2], Miguel Ramirez-Elias[2], Claudio Castillo-Martínez[1], Benjamin Moncada[1]; 1. Dermatology, Hospital Central "Dr. Ignacio Morones Prieto"/Universidad Autónoma de San Luis Potosí, San Luis Potosí, Mexico; 2. CIACYT, Universidad Autónoma de San Luis Potosí, San Luis Potosí, Mexico.

1376.7,3',4'-Trihydroxyisoflavone, a metabolite of the soy isoflavone daidzein, suppresses α-MSH-induced Melanogenesis by targeting Melanocortin 1 receptor Ji Hye Kim[1], Young Ah Kim[1], Ji An Kim[1], Jun Seong Park[2], Deok-Hee Kim[2], Myeong-Hun Yeom[2], Ann Bode[3], Zigang Dong[3], Hyong Joo Lee[4], Ki Won Lee[4, 5], Nam Joo Kang[1]; 1. School of Applied Biosciences, Kyungpook National University, Daegu, Republic of Korea; 2. Skin Research Institute, Amorepacific Corporation R&D Center, Yongin, Republic of Korea; 3. The Hormel Institute, University of Minnesota, Minnesota, MN, USA; 4. WCU Biomodulation Major, Department of Agricultural Biotechnology, Seoul National University, Seoul, Republic of Korea; 5. Advanced Institutes of Convergence Technology, Seoul National University, Seoul, Republic of Korea.

1377.A progression pattern of subungual melanoma Hyun Tae Shin, Dong Youn Lee, Jun Mo Yang; Dermatology, Samsung Medical Center, Seoul, Republic of Korea.

1378.The p53 tumor suppressor acts as tumor promoter in vemurafenib resistant melanoma cells Elisabetta Botti[1], Giulia Spallone[1], Valentina Pinetti[1], Barbara Marinari[1], Mitch Levesque[2], Francesca Moretti[1], Michela Restelli[3], Luisa Guerrini[3], Reinhard Dummer[2], Antonio Costanzo[4]; 1. Dermatology, University of Rome "Tor Vergata", Rome, Italy; 2. Dermatology, University of Zurich, Zurich, Switzerland; 3. Biotechnology, University of MIlan, Milan, Italy; 4. Dermatology - NESMOS, Sapienza University of Rome, Rome, Italy.

1379.A two gene serum epigenetic signature detects metastatic melanoma with high sensitivity and specificity Hexiao Wang[1], Angela McHugh[1], Rubeta Matin[2], Colin Fleming[1], Irene Leigh[1], Catherine Harwood[2], Gareth Inman[1], Tim Crook[1], Charlotte Proby[1]; 1. Division of Cancer Research & Department of Dermatology, Ninewells Hospital & Medical School, University of Dundee, Dundee, United Kingdom; 2. Centre for Cutaneous Research, Barts & the London Queen Mary University of London, London, United Kingdom.

1380.Investigation of the role of amyloid precursor protein in ocular melanoma using goldfish (Carassius Auratus) model Jerry Wan[1, 2], David Calianese[1], Garrett Cammarata[1], Kevin Szulak[1], Nicholas Marcello[1], Nicholas DeLeo[1], Aie Xu[3], Joseph DeGiorgis[2, 1], Yinsheng Wan[1]; 1. Biology, Providence College, providence, RI, USA; 2. Marine Biological Laboratory, Woods Hole, MA, USA; 3. The 3rd Hospital of Hangzhou, Hangzhou, China.

1381.Vimentin protects against endoplasmic reticulum stress induced by arsenite in human skin melanoma cells Garrett Cammarata[1], David Calianese[1], Kevin Szulak[1], Katelyn Higgins[1], Brianna Lutz[1], Jeanine Justinano[1], Aie Xu[2], Yinsheng Wan[1]; 1. Providence College, providence, RI, USA; 2. The 3rd Hospital of Hangzhou, Hangzhou, China.

1382.Soluble adenylyl cyclase regulates melanosome production and decay in human melanocytes Adam Widman, Jonathan Zippin; Dermatology, Weill Cornell Medical College, New York, NY, USA.

1383.RASSF1A protein expression despite DNA methylation in melanocytic nevi Hiroshi Maruyama, Junichi Furuta, Maiko Maeda, Yasuhiro Fujisawa, Yasuhiro Nakamura, Yoshiyuki Ishii, Yasuhiro Kawachi, Fujio Otsuka; Department of Dermatology, Faculty of Medicine, University of Tsukuba, Tsukuba, Japan.

1384.Potential approach for treatment of melasma by regulation of epidermal stem cells KyoungChan Park, Hye-Ryung Choi, Seung-Hye Yang, YounA Kang, Hyun-Seon Lee; Dermatology, Seoul National University Bundang Hospital, Seongnam, Republic of Korea.

1385*(CM2-05).Loss of Noxa and Puma have inverse effects on melanomagenesis in a predisposed, genetically-defined mouse melanoma model Nethia Mohana-Kumaran[1], Keryn Lucas[1], Ben Roediger[1], Richard Scolyer[2], Wolfgang Weninger[1, 4, 5], John Allen[3], Nikolas Haass[1, 4, 5]; 1. Centenary Institute, Newtown, NSW, Australia; 2. Tissue Pathology and Diagnostic Oncology, Royal Prince Alfred Hospital, Camperdown, NSW, Australia; 3. ANZAC Research Institute, Concord, NSW, Australia; 4. Discipline of Dermatology, University of Sydney, Camperdown, NSW, Australia; 5. Department of Dermatology, Royal Prince Alfred Hospital, Camperdown, NSW, Australia.

1386(PL2-04).Epigenetic control of tumor suppressors and oncogenes by melanoma antigens (MAGE) and KRAB-zinc finger transcription factors (KZFs)** B Jack Longley, T. Xiao, Y. Suh, N. Maddodi, V. Setaluri; Department Of Dermatology and the Carbone Comprehensive Cancer Center, Univ. of Wisconsin, Madison, WI, USA.

1387.The melanoma surface glycome Emanual Maverakis[1, 3], Yoko Ono[1], Jayne Joo[1], Itzel Bustos Villalobos[1], Jennifer Bergstrom[1], Alina Marusina[1], Amilcar Rizzo[1], Carlito Lebrilla[2]; 1. Dermatology, University of California, Davis, Sacramento, CA, USA; 2. Chemistry, University of California, Davis, Sacramento, CA, USA; 3. Department of Veteran Affairs, VA Northern California Health Care System, Sacramento, CA, USA.

1388.Molecular profiling of dysplastic nevi identifies genes with progression towards primary cutaneous melanomas Hiroshi Mitsui[1], Mayte Suarez-Farinas[1], Nicholas Gulati[1], Claire Wang[1], Hanako Ohmatsu[1], Maria Cannizzaro[1], Patricia Gilleaudeau[1], Mary Sullivan-Whalen[1], Neil McNutt[1], Felix Kiecker[2], Avner Shemer[3], James Krueger[1]; 1. Investigative Dermatology, The Rockefeller University, New York, NY, USA; 2. Charité Universitätsmedizin, Berlin, Germany; 3. Tel-Hashomer Hospital and Tel Aviv University, Tel Aviv, Israel.

1389.Identification of a drug resistance signature by proteome analysis Verena Paulitschke[1], Verena Haudek-Prinz[3], Johannes Griss[1], Walter Berger[2], Thomas Mohr[2], Hubert Pehamberger[1], Christopher Gerner[3], Rainer Kunstfeld[1]; 1. Department of Dermatology, Medical University Vienna, Vienna, Austria; 2. Department of Medicine I, Medical University Vienna, Vienna, Austria; 3. Institute of Analytical Chemistry, University Vienna, Vienna, Austria.

1390.To explore the relationship of tyrp1 gene and melanoma tumor growth by piggyBac transposon mutagenesis Jin-Bon Hong[1, 2], Yung-Hsin Huang[1, 2], Yi-Hua Liao[1], Chia-Yu Chu[1], You-Tzung Chen[2]; 1. Department of Dermatology, National Taiwan University Hospital and College of Medicine, Taipei, Taiwan; 2. Graduate Institute of Medical Genomics and Proteomics, National Taiwan University Hospital and College of Medicine, Taipei, Taiwan.

1391.High-definition optical coherence tomography imaging of melanocytic lesions. Correlation with dermoscopy, reflectance confocal microscopy and histopathology Marc Boone[1], Sarah Norrenberg[1], Gregor Jemec[2], Veronique Del Marmol[1]; 1. Dermatology, Université Libre de Bruxelles, Brussels, Belgium; 2. Dermatology, University of Copenhagen, Copenhagen, Denmark.

1392.Differential cellular localization of activating transcription factor 3 (ATF3) in melanoma progression Nitin Chakravarti[1], Roland Bassett[2], Jonathan Curry[1], Michael Tetzlaff[1], Victor Prieto[1]; 1. Pathology, UT MD Anderson Cancer Center, Houston, TX, USA; 2. Biostatistics, UT MD Anderson Cancer Center, Houston, TX, USA.

1393.Macrophage-derived interferon-gamma exerts a downstream response signal in human malignant melanoma cells Tatyana Petukhova, Thomas McCormick, Meg Gerstenblith, Jeremy Bordeaux, Julian Kim, Kord Honda, Kevin Cooper; Case Western Reserve University, Cleveland, OH, USA.

1394.Dermatologists and dermatopathologists have different levels of concern that partially sampled melanocytic lesions carrying a microscopic diagnosis of dysplastic nevus may actually be melanoma Jonathan Kantor[1, 2], Michael Shapiro[1], Mary Chren[3], Ross Levy[1], David Elder[1], Philip LeBoit[3], Martin Mihm[4], David Margolis[1], Michael Ming[1]; 1. Perelman School of Medicine at the University of Pennsylvania, Philadelphia, PA, USA; 2. Florida Center for Dermatology, PA, St Augustine, FL, USA; 3. University of California, San Francisco, San Francisco, CA, USA; 4. Harvard Medical School, Boston, MA, USA.

1395.Comparative proteomic analysis reveals unique tumor protein composition among the melanoma subtypes pure desmoplastic and superficial spreading melanoma Michael Schowalter, Jonhan Ho, Brittany Dulmage, Louis Falo, Larisa Geskin; Dermatology, University of Pittsburgh School of Medicine, Pittsburgh, PA, USA.

1396.Dietary fat intakes are associated with the risk for severe solar lentigines in middle-aged caucasian women Julie Latreille[1], Khaled Ezzedine[2, 3], Emmanuelle Kesse-Guyot[2], Randa Jdid[1], Valentina Andreeva[2], Denis Malvy[4], Pilar Galan[2], Erwin Tschachler[1, 5], Christiane Guinot[1, 6], Serge Hercberg[2, 7]; 1. CERIES, Neuilly sur Seine, France; 2. UMR U557 INSERM/U1125 INRA/CNAM, University Paris 13, Bobigny, France; 3. Dpt Dermatol, CHU Saint-André, Bordeaux, France; 4. Dpt Internal Med Trop Dis, CHU Saint-André, Bordeaux, France; 5. Dpt Dermatol, Med University Vienna, Vienna, Austria; 6. Comput Sci Lab, University François Rabelais, Tours, France; 7. Dpt Public Health, Hosp Avicenne, Bobigny, France.

1397.Macromolecular changes in melanoma cells after treatment with vemurafenib observed by a mid-infrared sensor system Daniela Pucciarelli[1], Emanuel Weber[3], Sander van den Driesche[3], Nina Lengger[1], Michael Vellekoop[3], Heimo Breiteneder[1], Christine Hafner[1, 2]; 1. Department of Pathophysiology and Allergy Research, Center for Pathophysiology, Infectiology & Immunology, Medical University of Vienna, Vienna, Austria; 2. Karl Landsteiner Institute for Dermatological Research, St.Poelten, Austria; 3. Institute for MicroSensors, -Actuators and -Systems (IMSAS), University of Bremen, Bremen, Germany.

1398.Effective modulation of human skin pigmentation by inhibitors of human tyrosinase Tobias Mann[1], Wolfram Gerwat[1], Jan Batzer[1], Wei Sun[2], Cathrin Scherner[1], Franz Stäb[1], Horst Wenck[1], Klaus-Heinrich Röhm[2], Ludger Kolbe[1]; 1. Skin Research, Beiersdorf AG, Hamburg, Germany; 2. Institute of Physiological Chemistry, Philipps University, Marburg, Germany.

1399.SOX2 maintains growth and specifies the high risk phenotype of melanoma cells Scott Granter[1], Aeron Hurley[2], Jack Lee[2], Hans Widlund[2]; 1. Pathology, Brigham and Women's Hospital, Boston, MA, USA; 2. Dermatology, Brigham and Women's Hospital, Boston, MA, USA.

1400.A new mouse model for studying the development of melanomas Laura Timares[1, 2], Tahseen Nasti[1], Barry Cochran[1], Tarannum Jaleel[1], Nabiha Yusuf[1, 2], Craig Elmets[1, 2, 3]; 1. Dermatology, University of Alabama at Birmingham, Birmingham, AL, USA; 2. Skin Diseases Research Center, University of Alabama at Birmingham, Birmingham, AL, USA; 3. Birmingham VA Medical Center, Birmingham, AL, USA.

1401.Effects of BRAF inhibitors on glucose utilization in melanoma *in vitro* Nicholas Theodosakis, Marcus Bosenberg; Dermatology, Yale School of Medicine, New Haven, CT, USA.

1402.Differential expression of melanocyte markers in the human epidermis and hair follicle Nathaniel Goldstein[1], Maranke Koster[1], Laura Hoaglin[1], Steven Robinson[2], William Robinson[2], Dennis Roop[1], David Norris[1], Stanca Birlea[1]; 1. Dermatology, University of Colorado, Aurora, CO, USA; 2. Oncology, University of Colorado, Aurora, CO, USA.

1403.Melanoma-associated macrophages express molecules inhibiting innate immune responses Wolfgang Bauer[1], Ernst Kriehuber[1, 2], Dieter Maurer[1], Georg Stingl[1]; 1. Dept.for Dermatology, Div.of Immunology, Allergology and Infectious Diseases, Medical University of Vienna, Vienna, Austria; 2. NIBR Vienna, Vienna, Austria.

1404.Genome-wide miRNA expression profiles identify serum miRNAs as potential noninvasive biomarkers for malignant melanoma Rui-Qun Qi[1, 2, 3], Matthew Weiland[1, 2], Xing-Hua Gao[3], Jia Li[4], Laila Poisson[4], Hong-Duo Chen[3], Ding Wang[4], David Nathanson[4], Melody Eide[1], Henry Lim[1], Li Zhou[1, 2], Qing-Sheng Mi[1, 2]; 1. Dermatology, Henry Ford Health System, Detroit, MI, USA; 2. Immunology Program, Henry Ford Health System, Detroit, MI, USA; 3. China Medical University, Shenyang, China; 4. Henry Ford Hospital, Detroit, MI, USA.

1405.Role of neuropeptides in melanoma Yolanda Gilaberte[1], Maria Jose Roca[2], Maria Dolores Arbues[2], Berta Perez-Tato[3], Alicia Zamarron[4], Angeles Juarranz[4], Concepcion Parrado[6], Salvador Gonzalez[5], Jesus Vera-Alvarez[2]; 1. Dermatology, Hospital San Jorge, Huesca, Spain; 2. Pathology, Hospital San Jorge, Huesca, Spain; 3. Dermatology, Hospital Universitario de Mostoles, Madrid, Spain; 4. Dept. Biology, Fac. Sciences, Universidad Autonoma, Madrid, Spain; 5. Dermatology, Memorial Sloan-Kettering Cancer Center, New York, NY, USA; 6. Histology and Pathology, University of Malaga, Malaga, Spain.

1406.Imaging mass spectrometry - a novel ancillary method for the diagnosis of malignant melanoma Rossitza Lazova[1], Erin Seeley[2], Jade Wititsuwannakul[3], Heintz Kutzner[4], Richard Scolyer[5], Lorenzo Cerroni[6], Sylvie Fraitag[7], José Luis Rodriguez Peralto[9], Glynis Scott[8], Sonja VollenweiderRoten[10], Richard Caprioli[2], Alireza Sepehr[11]; 1. Dermatology, Yale University, New Haven, CT, USA; 2. Vanderbilt University Medical Center, Nashville, TN, USA; 3. Chulalongkorn University, Bangkok, Thailand; 4. Dermatopathologie Friedrichshafen, Friedrichshafen, Germany; 5. Melanoma Institute Australia, Sydney, NSW, Australia; 6. Medical University of Graz, Graz, Austria; 7. Hôpital Necker-Enfants Malades, Paris, France; 8. University of Rochester Medical Center, Rochester, NY, USA; 9. 12 de Octubre University Hospital, Madrid, Spain; 10. Dermatopathologie-Viollier, Vevey, Switzerland; 11. Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, MA, USA.

1407.Identification of a chemokine profile associated to melanoma progression Ana Soler-Cardona, Hubert Pehamberger, Robert Loewe; Dermatology, Medical University of Vienna, Vienna, Austria.

1408*(CM2-06).Antibodies of the IgG4 subclass impaired immune responses against melanoma Panagiotis Karagiannis, Amy Gilbert, Debra Josephs, Niwa Ali, Tihomir Dodev, Louise Saul, Isabel Correa, Luke Roberts, Emma Beddowes,

Alexander Koers, Carl Hobbs, Silvia Ferreira, Jenny Geh, Ciaran Healy, Mark Harries, Katharine Acland, Philip Blower, Tracey Mitchell, David Fear, James Spicer, Katie Lacy, Frank Nestle, Sophia Karagiannis; King's College London, London, United Kingdom.

1409.An *in vivo* model of postinflammatory hyperpigmentation Prescilia Isedeh[1], Oma Agbai[2], Henry Lim[1], Iltefat Hamzavi[1], Mary Matsui[3]; 1. Multicultural Dermatology Center, Henry Ford Hospital, Detroit, MI, USA; 2. Department of Dermatology, University of California-Davis, Sacramento, CA, USA; 3. Estee Lauder Co's, Melville, NY, USA.

1410.The receptor tyrosine kinase, Axl, as a therapeutic target in malignant melanoma Zsofia Szentpetery[1], Penny Lovat[2], Daniele Bergamaschi[1], Edel O'Toole[1]; 1. Centre for Cutaneous Research, Queen Mary University of London, London, United Kingdom; 2. Dermatological Sciences, Newcastle University, Newcastle upon Tyne, United Kingdom.

1411.Mechanism of sirtuin inhibition mediated anti-proliferative response in human melanoma cells: A proteomics approach Chandra Singh[1], Jasmine George[1], Minakshi Nihal[1], Grzegorz Sabat[1], Raj Kumar[2], Nihal Ahmad[1, 3]; 1. University of Wisconsin, Madison, WI, USA; 2. The Commonwealth Medical College, Scranton, PA, USA; 3. William S. Middleton VA Medical Center, Madison, WI, USA.

1412.An epidermal model containing functional melanocytes for skin lightening and pigmentation disorder studies Michael Bachelor, Bridget Breyfogle, Edward Gustafson, Mitchell Klausner; MatTek Corporation, Ashland, MA, USA.

1413*(CM2-02).The crucial role of Sox10-Sox9 axis in melanoma development Olga Shakhova[1], Simon Schaefer[1], Daniela Mihic[2], Holger Moch[2], Reinhard Dummer[3], Lukas Sommer[1]; 1. Institute of Anatomy, University of Zurich, Zurich, Switzerland; 2. Institute of Surgical Pathology, University Hospital Zurich, Zurich, Switzerland; 3. Department of Dermatology, University Hospital Zurich, Zurich, Switzerland.

1414.PDE4 interacts with FAK to control melanoma invasion Nicolas Dumaz[1, 2, 3], Amandine Servy[2, 3], Martine Bagot[2, 3], Armand Besussan[1, 2, 3]; 1. INSERM, PARIS, France; 2. UNIV PARIS DIDEROT, PARIS, France; 3. AP-HP, PARIS, France.

1415*(CM10-07).Eradication of melanoma by intratumoral injection of attenuated vaccinia virus requires CD8+ T cells and combination of anti-CTLA-4 blockade and virotherapy enhances therapeutic efficacy in advanced melanoma Xianzhong Wu[1], Peihong Dai[2, 1], Weiyi Wang[1, 2], Francesca Avogadri[4], Hua Cao[1, 2], Tanvi Parikh[1, 5], Xuejun Jiang[3], Allan Halpern[1, 5], Alan Houghton[4], Stewart Shuman[2], Taha Merghoub[4], Jedd Wolchok[4], Liang Deng[1, 5]; 1. Dermatology/ Medicine, Memorial Sloan-Kettering Cancer Center, New York, NY, USA; 2. Molecular Biology Program, Memorial Sloan-Kettering Cancer Center, New York, NY, USA; 3. Cell Biology Program, Memorial Sloan-Kettering Cancer Center, New York, NY, USA; 4. Immunology Program, Memorial Sloan-Kettering Cancer Center, New York, NY, USA; 5. Dermatology, Weill Medical College of Cornell University, New York, NY, USA.

1416.Expression of heat shock proteins 60, 70 and 90 in melanoma and benign melanocytic nevi Elisabeta Candrea[1], Ioana Rusu[2], Rodica Cosgarea[1]; 1. Dermatology, University of Medicine and Pharmacy "I Hatieganu", Cluj Napoca, Romania; 2. Gastroenterology, University of Medicine and Pharmacy "I Hatieganu", Cluj Napoca, Romania.

1417.Metabotropic glutamate receptor 6 signaling enhances TRPM1 calcium channel function and increases melanin content in human melanocytes Sulochana Devi[1], Yogananda Markandeya[2], Nityanand Maddodi[1], Anuradha Dhingra[3], Noga Vardi[3], Ravi Balijepalli[2], Vijay Setaluri[1]; 1. Dermatology, University of Wisconsin, Madison, WI, USA; 2. Medicine, University of Wisconsin, Madison, WI, USA; 3. Neuroscience, University of Pennsylvania, Philadelphia, PA, USA.

1418.Role of hypoxia in melanoma stem cells and progression Sara Geyer, Harald Gollnick, Sven Quist; Department of Dermatology, Otto-von-Guericke University, Magdeburg, Germany.

1419.Hypomelanotic macules in tuberous sclerosis complex is linked to Th17 cell infiltration with possible impairment of cytoplasmic autophagy via mTOR pathway Yorihisa Kotobuki[1], Lingli Yang[1], Mari Wataya-Kaneda[1], Daisuke Tsuruta[2], Atsushi Tanemura[1], Mari Tanaka[1], Hiroyuki Murota[1], Masamitsu Ishii[2], Ichiro Katayama[1]; 1. Dermatology, Osaka University, Suita, Japan; 2. Dermatology, Osaka City University, Osaka, Japan.

1420.Inhibition of polo-like kinase 1 (Plk1) induces a senescence-like phenotype in human melanoma cells Brian Cholewa[1], Joshua Desotelle[1], Nihal Ahmad[1, 2]; 1. University of Wisconsin, Madison, WI, USA; 2. William S. Middleton Memorial VA Hospital, Madison, WI, USA.

1421.Combined targeting of MEK and PI3K/mTOR effector pathways effectively inhibits NRAS mutant melanoma *in vitro* and *in vivo* Christian Posch[1, 2], Homayoun Moslehi[1], Luzviminda Feeney[1], Gary Green[1], Anoosheh Ebaee[1], Valentin Feichtenschlager[2], Kim Chong[1], Lily Peng[1], Michelle Dimon[1], Thomas Phillips[1], Adil Daud[1], Timothy McCalmont[1], Philip LeBoit[1], Susana Ortiz-Urda[1]; 1. Dermatology, University of California San Francisco, San Francisco, CA, USA; 2. Krankenanstalt Rudolfstiftung, Vienna, Austria.

1422.Cytotoxic effects of hyper-inflammatory macrophages on melanoma survival in *vitro* Joseph Stuckert, Kurt Lu; Dermatology, Case Western Reserve University, Cleveland, OH, USA.

1423.Distinct properties of melanocyte progenitors from the hair follicle bulge and secondary hair germ Sandeep Joshi[1], Thomas Hornyak[1, 2, 3]; 1. Dept of Biochem and Mol Bio, Univ of Maryland SOM, Baltimore, MD, USA; 2. Dept of Dermatol, Univ of Maryland SOM, Baltimore, MD, USA; 3. VA Maryland, Baltimore, MD, USA.

1424*(CM2-10).Higher-order chromatin organization of melanocyte-specific gene loci in human melanocytes Michal Gdula[1, 3], Tatyana Sharova[1], Krzysztof Poterlowicz[2], Michael Fessing[2], Andrey Sharov[1]; 1. Department of Dermatology, Boston University School of Medicine, Boston, MA, USA; 2. Centre for Skin Sciences, University of Bradford, Bradford, United Kingdom; 3. The Wellcome Trust Centre for Human Genetics, University of Oxford, Oxford, United Kingdom.

1425.The TRPA1 agonist allyl isothiocyanate, an inducer of neurogenic inflammation, acts as a model substance for the investigation of postinflammatory hyperpigmentation, leading to increased melanin levels *in vivo* and *in vitro* Dominik Ebsen[1], Karen tom Dieck[2], Kazumasa Wakamatsu[3], Anil Jain[2], André Mahns[2], Shosuke Ito[3], Vincent Hearing[1], Horst Wenck[2], Franz Stäb[2], Ludger Kolbe[2]; 1. Pigment Cell Biology Section, NCI, National Institutes of Health, Bethesda, MD, USA; 2. R&D, Skin Research Center, Beiersdorf AG, Hamburg, Germany; 3. Department of Chemistry, Fujita Health University School of Health Sciences, Toyoake, Aichi, Japan.

Stem Cells and their Niches

All orals designated with an asterisk (*) below are presented in a Concurrent Session (see code). Orals designated with two asterisks (**) will be presented during a Plenary Session (see code).

1426.Lymphatic endothelium-derived chemokines CXCL10 and 11 promote expansion of human melanoma stem cells Ken Shiraishi[1, 2], Yong Chen[1], Shoib Siddiqui[1], Shigeki Higashiyama[3], Koji Sayama[2], Satoshi Hirakawa[4], Michael Detmar[1]; 1. Institute of Pharmaceutical Sciences, ETH Zurich, Zurich, Switzerland; 2. Dept. of Dermatology, Ehime University, Toon, Ehime, Japan; 3. Ehime Proteo-Medicine Research Center, Ehime University, Toon, Ehime, Japan; 4. Dept. of Dermatology, Hamamatsu University School of Medicine, Hamamatsu, Japan.

1427.Hypoxia levels are increased in photo-aged epidermis and might be associated with decreased regenerative potential of epidermal stem cells Adriana Primorac[1], Reto Huggenberger[1], Marc Dumas[2], Carine Nizard[2], Sylvianne Schnebert[2], Eric Perrier[2], Michael Detmar[1]; 1. Institute of Pharmaceutical Sciences, ETH Zurich, Zurich, Switzerland; 2. LVMH Recherche, Saint-Jean-de-Braye, France.

1428.β1-integrin signaling regulates maintenance and differentiation of adult human epithelial progenitor cells *in situ* Nancy Ernst[1], Arzu Yay[2], Martin Humphries[3], Tamás Bíró[4], Jennifer E. Kloepper[1], Ralf Paus[1, 5]; 1. Univ of Luebeck, Dept. of Dermatology, Luebeck, Germany; 2. Univ of Erciyes, Dept. of Histology & Embryology, Kayseri, Turkey; 3. Univ of Manchester, Faculty of Life Sciences, Manchester, United Kingdom; 4. Univ of Debrecen, Dept. of Physiology, Debrecen, Hungary; 5. Univ of Manchester, Inst. of Inflammation & Repair, Manchester, United Kingdom.

1429.Lrig1 is involved in the inhibition of the hysalurosome in the pluripotent stem cells of the mouse epidermis Laurent Barnes[1], Basile Darbellay[1], Jean Hilaire Saurat[2], Gürkan Kaya[1]; 1. Dermatology, University Hospital of Geneva, Geneva, Switzerland; 2. Swiis Center of Applied Toxicology, University of Geneva, Geneva, Switzerland.

1430.Lgr5+ and Lgr6+ epidermal stem cells in mouse and man G. van de Glind, S. Hoeboer, H. Rebel, A. El Ghalbzouri, C. Tensen, F. de Gruijl; Dermatology, LUMC, Leiden, Netherlands.

1431.Unraveling the epithelial stem cell niche: miRs-103/107 maintain E-cadherin-mediated cell-cell contacts Julia Katsnelson, Wending Yang, Jong-Kook Park, Han Peng, Robert Lavker; Dermatology, Northwestern University, Chicago, IL, USA.

1432.The spatio-temporal regulation of melanocyte stem cells determines their stress resistance Makiko Ueno[1, 2], Takahiro Aoto[1], Hiroo Yokozeki[2], Emi Nishimura[1]; 1. Stem Cell Biology, Medical Research Institute,Tokyo Medical and Dental University Graduate School of Medicine, Tokyo, Japan; 2. Dermatology, Tokyo Medical and Dental University Graduate School of Medicine, Tokyo, Japan.

1433.Cellular and signaling mechanisms that regulate hair follicle stem cells by live imaging Peggy Myung[1, 2], Elizabeth Deschene[2, 1], Panteleimon Rompolas[2, 1], Valentina Greco[2, 1]; 1. Dermatology, Yale University, New Haven, CT, USA; 2. Genetics, Yale University, New Haven, CT, USA.

1434.MicroRNA-184 triggers epithelial stem cell differentiation by repressing the stem cell marker cytokeratin 15 Ruby Shalom-Feuerstein[2, 1], Laura Serror[2], Odile Damour[3], Daniel Aberdam[1, 2]; 1. INSERM, Paris, France; 2. TECHNION, Haifa, Israel; 3. IBCP, Lyon, France.

1435*(CM4-02).The interfollicular epidermis is maintained by a hierarchy defined by stem cells within the non-cycling portion of hair follicles and committed progenitors Edwige Roy[1], Zoltan Neufeld[1], Luca Cerone[1], Angeline Wong[1], Samantha Hodgson[1], Inna Tabansky[2], Kevin Eggan[2], Jean Livet[3], Kiarash Khosrotehrani[1]; 1. University of Queensland, Brisbane, QLD, Australia; 2. Harvard University, Howard Hughes Medical Institute, Cambridge, MA, USA; 3. UPMC Univ Paris 06, UMR_S 968, Institut de la Vision, Paris, France.

1436.Suppression of MicroRNA 135b increased the proliferative potential of normal human keratinocytes Hye-Ryung Choi[1], Kyung-Mi Nam[1], Dong-Seok Kim[2], Woong-Yang Park[3], KyoungChan Park[1]; 1. Dermatology, Seoul National University Bundang Hospital, Seongnam, Republic of Korea; 2. Biochemistry, Chung-Ang University, Seoul, Republic of Korea; 3. Biochemistry, Seoul National University, Seoul, Republic of Korea.

1437.Efficient keratinocytes differentiation from transgene-free human induced pluripotent stem cell line: Implication for therapeutic application Ken Igawa[1, 2], Kyoji Horie[3], Kousuke Yusa[4], Hiroo Yokozeki[1], Ichiro Katayama[2], Junji Takeda[3]; 1. Dermatology, Tokyo Medical and Dental University, Tokyo, Japan; 2. Dermatology, Osaka University, Osaka, Japan; 3. Social and Environmental Medicine, Osaka University, Osaka, Japan; 4. Wellcome Trust Sanger Institute, Cambridge, United Kingdom.

1438.Desmoglein3 balances quiescence versus activation and repair in the hair follicle bulge stem cell niche Katja Schulze, Arnaud Galichet, Maja Suter, Eliane Müller; Molecular Dermatology and Stem Cell Research, Vetsuisse Faculty, University of Bern, Bern, Switzerland.

1439(PL4-03).The cell polarity protein aPKCl controls mammalian epidermal stem cell dynamics and tissue homeostasis through the regulation of cell fate and division orientation** Michaela Niessen[1, 2], Jeanie Scott[1], Susanne Vorhagen[1], Julia Zielinski[1], Panagiota Sotiropoulou[3], Cedric Blanpain[3], Michael Leitges[4], Carien Niessen[1]; 1. Department of Dermatology, Center for Molecular Medicine Cologne, Cologne Excellence Cluster on Cellular Stress Responses in Aging-Associated Diseases (CECAD), Cologne, Germany; 2. International Graduate School for Genetics and Functional Genomics (IGS-GFG), Cologne, Germany; 3. Interdisciplinary Research Institute (IRIBHM), Université Libre de Bruxelles, Brussels, Belgium; 4. Biotechnology Institute, University of Oslo, Oslo, Norway.

1440.Deletion of mTOR inhibitor REDD1 protects CD34+ follicular epithelial stem cells and prevents development of steroid-induced cutaneous atrophy Gleb Baida, Pankaj Bhalla, Kit Yuen, Shuchi Guo, Robert Lavker, Irina Budunova; Dermatology, Northwestern University, Chicago, IL, USA.**1441*(CM4-03).Defining label retaining cells (LRCs) from nails as putative new skin stem cells** Yvonne Leung[1, 2], Eve Kandyba[1, 2], Yi-Bu Chen[3], Seth Ruffins[1], Krzysztof Kobielak[1, 2]; 1. Eli and Edythe Broad CIRM Center for Regenerative Medicine and Stem Cell Research, University of Southern California, Los Angeles, CA, USA; 2. Department of Pathology, University of Southern California, Los Angeles, CA, USA; 3. Norris Medical Library, University of Southern California, Los Angeles, CA, USA.

1442.Generation of induced pluripotent stem cells from revertant mosaic keratinocytes: A novel strategy for natural gene therapy for epidermolysis bullosa Noriko Umegaki[1], Zongyou Guo[1], Munenari Itoh[1], Anna Pasmooij[3], Marcel Jonkman[3], Angela Christiano[1, 2]; 1. Dermatology, Columbia University, New York, NY, USA; 2. Genetics and Development, Columbia University, New York, NY, USA; 3. Dermatology, University of Groningen, Groningen, Netherlands.

1443.Postnatal hair follicle differentiation but not stem cell quiescence can be maintained by Smad8 alone after Smad1 and Smad5 ablation Eve Kandyba[1, 2], Virginia Hazen[5], Agnieszka Kobielak[3, 4], Samantha Butler[5], Krzysztof Kobielak[1, 2]; 1. Eli and Edythe Broad CIRM Center For Regerenative Medicine and Stem Cell Research, USC, Los Angeles, CA, USA; 2. Department of Pathology, USC, Los Angeles, CA, USA; 3. Department of Otolarngology, USC, Los Angeles, CA, USA; 4. NCC, USC, Los Angeles, CA, USA; 5. Department of Biological Sciences, Neurobiology Section, USC, Los Angeles, CA, USA.

1444.Genome organizer Satb1 regulates differentiation-associated silencing of the Nanog locus by modulating its nuclear positioning in human embryonic stem cells Mohammed Ahmed[1], Neil Harrison[3], Andrei Mardaryev[1], Michael Fessing[1], Krzysztof Poterlowicz[1], Peter Andrews[3], Vladimir Botchkarev[1, 2]; 1. Centre for Skin Sciences, University of Bradford, Bradford, United Kingdom; 2. Dermatology, Boston University, Boston, MA, USA; 3. Center for Stem Cell Biology, University of Sheffield, Sheffield, United Kingdom.

1445.Special AT-rich binding protein Satb1 controls re-organization of lineage-specific differentiation programs during keratinocyte reprogramming towards the induced pluripotent state Tatyana Sharova[1], Mohammed Ahmed[4], Hye-Jung Han[3], Krzysztof Poterlowicz[4], Gustavo Mostoslavsky[2], Terumi Kohwi-Shigematsu[3], Vladimir Botchkarev[1, 4], Andrey Sharov[1]; 1. Dermatology, Boston University School of Medicine,, Boston, MA, USA; 2. Center for Regenerative Medicine, Boston University School of Medicine,, Boston, MA, USA; 3. Lawrence Berkeley National Laboratory, University of California Berkeley, Berkeley, CA, USA; 4. Centre for Skin Sciences, University of Bradford, Bradford, United Kingdom.

1446*(CM4-10).The touch dome defines a new niche in the skin epidermis Yanne Doucet[1, 2], Seung-Hyun Woo[1, 4], Marlon Ruiz[1], David Owens[1, 3]; 1. Dermatology, Columbia University, New York, NY, USA; 2. Aix-Marseille Universite, Marseille, France; 3. Pathology and Cell Biology, Columbia University, New York, NY, USA; 4. Cell Biology, Scripps Research Institute, La Jolla, CA, USA.

1447.Wnt7b regulates hair follicle stem cell homeostasis and hair follicle cycling Eve Kandyba[1, 3], Yvonne Leung[1, 3], Yi-Bu Chen[2], Randall Widelitz[3], Cheng Chuong[3], Krzysztof Kobielak[1, 3]; 1. Eli and Edythe Broad CIRM Center for Regenerative Medicine and Stem Cell Research, University of Southern California, Los Angeles, CA, USA; 2. Norris Medical Library, University of Southern California, Los Angeles, CA, USA; 3. Department of Pathology, University of Southern California, Los Angeles, CA, USA.

1448."Tonic" cannabinoid receptor 1 signaling regulates human hair follicle epithelial progenitor cell survival *in situ* Koji Sugawara[1, 2], Nóra Zákány[1, 3], Stephan Tiede[1], Matthew Harries[4], Iain Haslam[4], Holger Schlüter[5], Nancy Ernst[1], Pritinder Kaur[5], Tamás Bíró[3], Ralf Paus[1, 4]; 1. Department of Dermatology, University of Lübeck, Lübeck, Germany; 2. Department of Dermatology, Osaka City University Graduate School of Medicine, Osaka, Japan; 3. Department of Physiology, University of Debrecen, Debrecen, Hungary; 4. Institute of Inflammation and Repair, University of Manchester, Manchester, United Kingdom; 5. Peter MacCallum Cancer Centre, Melbourne, VIC, Australia.

Tissue Regeneration and Wound Healing

All orals designated with an asterisk (*) below are presented in a Concurrent Session (see code). Orals designated with two asterisks (**) will be presented during a Plenary Session (see code).

1449.Acceleration of skin wound healing in Mediator complex subunit 1 null mouse Fumihito Noguchi, Takeshi Nakajima, Shigeki Inui, Satoshi Itami; Osaka University Graduate School of Medicine, Osaka, Japan.

1450.The development of a point-of-care diagnostic of wound status Carla Daunton[1], Rob Short[1], David Leavesley[2], Allison Cowin[1], David Steele[1]; 1. Mawson Institute, Adelaide, SA, Australia; 2. Institute of Health and Biomedical Innovation, Brisbane, QLD, Australia.

1451.Collagen I matrices containing high-sulfated HA modulate phenotype and function of human pro-inflammatory M1 macrophages Sandra Franz[1], Inka Forstreuter[1], Vera Hintze[2], Stephanie Moeller[3], Jan Simon[1]; 1. Department of Dermatology, Venerology und Allergology, Leipzig University, Leipzig, Germany; 2. Max Bergmann Center for Biomaterials, Technical University Dresden, Dresden, Germany; 3. Biomaterials Department, INNOVENT e.V., Jena, Germany.

1452.Sulfation of hyaluronan in regenerative biomaterials can control TGFβ1 induced myofibroblast differentiation due to competition with TGFβ1 receptor binding A. van der Smissen[1], S. Samsonov[2], M. Pisabarro[2], U. Anderegg[1]; 1. Dept. of Dermatology, University of Leipzig, Leipzig, Germany; 2. Struct. Bioinformatics, BIOTEC, TU Dresden, Dresden, Germany.

1453.Phytochemical incorporated biomaterials for wound healing Masugi Maruyama, Yuchi Nakajima, Radha Madhyastha, Harishkumar Madhyastha; Department of Applied Physiology, faculty of Medicine, University of Miyazaki, Miyazaki, Japan.

1454*(CM11-01).Human dermis-derived ABCB5-positive mesenchymal stem cells accelerate mouse skin full-thickness excisional wound healing in part by the secretion of interleukin-1 receptor antagonist Seppe Vander Beken[1], Dongsheng Jiang[1], Yu Qi[1], Juliane de Vries[1], Andreas Kluth[2], Yvonne Ziouta[2], Christoph Ganss[2], Meinhard Wlaschek[1], Karin Scharffetter-Kochanek[1]; 1. Department of Dermatology and Allergic Diseases, Ulm University, Ulm, Germany; 2. Ticeba GmbH, Heidelberg, Germany.

1455.Ratite oils promote keratinocyte cell growth and inhibit leukocyte activation Gigi Leung[1], Darin Bennett[3], Eddy Wang[1, 2], Sam Ma[1], Blanche Lo[1, 2], Kimberly Cheng[3], Kevin McElwee[1, 2]; 1. Department of Dermatology and Skin Science, University of British Columbia, Vancouver, BC, Canada; 2. Vancouver Coastal Health Research Institute, Vancouver, BC, Canada; 3. Avian Research Centre, Faculty of Land and Food Systems, University of British Columbia, Vancouver, BC, Canada.

1456.Inhibition of NF-κB signaling by hypochlorite rejuvenates skin Thomas Leung[1], Seung Kim[2]; 1. Dermatology, Stanford University, Stanford, CA, USA; 2. Stanford University, Stanford, CA, USA.

1457*(CM11-04).Impaired β_2 integrin-dependent activation of NOX2 in macrophages delays wound healing in *CD18*$^{-/-}$ mice Andrea Kügler[1], Susanne Schatz[1], Seppe Vander Beken[1], Bruno DeGeest[2], Carmen Hauser[3], Angelika Rück[3], Phillip Hawkins[4], Karin Scharffetter-Kochanek[1], Anca Sindrilaru[1]; 1. Department of Dermatology and Allergic Diseases, University of Ulm, Ulm, Germany; 2. University of Ghent, Ghent, Belgium; 3. University of Ulm, Ulm, Germany; 4. The Babraham Institute, Cambridge, United Kingdom.

1458.Fractional laser-assisted changing of tissue shape Wikunda Limpiangkanan[1, 2], William Farinelli[1], Mathew Avram[1], Richard Anderson[1]; 1. Dermatology, Harvard Medical School, Boston, MA, USA; 2. Medicine, Naresuan University, Muang, Thailand.

1459.Interest of Rhealba® oat plantlets on epidermal reparation Hélène Hernandez-Pigeon, Isabelle Ceruti, Antony Caruana, Anne Mandeau, Marie-Florence Galliano, Hélène Duplan, Sandrine Bessou-Touya, Nathalie Castex-Rizzi; Dermo Cosmetic Department, Pierre FABRE R&D Center, Toulouse, France.

1460.Keloid fibroblasts exhibit hyper-responsiveness to mechanical stimulation: The role of cell softening and nuclear Runx2 Chao-Kai Hsu[1, 2], Hsi-Hui Lin[3], Yang-Kao Wang[3], Hans I-Chen Harn[3], Julia Yu-Yun Lee[2], Ming-Jer Tang[3]; 1. Institute of Clinical Medicine, National Cheng-Kung University College of Medicine and Hospital, Tainan, Taiwan; 2. Department of Dermatology, National Cheng-Kung University College of Medicine and Hospital, Tainan, Taiwan; 3. Department of Physiology, National Cheng-Kung University College of Medicine and Hospital, Tainan, Taiwan.

Posters

1461.High concentration of glucose activates migration and proliferation of human skin keratinocytes through inducing active release of HMGB1 Kiyoko Yamada[1, 2], Kenji Matsushita[1]; 1. Department of Longevity Oral Science, Kagoshima University Graduate School of Medical and Sciences, Kagoshima, Japan; 2. C.A.C.,inc., Nagareyama, Japan.

1462.Rapid construction of a three-dimensional multilayered dermis with a vascular tube network by polymeric nanofilm coating on cell surfaces for a living skin equivalent Yuji Shirakata[1], Michiya Matsusaki[3], Mikiko Tohyama[1], Masamoto Murakami[1], Hidenori Okazaki[1], Satoshi Hirakawa[2], Koji Hashimoto[1], Michiru Akashi[3], Koji Sayama[1]; 1. Dermatology, Ehime University School of Medicine, Toon City, Japan; 2. Dermatology, Hamamatsu University School of Medicine, Hamamatsu, Japan; 3. Applied Chemistry, Osaka University School of Technology, Suita, Japan.

1463*(CM11-02).Apelin inhibits subcutaneous adipose tissue accumulation by enhancing lymphatic and blood vessel integrity Kentaro Kajiya[1], Mika Sawane[1, 2], Hiroyasu Kidoya[2], Fumitaka Muramatsu[2], Nobuyuki Takakura[2]; 1. Shiseido Innovative Science Research and Development Center, Yokohama, Japan; 2. Department of Signal Transduction, Research Institute for Microbial Diseases, Osaka University, Osaka, Japan.

1464.Polyphenol enriched botanical extract pretreatment protects keratinocytes against oxidative stress Raja Sivamani[1], Dev Chahal[1], Shirley Vu[1], Rasiq Zackria[1], Balvinder Rehal[1], Roslyn Isseroff[1, 2]; 1. UC Davis, Sacramento, CA, USA; 2. VA Mather, Mather, CA, USA.

1465.Cytoplasmic sequestration of keratinocyte GLUT1 by ganglioside GM3 mediates impaired diabetic wound healing Aurora Shehu[1], Jiamyun Lu[1], Heather Wilson[1], Daniel Bach[1], Desmond Shipp[1], Pratik Randeria[2], Chad Mirkin[2], Amy Paller[1]; 1. Dermatoogy, Northwestern Univ., Chicago, IL, USA; 2. Chemistry, Northwestern Univ., Evanston, IL, USA.

1466.Vascular hyperpermability and severe impairment of lymphatic vessels contribute to the formation of pressure ulcers in mouse ischemia-reperfusion injury Akira Kasuya[1], Satoshi Hirakawa[1], Jun-ichi Sakabe[1], Akihiro Kishimura[2], Yasutaka Anraku[2], Kazunori Kataoka[2, 3], Yoshiki Tokura[1]; 1. Department of Dermatology, Hamamatsu University School of Medicine, Hamamatsu, Japan; 2. Department of Materials Engineering, Graduate School of Engineering, University of Tokyo, Tokyo, Japan; 3. Center for Disease Biology and Integrative Medicine, Graduate School of Medicine, University of Tokyo, Tokyo, Japan.

1467(PL2-02).Smad7 accelerated healing of cutaneous wounds associated with chronic inflammation** Gangwen Han[1], Fulun Li[1, 2], Shunsuke Iriyama[1], Bin Li[2], Qinghong Zhang[1], Xiao-Jing Wang[1]; 1. University of Colorado Denver Anschutz Medical Campus, Aurora, CO, USA; 2. Yueyang Hospital of Integrated Traditional Chinese and Western Medicine, Shanghai, China.

1468.IFC-CAF, extract from Cryptomphalus aspersa's eggs significantly promotes skin homeostasis and migration and survival of skin cells *in vitro* Maria Matabuena[1], S. Lucena[2], Eduardo Reyes[3, 4], C. Parrado[5], Salvador Gonzalez[6], Angeles Juarranz[2]; 1. InnCells, Tres Cantos, Spain; 2. Universidad Autónoma de Madrid, Tres Cantos, Spain; 3. Universidad de Alcalá, Alcalá de Henares, Spain; 4. Industrial Farmaceutica Cantabria, Madrid, Spain; 5. Universidad de Malaga, Malaga, Spain; 6. Memorial Sloan-Kettering Cancer Center, New York, NY, USA.

1469.Development of a clinical grade suspension of allogeneic human dermal fibroblasts with extended shelf life capable of intradermal delivery through small calibre needles Paul Kemp, John Lovelady, Jonathan Elwell, Sarah Drinkwater, Joanna Miall; Intercytex Ltd, Manchester, United Kingdom.

1470.Engineered wound-dressing carriers with peripheral blood-derived angiogenic factor protein mixtures: Therapeutic implications for peripheral ischaemic tissue Anna Bauer[1], Ektoras Hadjipanayi[1, 2], Burak Salgin[3], Bastian Fersch[4], Ursula Hopfner[1], Andreas Schlütter[4], Milomir Ninkovic[2], Hans Machens[1], Arndt Schilling[1]; 1. Plastic Surgery, Klinikum Rechts der Isar, Munich, Germany; 2. Plastic Surgery, Klinikum Bogenhausen, Munich, Germany; 3. Paediatrics, Heinrich-Heine University Düsseldorf, Düsseldorf, Germany; 4. Faculty of Physical Engineering, Munich University of Applied Sciences, Munich, Germany.

1471.Matrix metalloproteinases 1, 2, 13 and 14 are differentially expressed in keloid scars compared to normal skin Zoe Drymoussi, Pambos Lemonas, Simon Myers, Michael Philpott, Harshad Navsaria; Centre for Cutaneous Research, BICMS, Queen Mary University of London, London, United Kingdom.

1472.Mast cells are dispensable for granulation tissue formation during skin wound healing and do not impact tissue fibrosis in mice Sebastian Willenborg[1], Beate Eckes[1], Jürgen Brinckmann[2], Thomas Krieg[1], Karin Hartmann[1], Axel Roers[3], Sabine Eming[1]; 1. University of Cologne, Cologne, Germany; 2. University of Lübeck, Lübeck, Germany; 3. Dresden University of Technology, Dresden, Germany.

1473.Podoplanin enhances migration of keratinocytes by downregulation of E-cadherin Jun Asai[1], Satoshi Hirakawa[2], Jun-ichi Sakabe[2], Hideya Takenaka[1], Naomi Nakamura[1], Tetsumei Urano[3], Yoshiki Tokura[2], Norito Katoh[1]; 1. Dermatology, Kyoto Prefectural University of Medicine, Graduate School of Medical Science, Kyoto, Japan; 2. Dermatology, Hamamatsu University School of Medicine, Hamamatsu, Japan; 3. Physiology, Hamamatsu University School of Medicine, Hamamatsu, Japan.

1474.The regulation of skin wound healing by MFG-E8 Akihiko Uchiyama[1], Kazuya Yamada[1], Akihito Uehara[1], Sachiko Ogino[1], Mark Udey[2], Osamu Ishikawa[1], Sei-ichiro Motegi[1]; 1. Department of Dermatology, Gunma University Graduate School of Medicine, Maebashi, Japan; 2. Dermatology Branch, Center for Cancer Research, National Cancer Institute, NIH, Bethesda, MD, USA.

1475.Eccrine sweat gland-derived keratinocytes rapidly express epidermal differentiation markers during repair of human wounds L. Rittié, J. Orringer, D. Sachs, John Voorhees, Gary Fisher; Department of Dermatology, University of Michigan, Ann Arbor, MI, USA.

1476.Recipe for impaired wound healing: Cross-talk between adrenergic and toll-like receptors in mesenchymal stem cells and keratinocytes M. Dasu[1], S. Ramirez[1], T. La[1], T. Peavey[1], F. Gorouhi[1], J. Nolta[1], F. Fierro[1], R. Isseroff[1, 2]; 1. U C Davis, Sacramento, CA, USA; 2. VA Medical Center, Mather, CA, USA.

1477.Angiopoietin-like 4 improves diabetic wound healing Han Chung Chong[1], Cleo Choong[2], Mark Boon Yang Tang[4], Nguan Soon Tan[1, 3]; 1. School of Biological Sciences, Nanyang Technological University, Singapore, Singapore; 2. School of Materials Science and Engineering, Nanyang Technological University, Singapore, Singapore; 3. Institute of Molecular and Cell Biology, A*STAR, Singapore, Singapore; 4. National Skin Centre, Singapore, Singapore.

1478.Topical controlled release of PPARβ/δ agonist from microparticles accelerates diabetic wound healing Xiao Ling Wang[1], Selin Foo[1], Han Chung Chong[1], Wei Li Lee[2], Mark Boon Yang Tang[3], Shunuke Chiba[4], Kee Woei Ng[2], Say Chye Joachim Loo[2], Nguan Soon Tan[1, 5]; 1. School of Biological Sciences, Nanyang Technological University, Singapore, Singapore; 2. School of Materials Science and Engineering, Nanyang Technological University, Singapore, Singapore; 3. National Skin Centre, Singapore, Singapore; 4. Division of Chemistry and Biological Chemistry, School of Physical and Mathematical Sciences, Nanyang Technological University, Singapore, Singapore; 5. Institute of Molecular and Cell Biology, Singapore, Singapore.

1479.A novel, simplified, non-cultured autologous cellular grafting procedure for chronic non-healing ulcers Amelie Seghers, Kee Goh, Boon Tang; National Skin Centre, Singapore, Singapore.

1480.Development of 3D scaffolds for the investigation of chronic wounds D. Robinson[1], R. Short[1], J. Whittle[1], L. Smith[1], D. Steele[1], B. Farrugia[3], R. Dawson[3], T. Dargaville[3], A. Cowin[2], D. Adams[2], D. Lang[2]; 1. Mawson Institute, University of South Australia, Adelaide, SA, Australia; 2. 3Women and Childrens Hospital, University of Adelaide, Adelaide, SA, Australia; 3. Institute of health and biomedical innovation, Queensland University of Technology, Brisbane, QLD, Australia.

1481.Audible doppler signal versus ankle brachial pressure index in patients with leg ulcer Afsaneh Alavi, Reza Nabavizadeh, Farnaz Valaie, R Gary Sibbald; Medicine (dematology), University of toronto, toronto, ON, Canada.

1482.**MiR-29b as a potential therapeutic target of radiation-induced skin fibrosis** E. Olasz[1], N. Duncan[1], A. Schock[1], M. Ngongang[1], L. Seline[1], A. Lopez[1], J. Lazar[1], P. Liu[2], Zelmira Lazarova[1]; 1. Dermatology, Medical College of Wisconsin, Milwaukee, WI, USA; 2. Physiology, Medical College of Wisconsin, Milwaukee, WI, USA.

1483.Novel synthesis and sctivity of solenopsin A and analogs, topical inhibitors of phosphoinositol-3 kinase/akt with ceramide-like properties Isabella Karlsson[1], Michael Bonner[1], Xin Zhou[4], Jin Zhang[4], E. Watkins[5], Joel Bowen[6], Jack Arbiser[1, 2, 3]; 1. Dermatology, Emory University School of Medicine, Atlanta, GA, USA; 2. Dermatology, Atlanta Veterans Administration Medical Center, Atlanta, GA, USA; 3. Winship Cancer Institute, Atlanta, GA, USA; 4. Pharmacology and Molecular Sciences, Hopkins University School of Medicine, Baltimore, MD, USA; 5. Union University School of Pharmacy, Jackson, TN, USA; 6. of Pharmacy and Health Sciences Mercer University, Atlanta, GA, USA.

1484*(CM11-05).Collagen XVII ectodomain shedding alters keratinocyte proliferation and motility through modulation of cell adhesiveness Joanna Jacków[1], Stepfanie Löffek[1], Andreas Schlosser[2], Alexander Nyström[1], Cassian Sitaru[1], Kaisa Tasanen[3], Leena Bruckner-Tuderman[1], Claus-Werner Franzke[1]; 1. Dept. of Dermatology, University Freiburg Medical Center, Freiburg, Germany; 2. Center of Systems Biology, University of Freiburg, Freiburg, Germany; 3. Dept. of Dermatology, University of Oulu, Oulo, Finland.

1485.A role for 11β-hydroxysteroid dehydrogenase type 1 in stress-induced wound healing impairment Ana Tiganescu, Yoshicazu Uchida, Peter Elias, Walter Holleran; Dermatology, UCSF, San Francisco, CA, USA.

1486.The presence of dermal papilla cells in bio-engineered skin substitutes improves the wound healing process in deep skin lesions in nude mice Gustavo Leirós[1], Ana Kusinsky[1], Hugo Drago[2], Silvia Bossi[2], Flavio Sturla[2], Lía Castellanos[1], Inés Stella[3], María Balañá[1]; 1. Fundación Pablo Cassará, Instituto de Ciencia y Tecnología César Milstein CONICET, Buenos Aires, Argentina; 2. Hospital de Quemados, Buenos Aires, Argentina; 3. CEBBAD Universidad Maimónides, Buenos Aires, Argentina.

1487.Age-related phenotypic and functional alteration of primary dermal fibroblasts Cécilia Brun[1], Francette Jean-Louis[1], Thierry Oddos[2], Aramnd Bensussan[1], Laurence Michel[1]; 1. U976, INSERM, Paris, France; 2. Johnson & Johnson Santé Beauté France, Val de Reuil, France.

1488*(CM11-06).Interleukin 6 promotes adult de novo hair follicle organogenesis through STAT3 phosphorylation Amanda Nelson, Adiya Katseff, Sydney Resnik, Luis Garza; Dermatology, Johns Hopkins School of Medicine, Baltimore, MD, USA.

1489.Management of hand pressure sores Kristen Aliano[2], Steve Stavrides[2], Bobby Mathews[2], Glenn Teplitz[1], Thomas Davenport[2]; 1. Winthrop University Hospital, Mineola, NY, USA; 2. Long Island Plastic Surgical Group, Garden City, NY, USA.

1490.Molecular mechanisms for epithelia to generate wound electric currents that promote wound healing Brian Reid[1], Lin Cao[1], Linlin Ma[2], Jing Gao[1], Jie Zheng[2], Min Zhao[1, 3]; 1. Dermatology, University of California, Davis, Sacramento, CA, USA; 2. Physiology and Membrane Biology, University of California, Davis, Davis, CA, USA; 3. Ophthalmology, University of California, Davis, Sacramento, CA, USA.

1491*(CM11-03).Oligosaccharide modification by N-acetylglucosaminyltransferase-V promotes skin sclerosis by inducing macrophages to shift toward M2 Mika Terao[1], Mizuki Yutani[1, 2], Arisa Kato[1, 2], Hiroyuki Murota[1], Eiji Miyoshi[2], Ichiro Katayama[1]; 1. Dermatology, Osaka University Graduate School of Medicine, Suita, Japan; 2. Molecular Biochemistry and Clinical Investigation, Osaka University Graduate School of Medicine, Suita, Japan.

1492.Effect of the peripheral nervous system on skin wound healing Jérémy Chéret[1], Christelle Le Gall-Ianotto[1, 2], Nicolas Lebonvallet[1], Misery Laurent[1, 2]; 1. Laboratory of Neurosciences of Brest, Brest, France; 2. Dermatology, CHRU Brest, Brest, France.

1493.Superiority of hair follicle neogenesis in engineered human skin substitutes using early keratinocyte cultures Rajesh Thangapazham, Peter Klover, Shaowei Li, Ji-an Wang, Leonard Sperling, Thomas Darling; Dermatology, Uniformed Services University of the Health Sciences, Bethesda, MD, USA.

1494.Effect of human skin explants on the neurite growth and electrophysiological profile of the PC12 cell line Nicolas Lebonvallet[1, 3, 5], Jean-Pierre Pennec[2], Christelle Le Gall-Ianotto[1], Ulysse Peirera[1], Nicholas Boulais[1], Jeremy Chéret[1], Jean-Luc Carré[1], Christine Jeanmaire[3], Louis Danoux[3], Gilles Pauly[3], Laurent Misery[1, 4]; 1. University of Brest, Faculty of Medicine and Health Sciences, Laboratory of Neurosciences of Brest, EA4685, Brest, France., UBO, Brest, France; 2. University of Brest, Faculty of Medicine and Health Sciences, EA4326, Brest, France, UBO, Brest, France; 3. BASF Beauty Care Solutions, Pulnoy, France, BASF, Pulnoy, France; 4. Brest University Hospital, Department of Dermatology, Brest, France, CHRU, Brest, France; 5. Department of Biochemistry and Pharmaco-Toxicology, hôpital de la Cavale-Blanche, CHRU, Brest, France.

1495.The use of acellular dermal matrix and skin grafting in the treatment of heel pressure sores Kristen Aliano, Steve Stavrides, Bobby Mathews, Thomas Davenport; Long Island Plastic Surgical Group, Garden City, NY, USA.

1496.The correlation between ultrasound findings and clinical assessment of pressure related ulcers: Is the extent of injury greater than what is predicted? Kristen Aliano[2], Christopher Low[2], Steve Stavrides[2], John Luchs[1], Thomas Davenport[2]; 1. Radiology, Winthrop University Hospital, Mineola, NY, USA; 2. Long Island Plastic Surgical Group, Garden City, NY, USA.

1497.The microbiota colonizing diabetic foot ulcers is associated with glycemic control, ulcer depth, and duration Sue Gardner[1], Stephen Hillis[2], Kris Heilmann[2], Elizabeth Grice[3]; 1. College of Nursing, University of Iowa, Iowa City, IA, USA; 2. Carver College of Medicine, University of Iowa, Iowa City, IA, USA; 3. Department of Dermatology, University of Pennsylvania, Philadelphia, PA, USA.

1498.Bacterial challenge study in porous polyHEMA implants Ge Zhao[1], Marcia Usui[1], Andrew Marshall[2], Max Maginness[2], John Olerud[1], Philip Fleckman[1]; 1. Medicine/Dermatology, University of Washington, Seattle, WA, USA; 2. Healionics Inc., Seattle, WA, USA.

1499*(CM11-07).TAp63α promotes the transition of hair follicle stem cells to interfollicular keratinocytes Daisy Dai, Aaron Huebner, Robert Long, Dennis Roop; University of Colorado Anschutz Medical Campus, Aurora, CO, USA.

1500.Challenges of tamoxifen and 4-OH-tamoxifen induction in the skin of transgenic K1.CreERT2 adult mice Marcia Usui[1], John Olerud[1], Philip Fleckman[1], Dennis Roop[2], Peter Koch[2]; 1. Medicine/Dermatology, University of Washington, Seattle, WA, USA; 2. Dermatology, University of Colorado, Denver, CO, USA.

1501.Different expression of tight junction proteins in chronic compared to normal wounds - implication on proliferation, differentiation and migration Thomas Volksdorf[1], Janina Lentfer[1], Nina Kirschner[1], Claudia Bohner[1], Michaela Zorn-Kruppa[1], Susanne Sehner[2], Ingrid Moll[1], Johanna Brandner[1]; 1. Department of Dermatology and Venerology, University Hospital Hamburg-Eppendorf, Hamburg, Germany; 2. Department of Medical Biometry and Epidemiology, University Hospital Hamburg-Eppendorf, Hamburg, Germany.

1502.Application of light emitting diode and celecoxib (Cox-2 inhibitor) for the management of wounds Steven Thng[2], Jia Lu[1], Shabbir Moochala[1], Manoj Kumar[1]; 1. Human Science Research, Defence Science Organization, Singapore, Singapore; 2. Medical, National Skin Centre, Singapore, Singapore.

1503.Development of a pragmatic novel assay for studying pathological wound healing of human skin *in vitro* Hannah Post[1], Guoyou Zhang[1], Christian Rose[1], Ralf Paus[1, 2]; 1. Dermatology, university of Lübeck, Lübeck, Germany; 2. Inflammation and repair, university of manchester, Manchester, United Kingdom.

1504.Fabrication and characterization of epithelial and mesenchymal scaffolds for engineering hair regeneration Ji Won Oh[1, 2], Jeong Ok Lim[2], Moonkyu Kim[1]; 1. Immunology, Kyungpook National University School of Medicine, Daegu, Republic of Korea; 2. Biomedical Science, Kyungpook National University Biomedical Research Institute, Daegu, Republic of Korea.

1505.Ologen® collagen matrix: A new dermal scaffold for skin tissue engineering Suzan Commandeur[1, 2], Sarah Sparks[1], Lisanne van Zijl[1], Marion Rietveld[2], Horng Ji Lai[1], Chien Lin[3], Abdoelwaheb El Ghalbzouri[2]; 1. Aeon Astron Europe BV, Leiden, Netherlands; 2. Leiden University Medical Center, Leiden, Netherlands; 3. Body Organ Biomedical Corporation, Taipei, Taiwan.

1506.Wound healing mouse model without contraction to study epidermal migration and mechanisms of action Vincent Falanga[1, 2, 3], Polly Carson[2], David Fiore[2], Xiaofeng Lin[1, 2], Tatyana Yufit[2]; 1. Dermatology, Boston University, Boston, MA, USA; 2. Biochemistry, Boston University, Boston, MA, USA; 3. Dermatology, Roger Williams Medical Center, Providence, RI, USA.

1507.C7 plays a dual role in skin wound healing Alexander Nyström[1], Daniela Velati[1], Venugopal Mittapalli[1], Anja Fritsch[1], Johannes Kern[1], Leena Bruckner-Tuderman[1, 2]; 1. Dermatology, University Medical Center Freiburg, Freiburg, Germany; 2. Freiburg Institute for Advanced Studies, School of Life Sciences - LifeNet, Freiburg, Germany.

1508.Cx31.1 is associated with apoptosis of scrape-wounded HaCaTs in diabetic conditions Catherine Wright, Iain Robertson, Narges Elgaseai, Patricia Martin; Diabetes Research Group, Life Sciences, Glasgow Caledonian University, Glasgow, United Kingdom.

1509.Sox9 is elevated in a subset of keloid scars with cartilage-like histological features Elizabeth Woods[1], Mark Soldin[2], Tanya Shaw[1]; 1. Division of Biomedical Sciences, St George's, University of London, London, United Kingdom; 2. Department of Plastic & Reconstructive Surgery, St George's Healthcare NHS Trust, London, United Kingdom.

1510.Is prolactin a negative modulator of human skin wound healing? Tatjana Poertner[1], Ewan Langan[2, 1], Ralf Paus[1, 2]; 1. Department of Dermatology, University of Luebeck, Luebeck, Germany; 2. Dermatological Sciences, University of Manchester, Manchester, United Kingdom.

1511*(CM11-08).VEGF promotes cutaneous wound healing via VEGFR-1 signaling in keratinocytes and macrophages Kelly Johnson, Monica Lachey, Traci Wilgus; Pathology, The Ohio State University, Columbus, OH, USA.

1512.Development of an *in vitro* organotypic wound model & application of this model to the characterization of notch in healing wounds Madhuchhanda Roy, Taylor Jaraczewski, Priya Pathak, Timothy King; Division of Plastic Surgery, Department of Surgery, University of Wisconsin, Madison, WI, USA.

1513.Wound healing in a full-thickness *in vitro* human skin model Alexander Armento, Michael Bachelor, Gina Stolper, Jonathan Oldach, Max Li, Mitchell Klausner, Patrick Hayden; MatTek Corporation, Ashland, MA, USA.

1514.Biological function & modulation of Thymosin β-4 in human skin Siming Chen[1], Qian Zheng[2], Joseph DiMaria[1], John Lyga[2], Uma Santhanam[1]; 1. Cell Biology & In Vitro Toxicology, Avon Products, Inc., Suffern, NY, USA; 2. Bioscience, Avon Products, Inc., Suffern, NY, USA.

1515.Role of kallikrein 6 during epidermal regeneration after glucocorticoid-induced cutaneous atrophy Mari Kishibe[2], Gleb Baida[1], Pankaj Bhalla[1], Sin Iinuma[2], Shigetaka Yoshida[3], Robert Lavker[1], Irina Budunova[1]; 1. Dermatology, Northwestern University, Chicago, IL, USA; 2. Dermatology, Asahikawa Medical University University, Asahikawa, Japan; 3. Functional Anatomy and Neuroscience, Asahikawa Medical University University, Asahikawa, Japan.

1516(PL6-06).Generation of 3D full-thickness skin equivalents exclusively from human induced pluripotent stem cell (iPSC)-derived keratinocytes and fibroblasts** Zongyou Guo, Munenari Itoh, Noriko Umegaki, Angela Christiano; Columbia University, New York, NY, USA.

1517.Light emitting diode generated red light modulates keloid-derived fibroblast proliferation and migration speed Andrew Mamalis[1], Jonathan Bartlett[1], Surinder Sandhu[1], Roslyn Isseroff[1, 2], Jared Jagdeo[1, 2, 3]; 1. Department of Dermatology, UC Davis, Sacramento, CA, USA; 2. Dermatology Service, Sacramento VA, Sacramento, CA, USA; 3. Department of Dermatology, SUNY Downstate Medical Center, Brooklyn, NY, USA.

1518.Genome organizer and AT-rich binding protein Satb1 inhibits epidermal regeneration during wound healing via modulation of cell migration and apoptosis Vladimir Emelianov[1], Mohammed Ahmed[2], Tatyana Sharova[1], Andrei Mardaryev[2], Michael Fessing[2], Andrey Sharov[1], Vladimir Botchkarev[1, 2]; 1. Dermatology, Boston University, Boston, MA, USA; 2. Centre for Skin Sciences, University of Bradford, Bradford, United Kingdom.

Posters

1519.IL-33 is upregulated after injury and stimulates inflammation during repair
Brian Wulff, Traci Wilgus; Pathology, The Ohio State University, Columbus, OH, USA.

1520*(CM11-09).Bone morphogenetic protein signalling regulates keratinocyte proliferation and migration during wound healing in murine and human skin
Chris Lewis[1], Andrei Mardaryev[1], Andrey Sharov[2], Tatyana Sharova[2], Vladimir Emelianov[2], Natalia Botchkareva[1], David Sharpe[1], Vladimir Botchkarev[1, 2]; 1. Centre for Skin Sciences, University of Bradford, Bradford, United Kingdom; 2. Dermatology, Boston University, Boston, MA, USA.

1521.TNS4 delayed wound healing through actin cytoskeletal regulation Seon-Pil Jin, Eun-Young Seo, Jin Ho Chung, Hee Chul Eun; Department of Dermatology, Seoul National University College of Medicine, Seoul, Republic of Korea.

1522.Development of ECM-based biohybrid skin substitutes Baiwen Luo[1], Qiu Loh[1, 3], Nguan Soon Tan[2, 3], Thiam Chye Lim[4], Cleo Choong[1]; 1. School of Materials Science & Engineering, Nanyang Technological University, Singapore, Singapore; 2. School of Biological Sciences, Nanyang Technological University, Singapore, Singapore; 3. Institute of Cell and Molecular Biology, Agency for Science, Technology & Research, Singapore, Singapore; 4. Department of Surgery, National University Hospital, Singapore, Singapore.

1523*(CM11-10).Expression of either microRNA-198 or FSTL1 from a primary transcript is controlled by TGF-β and KSRP for efficient wound healing
Gopinath Sundaram, John Common, Birgit Lane, Prabha Sampath; Institute of Medical Biology, A*STAR, Singapore, Singapore.

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British Association of Dermatologists

On behalf of the British Association of Dermatologists I would like to welcome you all to Edinburgh, Scotland, Britain and the UK.

The BAD is proud and delighted to have been able to support the IID in hosting this important event - the premier Dermatological scientific meeting in the world. It is a privilege to showcase investigative Dermatology in the UK. Our conference team has been involved from the bid stage to this week's exciting culmination, working closely with Professors Leigh and Griffiths without whose vision and leadership none of us would be here. The BAD Communications Unit is providing a press office and a media team. The BAD has funded 35 fellowships for junior investigators to attend this meeting from around the UK.

I am particularly proud that the BAD is sponsoring the IID public lecture. This will be held on Friday 10th May and given by BBC Science Presenter, Michael Mosley. More than ever, it is important for the public to understand the role of science in Dermatology and medicine. In the UK around a quarter of the population visit their GP with a skin problem every year.

I hope that you enjoy this meeting as much as I intend to. The SID and IID meetings I have attended over the last 25 years have always been the high point of my professional year - the venue of choice for my own research output and the opportunity to learn from and share ideas with the cream of the world's investigative dermatologists and scientists: above all a community of friends with common interests and goals. It has been the BAD's ambition to help make this the best IID ever.

Outside of the meeting, I hope you get to taste something of Scottish hospitality and culture, and I hope that you will come back, often, to Scotland and the UK.

Chris Bunker
President
British Association of Dermatologists

For further details on who we are and what we do please visit our website www.bad.org.uk or scan the QR code.

ABOUT THE ESDR

The European Society for Dermatological Research (ESDR) was founded in 1970. We are a non-profit organization promoting basic and clinical science related to dermatology.

The ESDR is the largest investigative dermatology Society in Europe with over 1'100 active members and is the only European society for dermatological research. The vibrancy of the society is illustrated by a 35% increase in membership over the last three years and attendance of over 1000 delegates at the Barcelona and Venice meetings in 2011 and 2012. The ESDR is one of the three leading dermatological research societies in the world.

The ESDR brings together opinion leaders in dermatological research and dermatology. Most University and Clinical departmental chairs participate in and support the ESDR. Future strategies in research and clinical management are shaped, developed, and communicated at ESDR meetings and there is close communication between the EADV and EDF. Recent strategic developments include increased emphasis on education, the development of the 'future leadership' program, a stand-alone EADV/ESDR laboratory training program and the introduction of a drug discovery symposium together with translational tracks at the annual meeting. Our state-of-the-art plenary lectures at the annual ESDR meetings highlight key development in dermatology and related fields relevant to our audience.

The ESDR facilitates exchange of information relevant to investigative dermatology between clinicians and scientists worldwide. The annual ESDR meeting provides a unique perspective by successfully encouraging interaction of basic research, clinical research, and practising clinicians. One of the most important activities of our Society is to promote the presentation of new research data and ideas through oral and poster formats at our annual scientific meetings and clinically oriented symposia with more than 1'000 expected delegates from all over Europe and the rest of the world (mostly Japan and the United States).

Over the last few years we have encouraged and promoted interaction between the ESDR and the pharmaceutical industry. It is the central belief of the ESDR that these interactions are pivotal for the future of dermatology with the ultimate aim of developing better treatments and optimising care for our patients. Moreover, we believe that greater cross-fertilisation between academic dermatologists, dermatological scientists and pharmaceutical scientists could have significant benefits for future drug development and for future patient care. Our strategy includes (i) regular meeting between interested parties, (ii) increased collaboration and (iii) strengthening of education initiatives around drug discovery and translational medicine.

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Future ESDR Meetings

2014	**44th Annual ESDR Meeting** Copenhagen, Denmark 10-13 September 2014
2015	**45th Annual ESDR Meeting** Rotterdam, The Netherlands 9-12 September 2015

JSID Members

The JSID Board of Directors cordially invites all JSID members to attend the IID2013 meeting in Edinburgh, along with members of the SID and ESDR. This is the only meeting to be held in 2013 for the three Societies. Professor Masayuki Amagai is JSID President for IID2013.

The 39th Annual Meeting of JSID will take place in Osaka, Japan from Dec.12-14, 2014. For more information, visit at http://www.jsid.org/english/

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Members of the Society will meet on Friday, May 10 at one session at which time presentations will be made by the President, Secretary-General, and by the Journal Chief Editor. Members will discuss and approve Society affairs.

Keynote Lectures
Four JSID lectures will be presented during IID2013.
Tanioku Kihei Memorial Lecture
speaker: Mark C. Udey
Guest Lecture
speaker: Hideyuki Okano
JSID Awardee Lecture
speaker: Manabu Fujimoto
Rising Star Lecture
speaker :Kenji Kabashima

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2002 Akemi Yamamoto
2003 Shinichi Sato
2004 Daisuke Sawamura
2005 Hironobu Ihn
2006 Shigetoshi Sano
2007 Masashi Akiyama
2008 Koji Sayama
2009 Kenji Kabashima
2010 Tamihiro Kawakami
2011 Riichiro Abe
2012 Naotomo Kambe
2013 Manabu Fujimoto

JDS Awards
1993 Lutz Hegemann et al.
Jun Matsunaga et al.
1994 Brian J. Nickoloff et al.
1995 Helena Rizova et al.
1996 Miroslav Blumenberg et al.
1997 Aimin Tang et al.
1998 Nathalie Emonet et al.
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SID Past, Present, and Future

Past
The year 2012 was a milestone for the Society for Investigative Dermatology (SID) as it marked the 75th Anniversary of the Society. Since its humble beginnings of a small scientific meeting in 1937, the SID has forged a solid position at the forefront of groundbreaking scientific research, to publishing the premier dermatology journal (JID) with our sister society, the European Society for Dermatological Research (ESDR).

Our membership has grown in size and diversity during the past eight decades, and we took the anniversary as an opportunity to showcase the past contributions of our members, and highlight our Society's current and emerging, innovative research in skin health and disease. As a part of the history celebration, a series of interviews were conducted during the last few years that captured some of the recollections of 'Dermatology Greats'. Read more about these interviews and the history of the Society at: http://www.sidnet.org/SID_History.aspx

As we begin the final 25 years of our first century, we maintain our commitment to forging stronger partnerships with the ESDR and Japanese Society for Investigative Dermatology (JSID). This IID meeting provides countless opportunities for forming new collaborations that will support the next generation of investigative Dermatology.

Present
In addition to its annual meeting, and publishing the JID with the ESDR, the SID engages in special educational programs designed to nurture young investigators as they embark on a career in research.

Resident and PhD Retreats: The first Resident Retreat was held in 2001, and featured a novel format that included presentations on establishing a niche, identifying funding sources and maintaining work-life balance. Since then, the program has grown in size and scope. In 2012, a parallel PhD Retreat was held. The new program allowed interaction between young MD and PhD investigators. During this special IID year, an international Trainee Retreat will facilitate introductions between SID, ESDR and JSID trainees.

Atopic Dermatitis Project: In addition to educational programs, the Society pursues special projects aimed at advancing the research agenda on a specific disease area. The goal for this project is to use one disease at a time to develop a template that will build and strengthen the collective research resources in the SID community.

SID Members

The focus is to bring together researchers with a common disease interest, then provide administrative support for their efforts to develop a multi-institutional clinical research network that can measure disease outcomes and provide a platform for clinical trials addressing new therapies as well as important questions regarding the pathogenesis of disease. Atopic Dermatitis Project, led by Dr. Lisa Beck, has convened working groups and will work in the next year to identify key areas of opportunity.

Future

The SID is committed to building new alliances and expanding the reach of its collective community. To that end, we are embarking on a new Academic-Industry Partnership Project. The concept will make its debut during the IID meeting on Wednesday May 8, from 10 am –Noon.

A novel component of the Project is an interactive database that will enable Academic Investigators and Industry to match up based on complementary knowledge, initiate contact, and work to develop effective partnerships. This portal can potentially extend the reach of knowledge about one disease to others caused by the same mechanism.

The companion piece to the online portal is a dedicated session during the SID annual meeting. The program will include presentations from those who have successfully navigated the tech transfer process, followed by short face-to-face meetings between industry and those with intellectual property that is of interest in a specific research question.

Together, these elements will create a virtual 'space' in which academic and industry science can explore potential synergy. It will remove many of the barriers that exist within a single organization/institution, or across the academic and private sectors. The system relies on mutual interdependence; self-organization based on the possession of complementary resources.

More information is available on the SID website. Scan the QR code (right), or go to www.sidnet.org for more details about the SID.

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