

Meeting Program



Society for
Investigative
Dermatology

2012 SID Annual Meeting & 75th Anniversary Celebration

May 9 - 12, 2012

Raleigh Convention Center
Raleigh, North Carolina



The Duke Department of Dermatology presents the 2012 Society for Investigative Dermatology Annual Meeting.

Jointly sponsored by Duke School of Medicine and Society for Investigative Dermatology



Society for Investigative Dermatology

Mission

To advance and promote the sciences relevant to skin health and disease through education, advocacy and scholarly exchange of scientific information.

Vision

The SID will be the pre-eminent organization for the science of skin health and diseases. It will be a leading purveyor of educational programming. It will promote a culture of discovery and serve as the premier forum for the exchange of scientific information relating to dermatologic research. It will build cross-disciplinary bridges to provide catalytic leadership in attaining intellectual, political, and financial support for skin-related scientific investigation. The SID will be—and be viewed as—a significant force in shaping public policy. As a result of recruiting, nurturing, and mentoring the next generation of scientists, it will be a financially robust and self-sustaining organization.

Core Values

- Integrity
- Collegiality
- Shared beliefs
- Innovation
- Leadership



Commercial Support (Confirmed as of March 15, 2012)



2012 Exhibitors

- BCCNS Life Support Network
CellnTec Advanced Cell Systems
Coalition of Skin Diseases
Cutaneous Lymphoma Foundation
F.I.R.S.T.
International Investigative Dermatology 2013 (IID 2013)
National Alopecia Areata Foundation
National Foundation for Ectodermal Dysplasias
National Institute of Arthritis and Musculoskeletal and Skin Diseases
Nature Publishing Group
Pfizer, Inc.
STE, Inc.
Zen-Bio, Inc.

Future Annual Meetings

May 8 - 11, 2013

International Investigative Dermatology
Edinburgh, Scotland

May 7 - 10, 2014

Albuquerque Convention Center
Albuquerque, New Mexico

May 6 - 9, 2015

Hilton Atlanta
Atlanta, Georgia

May 11 - 14, 2016

The Westin Kierland Resort & Spa
Scottsdale, AZ

Officers

Kim Yancey, MD
President

Robert Modlin, MD
Vice President

Thomas Kupper, MD
President-elect

Rivkah Isseroff, MD
Vice President-elect

Kathleen Green, PhD
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Secretary-Treasurer

Alice Pentland, MD
Assistant Secretary-Treasurer

Paul Bergstresser, MD
JID Editor

Lowell Goldsmith, MD MPH
SID Senior Medical & Scientific Advisor

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WELCOME TO RALEIGH

On behalf of the Society for Investigative Dermatology (SID), we welcome you to the 2012 Annual Meeting. This year marks the 75th Anniversary of the Society, so we are planning a variety of special activities to celebrate the rich history of our organization.

Our host city, Raleigh, was named after famed explorer Sir Walter Raleigh. It is a fitting place for our research community to celebrate its anniversary, share advances in cutaneous biology and dermatology, and expand new scientific frontiers.

The SID scientific program incorporates research from multiple specialties and disciplines. It also offers a broad array of special tracks, symposia, and networking sessions. We would like to thank the 2011-2012 Committee on Scientific Programs for their dedication in developing an outstanding program.

SID Committee on Scientific Programs

Co-Chairs

David Margolis, MD/PhD
Anthony Oro, MD/PhD

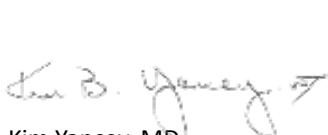
Committee Members

Jack Arbiser, MD/PhD
Anthony Gaspari, MD
Sam Hwang, MD/PhD
Sarah Millar, PhD
Mitchell Denning, PhD
Tom Hornyak, MD/PhD
My Mahoney, PhD
Julie Segre, PhD

Since its founding in 1937, the Society has been committed to facilitating the careers of young investigators by providing a dynamic forum in which a diverse group of scientists can interact. We remain fully committed to this goal.

We have scheduled a variety of activities to highlight scientific advances made by our community. Our Society strives to offer programming that reaches all members of the dermatology and cutaneous biology research communities.

Thank you for your support of the SID.



Kim Yancey, MD
President



Russell Hall, MD
Secretary-Treasurer



Alice Pentland, MD
Asst. Secretary-Treasurer



Photos of Raleigh courtesy of GRCVB/visitRaleigh.com



**Society for
Investigative
Dermatology**



*City Of Raleigh
North Carolina*

Nancy McFarlane
Mayor

Welcome to Raleigh!

On behalf of the members of the Raleigh City Council and the more than 404,000 residents of our city, I would like to welcome the Society for Investigative Dermatology Conference to Raleigh, North Carolina. We are glad to be your host city.

It is an honor to have you here, and we are especially excited that you have chosen to hold SID's 75th Anniversary Celebration in Raleigh. SID and Raleigh have a lot in common! With your longstanding reputation of being on the forefront of scientific research, it is appropriate to meet in Raleigh where research, technology and medicine are the mainstays of our local economy. We are proud of our reputation and that of nearby Research Triangle Park and know your attendees will feel at home while they are here.

While you are here, we hope that you will explore and experience our great city. Raleigh is known for its hospitality and we invite you to see all that it has to offer. Great cultural attractions, fine restaurants and world class entertainment are just a few steps away from the Raleigh Convention Center. Our complimentary R-Line connector service makes it easy to get around when you want to adventure a little further away. The Visitor Information Center inside the Raleigh Marriott City Center, Tourism Ambassadors and Downtown Ambassadors are all close by and available to help you find your way.

Again, thank you for choosing Raleigh, welcome to the City and we wish you a successful conference!

Sincerely,

Nancy McFarlane

Nancy McFarlane
Mayor

Telephone: 919.996.3060

Office • 222 West Hargett Street • Post Office Box 590 • Raleigh, North Carolina 27602-0580
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CME STATEMENT & OBJECTIVES

The Duke Department of Dermatology presents the 2012 Society for Investigative Dermatology Annual Meeting.
Jointly sponsored by:



Commercial Support Statement

This CME activity is supported by educational grants from Abbott, Ceptaris Therapeutics, Genentech, Medicis, Merz Pharmaceuticals, and Valeant Pharmaceuticals International, Inc.

Statement of Need

The educational programming of the SID is designed to develop, maintain, and/or increase the abilities, skills, and professional performance of its target audiences.

SID CME activities will:

- 1) Disseminate updated evidence-based knowledge of skin biology/disease and applications for maintaining health and preventing, diagnosing, and treating disease in a manner that fosters scientific excellence, elevates the standard of care, and meets high ethical standards.
- 2) Provide target audiences with a relevant forum for the exchange of cutting-edge scientific ideas, information, and methodology.
- 3) Advance the science involved in basic skin biology and clinical care of patients with skin disease.
- 4) Provide exposure to novel science (both concepts and methods) which may be relevant in the future to understanding and treatment skin disease.

Target Audience

The primary target audiences for SID CME activities include all of the sectors of the dermatology community, consisting of research investigators, clinicians, research and clinical trainees, members of industry, and community advocates for skin health/disease.

Learning Objectives

At the conclusion of this activity, participants should be able to:

- Identify which disease states require new or additional research
- Evaluate state-of-the-art information relating to basic skin biology research
- Describe how newly discovered, evidence-based scientific information may or may not be applied to the current practice of investigative or clinical dermatology
- Apply strategies to structure and design successful research proposals, abstracts, and manuscripts
- Facilitate interdisciplinary and/or collaborative investigation in clinical dermatology and skin biology to improve research hypotheses, processes and/or techniques
- Incorporate knowledge gained from interactions between basic scientists and clinicians into daily decision-making

Faculty Listing

Activity Medical Director:

Russell P. Hall, III, MD
Chairman, Department of Dermatology
Duke University Medical Center

Activity Co-Director:

Alice P. Pentland, MD
Chair, Department of Dermatology
University of Rochester

Summary of Faculty Disclosure/Conflict Resolution

Staff and Content Validation Reviewer Disclosure

The staff involved with this activity and any content validation reviewers of this activity have reported no relevant financial relationships with commercial interests.

Resolution of Conflicts of Interest

In accordance with the ACCME Standards of Commercial Support of CME, the Duke University School of Medicine will implement mechanisms, prior to the planning and implementation of this CME activity, to identify and resolve conflicts of interest for all individuals in a position to control content of this CME activity.

Planning Committee/Faculty Disclosure

See addendum for a list of speakers and/or planning committee members who have indicated that they have no relationship(s) with industry to disclose relative to the content of this CME activity. Please see addendum for a list of speakers and/or planning committee members who have indicated they have relationship(s) with industry to disclose.

Unapproved Use Disclosure Statement

Duke School of Medicine requires CME faculty (speakers) to disclose to attendees when products or procedures being discussed are off-label, unlabeled, experimental, and/or investigational (not FDA approved); and any limitations on the information that is presented, such as data that are preliminary or that represent ongoing research, interim analyses, and/or unsupported opinion. This information is intended solely for continuing medical education and is not intended to promote off-label use of these medications. If you have questions, contact the medical affairs department of the manufacturer for the most recent prescribing information. Faculty will not be discussing information about pharmaceutical agents that is outside of U.S. Food and Drug Administration approved labeling.

Disclaimer

The information provided at this CME activity is for continuing education purposes only and is not meant to substitute for the independent medical judgment of a healthcare provider relative to diagnostic and treatment options of a specific patient's medical condition.

Instructions on How to Receive Credit

In order to receive CME credit, participants must sign-in, review the CME information (accreditation, learning objectives, faculty disclosures, etc.) and attend the CME activity. Participants should also complete the attestation and activity evaluation forms and return them to the Society for Investigative Dermatology via fax to 216-579-9333 or mail to:

Society for Investigative Dermatology / CME
526 Superior Avenue E, Suite 540
Cleveland, OH 44114

Accreditation Statement

This activity has been planned and implemented in accordance with the Essential Areas and Policies of the Accreditation Council for Continuing Medical Education through the joint sponsorship of the Duke University School of Medicine and the Society for Investigative Dermatology. The Duke University School of Medicine is accredited by the ACCME to provide continuing medical education for physicians.

AMA Credit Statement

The Duke University School of Medicine designates this live activity for a maximum of 36.50 AMA PRA Category 1 Credit(s)TM. Physicians should only claim credit commensurate with the extent of their participation in the activity.

MEETING-AT-A-GLANCE

Wednesday, May 9, 2012

Resident Retreat for Future Academicians Raleigh Convention Center 305 A/B	7:00 am - 3:00 pm
PhD Retreat Raleigh Convention Center 305 A/B	7:00 am - 3:00 pm
SID Board of Directors Meeting Raleigh Convention Center 402	7:00 am - 2:00 pm
Pachyonychia Congenita Project (PC Project) Raleigh Convention Center 301 A/B	8:00 am - 3:00 pm
Registration Raleigh Convention Center 300 Level Registration Area	8:00 am - 6:30 pm
American Acne and Rosacea Society Raleigh Convention Center 302 A	10:30 am - 12:00 pm
Atopic Dermatitis Conference Raleigh Convention Center Ballroom B/C	12:00 pm - 3:00 pm
Irvin H. Blank Forum <i>Translating the Genetics of Disease into Therapeutics</i> Raleigh Convention Center Ballroom B/C	3:00 pm - 5:00 pm
Albert M. Kligman/Phillip Frost Leadership Lecture <i>Keeping an Eye on Cutaneous Biology</i> Robert Lavker, PhD Raleigh Convention Center Ballroom B/C	5:00 pm - 5:30 pm
State-of-the-Art Plenary Lecture 1 <i>Stem Cell Regulation by Stem Cells in Hair Follicles</i> Emi Nishimura, MD/PhD Raleigh Convention Center Ballroom B/C	5:30 pm - 6:00 pm
State-of-the-Art Plenary Lecture 2 <i>Opportunities for Discovery Utilizing Next Generation Sequencing Technology</i> Keith Choate, MD/PhD Raleigh Convention Center Ballroom B/C	6:00 pm - 6:30 pm
Welcome Reception Raleigh Convention Center Grand Lobby and Outside Patio	7:00 pm - 8:30 pm

Indicates CME Credit Offered

Thursday, May 10, 2012

Society for Pediatric Dermatology Raleigh Convention Center 206	7:00 am - 8:00 am
Registration Raleigh Convention Center 300 Level Registration Area	7:30 am - 4:00 pm
Plenary Session I Raleigh Convention Center Ballroom B/C	8:00 am - 9:00 am
Eugene M. Farber Lecture <i>Genomics Meets the Immune System: An Integrated Systems Perspective on Psoriasis</i> Frank Nestle, MD Raleigh Convention Center Ballroom B/C	9:00 am - 9:30 am
Naomi M. Kanof Lecture <i>The Neurofibroma Story: A Role for Mast Cells in Tumor Potentiation and Clinical Implications</i> Luis Parada, PhD Raleigh Convention Center Ballroom B/C	9:30 am - 10:00 am
American Skin Association Achievement Awards Raleigh Convention Center Ballroom B/C	10:00 am - 10:10 am
David Martin Carter Mentor Award <i>Presented to Stuart Yuspa, MD</i> Raleigh Convention Center Ballroom B/C	10:10 am - 10:15 am
Poster Session I/Technical Exhibits Open w/coffee break <i>Odd 001-287 / Even 288-574</i> Raleigh Convention Center Exhibit Hall A	10:00 am - 12:00 pm
Research in Cutaneous Surgery Raleigh Convention Center 305 A	10:00 am - 1:00 pm
Young Investigator and Trainee Symposium <i>Developing an Academic Career</i> Raleigh Convention Center 302 A	10:00 am - 1:30 pm
Clinical Scholars Plenary Session Raleigh Convention Center 305 B	10:15 am - 12:15 pm
JDS Editorial Board Luncheon Raleigh Convention Center 307	12:00 pm - 1:30 pm
Merkel Cell Carcinoma Symposium Raleigh Convention Center Ballroom B/C	12:00 pm - 2:00 pm
Concurrent Minisymposia <ul style="list-style-type: none"> 1. Photobiology Raleigh Convention Center 305 B 2. Auto-immunity and Inflammation Raleigh Convention Center 306 C 3. Cell Adhesion/Matrix Biology Raleigh Convention Center 302 B 4. Epidemiology/Health Services Research Raleigh Convention Center 306 B 5. Hair and Cutaneous Development Raleigh Convention Center 305 A 	2:00 pm - 5:30 pm
Cutaneous T Cell Lymphoma Symposium <i>International Society for Cutaneous Lymphomas Scientific (ISCL) & Cutaneous Lymphoma Foundation (CLF)</i> Raleigh Convention Center 302 A	2:00 pm - 5:30 pm
Social Event <i>TICKETED EVENT; PRE-REGISTRATION REQUIRED</i> <i>See page 46 for additional information.</i> Raleigh Convention Center Ballroom A	6:00 pm - 10:00 pm

Friday, May 11, 2012

Society for Pediatric Dermatology Raleigh Convention Center 206	7:00 am - 8:00 am
Registration Raleigh Convention Center 300 Level Registration Area	7:30 am - 4:00 pm
Business Meeting for Members Raleigh Convention Center Ballroom B/C	7:45 am - 8:30 am
Plenary Session II Raleigh Convention Center Ballroom B/C	8:30 am - 9:30 am
Stephen Rothman Award <i>Presented to Paul Bergstresser, MD</i> Raleigh Convention Center Ballroom B/C	9:30 am - 9:40 am
Herman Beerman Lecture <i>Why Don't We Get More Cancer: A Proposed Role of the Microenvironment in Restraining Cancer Progression</i> Mina Bissell, PhD Raleigh Convention Center Ballroom B/C	9:40 am - 10:10 am
State-of-the-Art Plenary Lecture 3 <i>Cytoskeletal Organization and Function in the Epidermis</i> Terry Lechner, PhD Raleigh Convention Center Ballroom B/C	10:15 am - 10:45 am
State-of-the-Art Plenary Lecture 4 <i>Genomic Tracking of Microbial Pathogens</i> Julie Segre, PhD Raleigh Convention Center Ballroom B/C	10:45 am - 11:15 am
BCCNS Life Support Network Raleigh Convention Center 301 A/B	11:00 am - 1:00 pm
Poster Session II/Technical Exhibits Open w/coffee break <i>Even 002-286 / Odd 575-863</i> Raleigh Convention Center Exhibit Hall A	11:15 am - 1:15 pm
Clinical Scholars Program Raleigh Convention Center 305 B	11:30 am - 1:30 pm
National Alopecia Areata Foundation Raleigh Convention Center 307	11:45 am - 1:30 pm
Genomic Technology Workshop Raleigh Convention Center Ballroom B/C	12:00 pm - 2:00 pm
Academic Dermatologists Luncheon <i>Sponsored by the Women's Dermatology Society</i> Raleigh Convention Center 302 B/C	12:00 pm - 2:00 pm
Concurrent Minisymposia	2:00 pm - 5:30 pm
6. Immunology II: Innate Immunity and Microbiology Raleigh Convention Center 305 B	
7. Human Clinical Research and Therapeutics Raleigh Convention Center 306 C	
8. Epidermal Structure and Function Raleigh Convention Center 306 B	
9. Carcinogenesis, Growth Factors, and Cancer Genetics Raleigh Convention Center 305 A	
JID Editorial Board Meeting Raleigh Convention Center 402	4:00 pm - 5:30 pm
Nanodermatology Society Raleigh Convention Center 302 A	4:00 pm - 7:00 pm
North American Hair Research Society Scientific Meeting Raleigh Convention Center 302 B/C	6:00 pm - 9:30 pm
Galderma Japan Scientific Forum Raleigh Convention Center 301 A/B	6:30 pm - 9:30 pm
Trainee Dinner Session Raleigh Convention Center Ballroom A	7:30 pm - 9:30 pm

Saturday, May 12, 2012

SID Board of Directors Meeting Raleigh Convention Center 402	7:00 am - 8:00 am
Registration Raleigh Convention Center 300 Level Registration Area	7:30 am - 12:00 pm
Plenary Session III Raleigh Convention Center Ballroom B/C	8:00 am - 9:00 am
American Dermato-Epidemiology Network Business/Scientific Session Raleigh Convention Center 302 A	8:00 am - 12:00 pm
William Montagna Lecture <i>Genome Regulation by Long Noncoding RNAs</i> Howard Chang, MD/PhD Raleigh Convention Center Ballroom B/C	9:00 am - 9:30 am
Julius Stone Lecture <i>The Hyper IgE Syndromes</i> Rebecca Buckley, MD Raleigh Convention Center Ballroom B/C	9:30 am - 10:00 am
Poster Session III/Technical Exhibits Open w/coffee break <i>Odd 289-573 / Even 576-864</i> Raleigh Convention Center Exhibit Hall A	10:00 am - 12:00 pm
Clinical Scholars Program Raleigh Convention Center Room 305 B	10:15 am - 12:15 pm
Concurrent Minisymposia	12:30 pm - 4:00 pm
10. Pigmentation and Melanoma Raleigh Convention Center 306 B	
11. Genetic Disease, Gene Regulation and Gene Therapy Raleigh Convention Center 305 B	
12. Tissue Regeneration, Stem Cells and Wound Healing Raleigh Convention Center 306 C	
13. Immunology I: Adaptive Immunity Raleigh Convention Center 305 A	

EDUCATIONAL TRACKS

The SID is pleased to offer two educational tracks within the 2012 Annual Meeting: the Clinical Scholars Track and the Young Investigator & Trainee Track.

The SID has been increasing the variety of sessions offered at the Annual Meeting that are geared toward residents, fellows, students and clinicians. The track system is an easy way for attendees to find and select the components of the Meeting that are best suited to their interests. The tracks include portions of the Meeting that are the most inter-related, providing attendees with a cohesive learning experience. By participating in a track, attendees will have the added benefit of attending sessions with their peers, providing significant opportunities for networking. You must be registered to attend educational track programming. Spaces are limited, and early registration is recommended. Registration will remain open until all spaces are filled.

The following pages outline the programming that is suggested to attendees participating in educational tracks. Track participants are encouraged to attend other portions of the Meeting as well.

Clinical Scholars Track

- **Designed for practicing dermatologists and educators who need overviews of current research topics and insight into the latest developments in skin disease and health research**

The Clinical Scholars program focuses on providing the latest findings on cutting-edge research in a way that better reaches dermatologists not directly involved in bench research. This program combines clinically-oriented elements of the Meeting with special lectures on topics such as:

- The mTOR Pathway and Dermatologic Disease
- Stem Cell Therapy/Epidermolysis bullosa
- Role of IL-17 in Psoriasis and Other Skin Diseases
- Update on Atopic Dermatitis
- The Impact of High Throughput Sequencing in Genetic Skin Disease
- Notch and SCC

Young Investigator & Trainee Track

- **Designed for early career dermatology investigators and residents to learn about the latest developments in skin research as well as to gain insight into career development in dermatological research**

This track combines clinically-oriented elements of the Meeting with elements of the Clinical Scholars program and a special symposium for young investigators. This year's symposium, "Developing an Academic Career" includes the following lecture topics:

- What Does an Academic Career in Investigative Dermatology Really Mean, and Is It Right for You?
- Finding the Right Job and Negotiating a Contract
- Making the Most of Mentorship: From Finding a Mentor to Being One
- Funding: A Brief Overview of Funding Opportunities Available to Young Investigators, and Strategies to Improve Your Grant Application
- Putting It All Together: Words of Advice on Finding a Niche, Building Collaborations, and Mentoring
- What Can the SID Do for Me?

CLINICAL SCHOLARS TRACK (SUGGESTED PROGRAMMING)

Wednesday, May 9, 2012

Atopic Dermatitis Conference Raleigh Convention Center Ballroom B/C	12:00 pm - 3:00 pm
Irvin H. Blank Forum <i>Translating the Genetics of Disease into Therapeutics</i> Raleigh Convention Center Ballroom B/C	3:00 pm - 5:00 pm
Albert M. Kligman/Phillip Frost Leadership Lecture <i>Keeping an Eye on Cutaneous Biology</i> Robert Lavker, PhD Raleigh Convention Center Ballroom B/C	5:00 pm - 5:30 pm
State-of-the-Art Plenary Lecture 1 <i>Stem Cell Regulation by Stem Cells in Hair Follicles</i> Emi Nishimura, MD/PhD Raleigh Convention Center Ballroom B/C	5:30 pm - 6:00 pm
State-of-the-Art Plenary Lecture 2 <i>Opportunities for Discovery Utilizing Next Generation Sequencing Technology</i> Keith Choate, MD/PhD Raleigh Convention Center Ballroom B/C	6:00 pm - 6:30 pm
Welcome Reception Raleigh Convention Center Grand Lobby & Outside Patio	7:00 pm - 8:30 pm

Thursday, May 10, 2012

Plenary Session I Raleigh Convention Center Ballroom B/C	8:00 am - 9:00 am
Naomi M. Kanof Lecture <i>The Neurofibroma Story: A Role for Mast Cells in Tumor Potentiation and Clinical Implications</i> Luis Parada, PhD Raleigh Convention Center Ballroom B/C	9:30 am - 10:00 am
Clinical Scholars Program Raleigh Convention Center 305 B	10:15 am - 12:15 pm
Concurrent Minisymposia	2:00 pm - 5:30 pm
1. Photobiology Raleigh Convention Center 305 B	
2. Auto-immunity and Inflammation Raleigh Convention Center 306 C	
3. Cell Adhesion/Matrix Biology Raleigh Convention Center 302 B	
4. Epidemiology/Health Services Research Raleigh Convention Center 306 B	
5. Hair and Cutaneous Development Raleigh Convention Center 305 A	
Cutaneous T Cell Lymphoma Symposium Raleigh Convention Center 302 A	2:00 pm - 5:30 pm
Social Event <i>TICKETED EVENT; PRE-REGISTRATION REQUIRED</i> See page 46 for additional information. Raleigh Convention Center Ballroom A	6:00 pm - 10:00 pm

Friday, May 11, 2012

Plenary Session II Raleigh Convention Center Ballroom B/C	8:30 am - 9:30 am
Herman Beerman Lecture <i>Why Don't We Get More Cancer: A Proposed Role of the Microenvironment in Restraining Cancer Progression</i> Mina Bissell, PhD Raleigh Convention Center Ballroom B/C	9:40 am - 10:10 am
State-of-the-Art Plenary Lecture 3 <i>Cytoskeletal Organization and Function in the Epidermis</i> Terry Lechler, PhD Raleigh Convention Center Ballroom B/C	10:15 am - 10:45 am
State-of-the-Art Plenary Lecture 4 <i>Genomic Tracking of Microbial Pathogens</i> Julie Segre, PhD Raleigh Convention Center Ballroom B/C	10:45 am - 11:15 am
Clinical Scholars Program Raleigh Convention Center 305 B	11:30 am - 1:30 pm
Concurrent Minisymposia	2:00 pm - 5:30 pm
6. Immunology II: Innate Immunity and Microbiology Raleigh Convention Center 305 B	
7. Human Clinical Research and Therapeutics Raleigh Convention Center 306 C	
8. Epidermal Structure and Function Raleigh Convention Center 306 B	
9. Carcinogenesis, Growth Factors, and Cancer Genetics Raleigh Convention Center 305 A	

Saturday, May 7, 2011

Plenary Session III Raleigh Convention Center Ballroom B/C	8:00 am - 9:00 am
William Montagna Lecture <i>Genome Regulation by Long Noncoding RNAs</i> Howard Chang, MD/PhD Raleigh Convention Center Ballroom B/C	9:00 am - 9:30 am
Julius Stone Lecture <i>The Hyper IgE Syndromes</i> Rebecca Buckley, MD Raleigh Convention Center Ballroom B/C	9:30 am - 10:00 am
Clinical Scholars Program Raleigh Convention Center 305 B	10:15 am - 12:15 pm
Concurrent Minisymposia	12:30 pm - 4:00 pm
10. Pigmentation and Melanoma Raleigh Convention Center 306 B	
11. Genetic Disease, Gene Regulation and Gene Therapy Raleigh Convention Center 305 B	
12. Tissue Regeneration, Stem Cells and Wound Healing Raleigh Convention Center 306 C	
13. Immunology I: Adaptive Immunity Raleigh Convention Center 305 A	

YOUNG INVESTIGATOR & TRAINEE TRACK (SUGGESTED PROGRAMMING)

Wednesday, May 9, 2012

Atopic Dermatitis Conference Raleigh Convention Center Ballroom B/C	12:00 pm - 3:00 pm
Irvin H. Blank Forum <i>Translating the Genetics of Disease into Therapeutics</i> Raleigh Convention Center Ballroom B/C	3:00 pm - 5:00 pm
Albert M. Kligman/Phillip Frost Leadership Lecture <i>Keeping an Eye on Cutaneous Biology</i> Robert Lavker, PhD Raleigh Convention Center Ballroom B/C	5:00 pm - 5:30 pm
State-of-the-Art Plenary Lecture 1 <i>Stem Cell Regulation by Stem Cells in Hair Follicles</i> Emi Nishimura, MD/PhD Raleigh Convention Center Ballroom B/C	5:30 pm - 6:00 pm
State-of-the-Art Plenary Lecture 2 <i>Opportunities for Discovery Utilizing Next Generation Sequencing Technology</i> Keith Choate, MD/PhD Raleigh Convention Center Ballroom B/C	6:00 pm - 6:30 pm
Welcome Reception Raleigh Convention Center Grand Lobby & Outside Patio	7:00 pm - 8:30 pm

Thursday, May 10, 2012

Plenary Session I Raleigh Convention Center Ballroom B/C	8:00 am - 9:00 am
Eugene M. Farber Lecture <i>Genomics Meets the Immune System: An Integrated Systems Perspective on Psoriasis</i> Frank Nestle, MD Raleigh Convention Center Ballroom B/C	9:00 am - 9:30 am
Naomi M. Kanof Lecture <i>The Neurofibroma Story: A Role for Mast Cells in Tumor Potentiation and Clinical Implications</i> Luis Parada, PhD Raleigh Convention Center Ballroom B/C	9:30 am - 10:00 am
Young Investigator and Trainee Symposium <i>Developing an Academic Career</i> Raleigh Convention Center 302 A	10:00 am - 1:30 pm
Concurrent Minisymposia 1. Photobiology Raleigh Convention Center 305 B 2. Auto-immunity and Inflammation Raleigh Convention Center 306 C 3. Cell Adhesion/Matrix Biology Raleigh Convention Center 302 B 4. Epidemiology/Health Services Research Raleigh Convention Center 306 B 5. Hair and Cutaneous Development Raleigh Convention Center 305 A	2:00 pm - 5:30 pm
Social Event <i>TICKETED EVENT; PRE-REGISTRATION REQUIRED</i> See page 46 for additional information. Raleigh Convention Center Ballroom A	6:00 pm - 10:00 pm

Friday, May 11, 2012

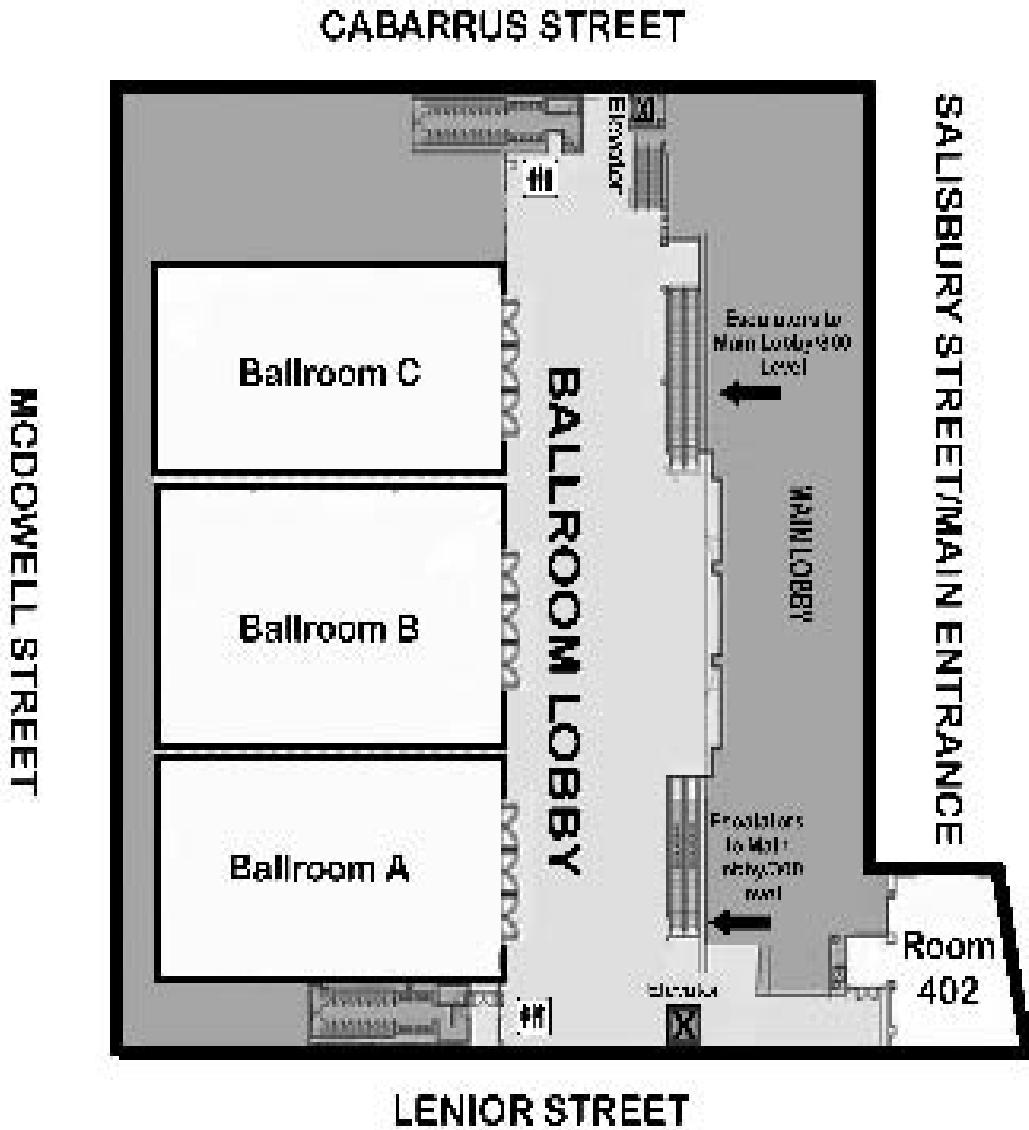
Plenary Session II Raleigh Convention Center Ballroom B/C	8:30 am - 9:30 am
Herman Beerman Lecture <i>Why Don't We Get More Cancer: A Proposed Role of the Microenvironment in Restraining Cancer Progression</i> Mina Bissell, PhD Raleigh Convention Center Ballroom B/C	9:40 am - 10:10 am
State-of-the-Art Plenary Lecture 3 <i>Cytoskeletal Organization and Function in the Epidermis</i> Terry Lechler, PhD Raleigh Convention Center Ballroom B/C	10:15 am - 10:45 am
State-of-the-Art Plenary Lecture 4 <i>Genomic Tracking of Microbial Pathogens</i> Julie Segre, PhD Raleigh Convention Center Ballroom B/C	10:45 am - 11:15 am
Clinical Scholars Program Raleigh Convention Center 305 B	11:30 am - 1:30 pm
Concurrent Minisymposia 6. Immunology II: Innate Immunity and Microbiology Raleigh Convention Center 305 B 7. Human Clinical Research and Therapeutics Raleigh Convention Center 306 C 8. Epidermal Structure and Function Raleigh Convention Center 306 B 9. Carcinogenesis, Growth Factors, and Cancer Genetics Raleigh Convention Center 305 A	2:00 pm - 5:30 pm
Trainee Dinner Session Raleigh Convention Center Ballroom A	7:30 pm - 9:30 pm

Saturday, May 12, 2012

Plenary Session III Raleigh Convention Center Ballroom B/C	8:00 am - 9:00 am
William Montagna Lecture <i>Genome Regulation by Long Noncoding RNAs</i> Howard Chang, MD/PhD Raleigh Convention Center Ballroom B/C	9:00 am - 9:30 am
Julius Stone Lecture <i>The Hyper IgE Syndromes</i> Rebecca Buckley, MD Raleigh Convention Center Ballroom B/C	9:30 am - 10:00 am
Clinical Scholars Program Raleigh Convention Center 305 B	10:15 am - 12:15 pm
Concurrent Minisymposia 10. Pigmentation and Melanoma Raleigh Convention Center 306 B 11. Genetic Disease, Gene Regulation and Gene Therapy Raleigh Convention Center 305 B 12. Tissue Regeneration, Stem Cells and Wound Healing Raleigh Convention Center 306 C 13. Immunology I: Adaptive Immunity Raleigh Convention Center 305 A	12:30 pm - 4:00 pm

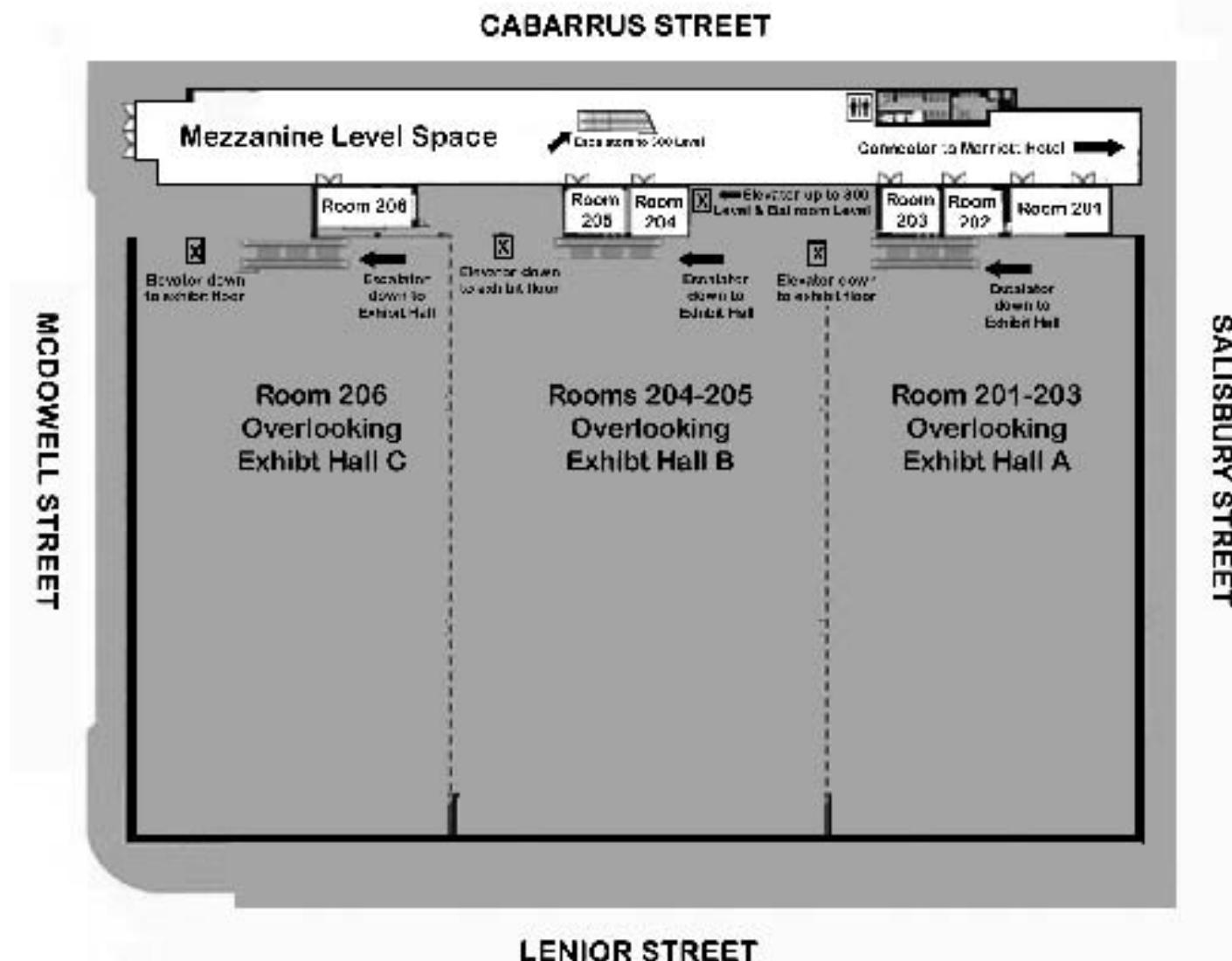
RALEIGH CONVENTION CENTER MAPS

Ballroom Level



RALEIGH CONVENTION CENTER MAPS

200 Level

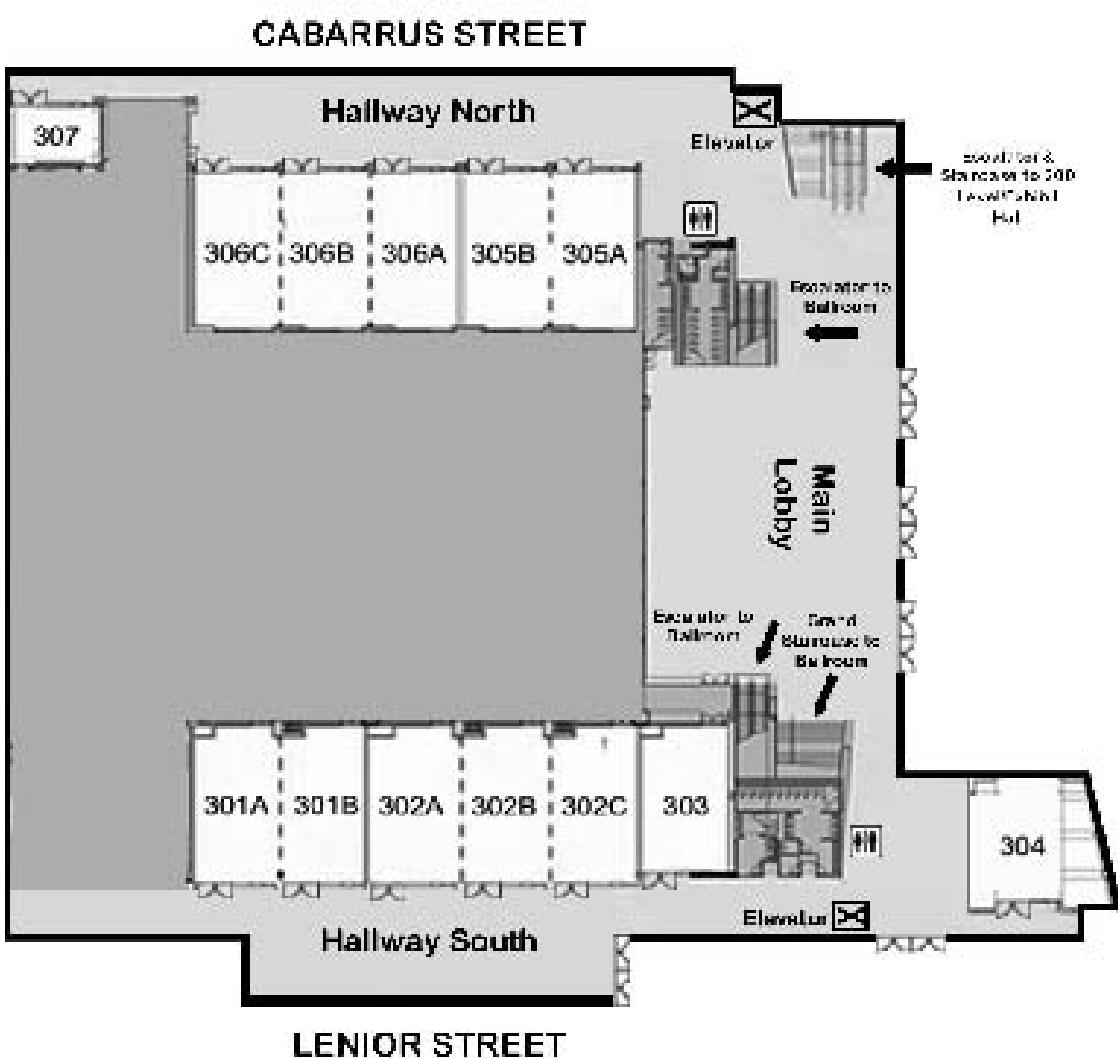


RALEIGH CONVENTION CENTER MAPS

300 Level

MCDOWELL STREET

SALISBURY STREET/MAIN ENTRANCE



The



congratulates the SID
on *75 amazing* years
serving the
skin research community.

May 2012



American Academy of Dermatology
Excellence in Dermatology™

On behalf of the American Academy of Dermatology (AAD), I want to congratulate the Society for Investigative Dermatology on its 75th anniversary! The SID has an important history of scientific advancement and promoting research within the field of dermatology, and has been an important partner to the Academy throughout the years.

Since its founding in 1937, the Society has served as the forward guard of research in dermatology, and has consistently been on the edge of discovery in our field. The scientific contributions that SID and its members have made since its founding have been numerous and valuable, not only to scientists and researchers, but to policymakers, physicians, and patients as well. Furthermore, the *Journal of Investigative Dermatology* presents important basic and clinical research and has become an important resource to dermatologists and clinicians around the world. Basic science often provides the necessary foundation for improving patient care and, ultimately, quality of life for patients.

Throughout the shared history of our two organizations, SID has partnered with AAD to further the interests of our field. The strong leadership and vision of the Society have contributed to many successful collaborative efforts over the years. While fulfilling complementary missions, the Society and the Academy have made cooperation a priority, and both our organizations and the field of dermatology are better for it.

Now, as the Society prepares for the next 75 years, I am confident that the great work will continue unabated. Again, I offer congratulations on behalf of the Academy, and I look forward to many more years of strong partnership. Best wishes to the Society on this momentous occasion.

Sincerely,

A handwritten signature in black ink, appearing to read "Daniel M. Siegel, MD, MS, FAAD".

Daniel M. Siegel, MD, MS, FAAD
President

1445 New York Avenue, NW
Suite 820
Washington, DC 20005-2131

Main: 202.842.9555
Fax: 202.842.4925
Website: www.aad.org

Daniel M. Siegel, MD, MS, FAAD
President

Dirk M. Elston, MD, FAAD
President-Elect

Zen D. Dierkes, MD, FAAD
Vice President

Daniel M. Siegel, MD, NPH, FAAD
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Ronald A. Hendrich, CAE
Executive Director & CEO



SID

Society for Investigative Dermatology

Contributors to the SID Named Lecture Fund (*as of March 16, 2012*)

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Murad Alam	Desmond D. Gibson	Leonard M. Milstone
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Masayuki M. Amagai	Barbara A. Gilchrest	John P. Minnillo
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Theresa Chen	Rivkah Isseroff	David S. Rubenstein
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George Cotsarelis	Lloyd King	John R. Stanley
Dr. Alan M. Dattner	Heidi H Kong	Kurt S. Stenn
Harold M. Davidson	Andrew P. Kowalczyk	John & Susan Strauss
Robert M. Day	Atsushi Kukita	George Stricklin
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Anna Di Nardo	Joseph W. Landau	Jeffrey Travers
Luis Diaz	Alfred T Lane	Maria L. Turner
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Tatiana Efimova	Robert M Lavker	Eugene J. Van Scott
Arthur Z. Eisen	Thomas J. Lawley	Bruce U. Wintroub
Ervin H. Epstein	Gerald Lazarus	Kim B. Yancey
Janet A. Fairley	Mark G. Lebwohl	Stuart & Eleanor Yuspa
Steve Feldman	Ethan A. Lerner	
Robert Fine	Wilson Joe Liao	
David Fisher	Fu-Tong Liu	
Phillip Fleckman	Marshfield Clinic	

MEETING INFORMATION & POLICIES

Reproduction and Photography Policy

Any photography, filming, taping, recording or reproduction in any medium of any of the programs, exhibits, or lectures (oral or posters) presented at the 2012 SID Annual Meeting is strictly forbidden. **Failure to comply with this rule may lead to the removal of your Meeting credentials.**

On-site Registration

On-site registration will take place at the SID Registration Counter at the 300-level registration area in the Raleigh Convention Center during the following hours:

Wednesday, May 9, 2012 • 8:00 am - 6:30 pm
Thursday, May 10, 2012 • 7:30 am - 4:00 pm
Friday, May 11, 2012 • 7:30 am - 4:00 pm
Saturday, May 12, 2012 • 7:30 am - 12:00 pm

Badges

Badges are issued at the SID Registration Counter (300-level registration area in the Raleigh Convention Center). Meeting attendees are required to wear their badges at all times for admission to all sessions and other Meeting activities.

Special Services for the Physically Challenged

This year's facilities are fully accessible to the physically challenged. If you have any special needs, please stop at the Registration Counter upon arrival or call the SID office at 216-579-9300.

Placement Services

The SID is pleased to offer a placement service to its members. A placement/job postings page is available to members on the SID website at www.sidnet.org. In addition, prospective employers and candidates may conduct interviews or post additional announcements at the Meeting. A board will be available in the registration area.

Technical Exhibits

Exhibits will be on display during the following times in Exhibit Hall A of the Raleigh Convention Center:

Thursday, May 10, 2012 • 10:00 am - 12:00 pm
Friday, May 11, 2012 • 11:15 am - 1:15 pm
Saturday, May 12, 2012 • 10:00 am - 12:00 pm

The SID welcomes representatives from the following organizations:

BCCNS Life Support Network
CellInTec Advanced Cell Systems
Coalition of Skin Diseases
Cutaneous Lymphoma Foundation
F.I.R.S.T.
International Investigative Dermatology 2013 (IID 2013)
National Alopecia Areata Foundation
National Foundation for Ectodermal Dysplasias
National Institute of Arthritis and Musculoskeletal and Skin Diseases
Nature Publishing Group
Pfizer, Inc.
STE, Inc.
Zen-Bio, Inc.

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24	Albert M. Kligman / Phillip Frost Leadership Lecture
25	State-of-the-Art Plenary Lectures 1 and 2
26	Welcome Reception

WEDNESDAY MEETING-AT-A-GLANCE

Wednesday, May 9, 2012

Resident Retreat for Future Academicians Raleigh Convention Center 305 A/B	7:00 am - 3:00 pm
PhD Retreat Raleigh Convention Center 305 A/B	7:00 am - 3:00 pm
SID Board of Directors Meeting Raleigh Convention Center 402	7:00 am - 2:00 pm
Registration Raleigh Convention Center 300 Level Registration Area	8:00 am - 6:30 pm
Pachyonychia Congenita Project (PC Project) Raleigh Convention Center 301 A/B	9:00 am - 3:00 pm
American Acne and Rosacea Society Raleigh Convention Center 302 A	10:30 am - 12:00 pm
Atopic Dermatitis Conference Raleigh Convention Center Ballroom B/C	12:00 pm - 3:00 pm
Irvin H. Blank Forum <i>Translating the Genetics of Disease into Therapeutics</i> Raleigh Convention Center Ballroom B/C	3:00 pm - 5:00 pm
Albert M. Kligman/Phillip Frost Leadership Lecture <i>Keeping an Eye on Cutaneous Biology</i> Robert Lavker, PhD Raleigh Convention Center Ballroom B/C	5:00 pm - 5:30 pm
State-of-the-Art Plenary Lecture 1 <i>Stem Cell Regulation by Stem Cells in Hair Follicles</i> Emi Nishimura, MD/PhD Raleigh Convention Center Ballroom B/C	5:30 pm - 6:00 pm
State-of-the-Art Plenary Lecture 2 <i>Opportunities for Discovery Utilizing Next Generation Sequencing Technology</i> Keith Choate, MD/PhD Raleigh Convention Center Ballroom B/C	6:00 pm - 6:30 pm
Welcome Reception Raleigh Convention Center Grand Lobby and Outside Patio	7:00 pm - 8:30 pm

ANCILLARY MEETINGS

WEDNESDAY, MAY 9, 2012

Resident Retreat for Future Academicians

7:00 am - 3:00 pm
Raleigh Convention Center 305 A/B

PhD Retreat

7:00 am - 3:00 pm
Raleigh Convention Center 305 A/B

SID Board of Directors Meeting

7:00 am - 2:00 pm
Raleigh Convention Center 402

Pachyonychia Congenita Project (PC Project)

8:00 am - 3:00 pm
Raleigh Convention Center 301 A/B

American Acne and Rosacea Society

10:30 am - 12:00 pm
Raleigh Convention Center 302 A

Indicates CME Credit Offered

ANCILLARY MEETINGS

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PhD Retreat
7:00 am - 3:00 pm
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Raleigh Convention Center 402

Pachyonychia Congenita Project (PC Project)
8:00 am - 3:00 pm
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American Acne and Rosacea Society
10:30 am - 12:00 pm
Raleigh Convention Center 302 A

INTERNATIONAL PACHYONYCHIA CONGENITA CONSORTIUM (PC PROJECT)

NO CME CREDIT OFFERED

Hosted by Pachyonychia Congenita Project

Wednesday, May 9, 2012
8:00 am – 3:00 pm (Pre-meeting Breakfast — 7:00 am – 7:45 am)
Raleigh Convention Center 301 A/B

OPEN TO ALL MEETING ATTENDEES

Keynote Speaker

Harnessing Stem Cell Gene Biology to Combat Genodermatoses
Jakub Tolar, MD/PhD, University of Minnesota, Minneapolis, Minnesota

Section 1: Diagnostics and Genetics

Chair: Dennis Roop, PhD, University of Colorado Anschutz Medical Campus

New approaches to the diagnostics of genodermatoses
Gabriele Richard, MD, GeneDx, Inc., Gaithersburg, Maryland

Update on Pachyonychia Congenita Genetics

Frances J.D. Smith, PhD, Epithelial Genetics Group, University of Dundee, Dundee, Scotland, United Kingdom

Frizzled 6 Gene

Regina C. Betz, MD, University of Bonn, Germany

Section 2: Research Studies

Chair: E. Birgit Lane, PhD, Institute of Medical Biology, Singapore

Review of the GO Delivery! Grant
Christopher H. Contag, PhD, Stanford University, Stanford, California

Keratinocytes and Pain

Michael J. Caterina, MD/PhD, Johns Hopkins School of Medicine, Baltimore, Maryland

BREAK

Nucleoside-modified messenger RNA for gene therapy
Katalin Kariko, PhD, and Drew Weissman, MD/PhD, University of Pennsylvania, Philadelphia, Pennsylvania

Update on Pachyonychia Congenita Research at TransDerm

Roger L. Kaspar, PhD, Robyn P. Hickerson, PhD, Tycho Speaker, PhD, TransDerm, Santa Cruz, California

K16 Null Mice

Juliane C. Kellner, PhD, Pierre A. Coulombe, PhD, Johns Hopkins Medical Institutions, Baltimore, Maryland

Keratins, Pachyonychia Congenita and Research Advances

W. H. Irwin McLean, PhD, Epithelial Genetics Group, University of Dundee, Dundee, Scotland, United Kingdom

HOSTED LUNCH

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INTERNATIONAL PACHYONYCHIA CONGENITA CONSORTIUM (PC PROJECT) (CONT'D)

Hosted by Pachyonychia Congenita Project

Wednesday, May 9, 2012

8:00 am – 3:00 pm (Pre-meeting Breakfast — 7:00 am – 7:45 am)

Raleigh Convention Center 301 A/B

OPEN TO ALL MEETING ATTENDEES

Section 3: PC Physician Network

Chair: Maurice van Steensel, MD/PhD, University Hospital Maastricht, The Netherlands

Trials and Tribulations

John A. McGrath, MD, St John's Institute of Dermatology, Kings College London, United Kingdom

Towards Differential Diagnosis: What We Have Learned From The IPCRR

Edel A. O'Toole, MB, BCh, PhD, FRCPI, DCH, Barts & the London, Queen Mary's, London, United Kingdom

Developing Best Practices For Pachyonychia Congenita

Ilan Goldberg, MD, Dermatology Department, Tel-Aviv Sourasky Medical Center, Tel Aviv, Israel

Painless Biopsies for PC Plantar Keratoderma

Leonard M. Milstone, MD, Yale School of Medicine, New Haven, Connecticut

DISCUSSION: Moving forward with clinical studies for Pachyonychia Congenita

Eli Sprecher, MD/PhD, Tel Aviv Sourasky Medical Center, Tel Aviv, Israel

For additional information, please contact:

Mary Schwartz, Director, PC Project

Tel: 877-628-7300 (toll free) / Fax: 877-628-7399

email: Mary.Schwartz@pachyonychia.org

ANCILLARY MEETINGS

WEDNESDAY, MAY 9, 2012

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Academicians

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ANCILLARY MEETINGS

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8:00 am - 3:00 pm
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10:30 am - 12:00 pm
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AMERICAN ACNE AND ROSACEA SOCIETY

NO CME CREDIT OFFERED

Wednesday, May 9, 2012
10:30 am - 12:00 pm
Raleigh Convention Center 302 A

OPEN TO ALL MEETING ATTENDEES

AARS Welcome and Overview
Diane Thiboutot, MD, AARS President

Recent Advances in Acne and Rosacea Research

Jenny Kim, MD/PhD, Assistant Professor, Dermatology, University of California, Los Angeles, California

1. Mast cells and neuropeptide expression are increased in erythematotelangiectatic rosacea in comparison to telangiectatic photoaging. Yolanda R Helfrich, James Varani, Gary Fisher, Craig Hammerberg, Allen Bruce, Andrew Lin, Lisa Maier, Dana Sachs and John Voorhees. Ann Arbor, MI and Portland, ME. 11:00 am, Poster #093
2. Inhibition of Rho-associated protein kinase (ROCK) allows for indefinite expansion of cultured human sebocytes. Melanie Dispenza, Amanda Nelson, Zhaoyuan Cong, Matthew Moll, Kathryn Gilliland and Diane Thiboutot. Hershey, PA and Baltimore, MD. 11:10 am, Poster #454
3. Developing a novel personalized interactive health care education system (MyPACE) for acne patients. Audrey S Wang, Julie Wu, Negar Foolad and April W Armstrong. Sacramento, CA. 11:20 am, Poster #511
4. IL-17A is involved in *P. acnes*-induced inflammation. George W Agak, Min Qin, Jennifer Nobe, Myung-Hwa Kim and Jenny Kim. Los Angeles, CA and Cheonan, South Korea. 11:30 am, Poster #633
5. Oxidized fatty acids and inflammatory response in acne: A potential therapeutic role for apolipoprotein A-I (apoA-I) mimetic peptide 4F as an anti-inflammatory agent. Aslan Pirouz, Min Qin, Alan M Fogelman and Jenny Kim. Los Angeles, CA. 11:40 am, Poster #085

Question & Answer Session

Moderated by Diane Thiboutot, MD

ATOPIC DERMATITIS CONFERENCE

DEVELOPMENTS IN PERSONALIZED MEDICINE FOR SKIN DISEASE

3 CME CREDITS

Wednesday, May 9, 2012

12:00 pm - 3:00 pm

Raleigh Convention Center Ballroom B/C

OPEN TO ALL MEETING ATTENDEES



Introduction and Welcome

Lisa Beck, MD, Associate Professor, Department of Dermatology, University of Rochester, Rochester, New York



No Place Like HOME: Goals of HOME and its Progress to Date and Plans for the Future

Hywel Williams, MSc/PhD/FRCP, Professor, Department of Dermatology, University of Nottingham, Nottingham, United Kingdom



Solid Gold? Should IGA Be the "Gold Standard" for AD Assessment?

Eric Simpson, MD, Associate Professor, Department of Dermatology, Oregon Health & Sciences University, Portland, Oregon

Q & A



Coming to Our Senses: Assessment Tools for Itch

Gil Yosipovitch, MD, Professor, Department of Dermatology, Wake Forest University, Winston-Salem, North Carolina



Hitting the Mark—AD Biomarkers: How good are they?

Emma Guttman-Yassky, MD/PhD, Assistant Professor of Dermatology and Immunology, Director of Occupational Contact Dermatitis Clinic and Laboratory for Inflammatory Skin Diseases, Department of Dermatology and the Immunology Institute, Mt. Sinai Medical Center, New York, New York

ANCILLARY MEETINGS

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Pachyonychia Congenita Project (PC Project)

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American Acne and Rosacea Society

10:30 am - 12:00 pm

Raleigh Convention Center 302 A

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ATOPIC DERMATITIS CONFERENCE (CONT'D) DEVELOPMENTS IN PERSONALIZED MEDICINE FOR SKIN DISEASE

Wednesday, May 9, 2012
12:00 pm - 3:00 pm
Raleigh Convention Center Ballroom B/C

OPEN TO ALL MEETING ATTENDEES



Hurdles in the Development of AD Therapeutics

Neil Graham, MD, MPH, Regeneron Pharmaceuticals, Inc., Tarrytown, New York



Casting a Wide Net: Genetic & Epidemiological Insights

David J. Margolis, MD, PhD, Professor, Department of Dermatology, University of Pennsylvania, Philadelphia, Pennsylvania

Q & A

Discussion & Wrap-up

Lisa Beck, MD, Associate Professor, Department of Dermatology, University of Rochester, Rochester, New York

IRVIN H. BLANK FORUM

TRANSLATING THE GENETICS OF DISEASE INTO THERAPEUTICS

2 CME CREDITS

Wednesday, May 9, 2012

3:00 pm - 5:00 pm

Raleigh Convention Center Ballroom B/C

OPEN TO ALL MEETING ATTENDEES



Introduction

Todd Ridky, MD/PhD

Assistant Professor, Department of Dermatology

University of Pennsylvania, Philadelphia, Pennsylvania



Rare and Common Variants in Medical Genetics

David V. Goldstein, PhD

The Richard and Pat Johnson Distinguished University Professor

Director, Center for Human Genome Variation

Duke University, Durham, North Carolina



Mutations in CARD14 Lead to Psoriasis

Elisha Roberson, PhD

Division of Biology and Biomedical Sciences

Washington University, St. Louis, Missouri



Exploring the Therapeutic Potential of Induced Pluripotent Stem (iPS) Cells for Inherited Skin Blistering Diseases

Dennis Roop, PhD

Professor of Dermatology

Charles C. Gates Chair of Regenerative Medicine and Stem Cell Biology

Director, Charles C. Gates Center for Regenerative Medicine and Stem Cell Biology

University of Colorado Anschutz Medical Campus, Aurora, Colorado

ANCILLARY MEETINGS

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Raleigh Convention Center 402

Pachyonychia Congenita Project

(PC Project)

8:00 am - 3:00 pm

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American Acne and Rosacea Society

10:30 am - 12:00 pm

Raleigh Convention Center 302 A

ANCILLARY MEETINGS

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ALBERT M. KLIGMAN / PHILLIP FROST LEADERSHIP LECTURE KEEPING AN EYE ON CUTANEOUS BIOLOGY

.5 CME CREDITS

Wednesday, May 9, 2012
5:00 pm - 5:30 pm
Raleigh Convention Center Ballroom B/C

OPEN TO ALL MEETING ATTENDEES

LECTURER BIO



Robert Lavker, PhD
Northwestern University
Chicago, Illinois

Dr. Lavker's laboratory focuses on investigations of processes of proliferation and differentiation in keratinizing tissues. His lab has successfully employed laser capture microdissection to isolate pure populations of limbal epithelial basal cells (enriched in stem cells) and corneal epithelial basal cells (enriched in stem cell progeny). Dr. Lavker's lab has also begun to characterize microRNAs (miRNAs) found in the stem cells of the epidermis and corneal epithelium and to understand how miRNAs regulate stem cell proliferation and differentiation.

LECTURESHIP HISTORY

Established in 2007 by Dr. Phillip Frost, the lectureship is intended to honor Dr. Albert M. Kligman, whose great commitment to dermatology and numerous contributions to the specialty has inspired generations of researchers and practitioners. The award is made to an individual in acknowledgment of significant contributions in the past five years to the understanding of structure and function of skin.

STATE-OF-THE-ART PLENARY LECTURE 1

STEM CELL REGULATION BY STEM CELLS IN HAIR FOLLICLES

.5 CME CREDITS

Wednesday, May 9, 2012

5:30 pm - 6:00 pm

Raleigh Convention Center Ballroom B/C

OPEN TO ALL MEETING ATTENDEES

LECTURER BIO



Emi Nishimura, MD/PhD

Tokyo Medical and Dental University

Tokyo, Japan

Dr. Nishimura's research focuses on the mechanisms of tissue homeostasis driven by stem cell systems and understanding physiological or pathological conditions resulting from stem-cell system defect. Her research recently demonstrated that the incomplete maintenance of melanocyte stem cells causes hair graying, and her research is now trying to elucidate the mechanisms of cancer development and resistance to cancer treatments by focusing on "cancer stem cells."

ANCILLARY MEETINGS

WEDNESDAY, MAY 9, 2012

Resident Retreat for Future

Academicians

7:00 am - 3:00 pm

Raleigh Convention Center 305 A/B

PhD Retreat

7:00 am - 3:00 pm

Raleigh Convention Center 305 A/B

SID Board of Directors Meeting

7:00 am - 2:00 pm

Raleigh Convention Center 402

Pachyonychia Congenita Project

(PC Project)

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American Acne and Rosacea Society

10:30 am - 12:00 pm

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STATE-OF-THE-ART PLENARY LECTURE 2

OPPORTUNITIES FOR DISCOVERY UTILIZING NEXT GENERATION SEQUENCING TECHNOLOGY

.5 CME CREDITS

Wednesday, May 9, 2012

6:00 pm - 6:30 pm

Raleigh Convention Center Ballroom B/C

OPEN TO ALL MEETING ATTENDEES

LECTURER BIO



Keith Choate, MD/PhD

Yale University

New Haven, Connecticut

Dr. Choate's research focuses on identification of genes responsible for genodermatoses utilizing microarray based genotyping platforms and next-generation sequencing and therapies for patients with disorders of keratinization. In his research, Dr. Choate uses cutting-edge whole-genome DNA sequencing technologies to identify mutations causing genetic skin diseases, and his group studies the function of identified genes in normal and disease states.

ANCILLARY MEETINGS

WEDNESDAY, MAY 9, 2012

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PhD Retreat
7:00 am - 3:00 pm
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7:00 am - 2:00 pm
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8:00 am - 3:00 pm
Raleigh Convention Center 301 A/B

American Acne and Rosacea Society
10:30 am - 12:00 pm
Raleigh Convention Center 302 A

WELCOME RECEPTION

NO CME CREDIT OFFERED

Wednesday, May 9, 2012
7:00 pm - 8:30 pm
Raleigh Convention Center Grand Lobby and Outside Patio

OPEN TO ALL MEETING ATTENDEES

Join us for a Welcome Reception to kick off the Meeting. All attendees are invited, free of charge, to gather for drinks and hors d'oeuvres and mingle with colleagues. Beverage tickets will be distributed in registration packets.



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Photos of Raleigh courtesy of GRCVB/visitRaleigh.com

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45	Cutaneous T Cell Lymphoma Symposium
46	Social Event

THURSDAY MEETING-AT-A-GLANCE

Thursday, May 10, 2012

Society for Pediatric Dermatology Raleigh Convention Center 206	7:00 am - 8:00 am
Registration Raleigh Convention Center 300 Level Registration Area	7:30 am - 4:00 pm
Plenary Session I Raleigh Convention Center Ballroom B/C	8:00 am - 9:00 am
Eugene M. Farber Lecture <i>Genomics Meets the Immune System: An Integrated Systems Perspective on Psoriasis</i> Frank Nestle, MD Raleigh Convention Center Ballroom B/C	9:00 am - 9:30 am
Naomi M. Kanof Lecture <i>The Neurofibroma Story: A Role for Mast Cells in Tumor Potentiation and Clinical Implications</i> Luis Parada, PhD Raleigh Convention Center Ballroom B/C	9:30 am - 10:00 am
American Skin Association Achievement Awards Raleigh Convention Center Ballroom B/C	10:00 am - 10:10 am
David Martin Carter Mentor Award <i>Presented to Stuart Yuspa, MD</i> Raleigh Convention Center Ballroom B/C	10:10 am - 10:15 am
Poster Session I/Technical Exhibits Open w/coffee break <i>Odd 001-287 / Even 288-574</i> Raleigh Convention Center Exhibit Hall A	10:00 am - 12:00 pm
Research in Cutaneous Surgery Symposium Raleigh Convention Center 305 A	10:00 am - 1:00 pm
Young Investigator and Trainee Symposium <i>Developing an Academic Career</i> Raleigh Convention Center 302 A	10:00 am - 1:30 pm
Clinical Scholars Plenary Session Raleigh Convention Center 305 B	10:15 am - 12:15 pm
JDS Editorial Board Luncheon Raleigh Convention Center 307	12:00 pm - 1:30 pm
Merkel Cell Carcinoma Symposium Raleigh Convention Center Ballroom B/C	12:00 pm - 2:00 pm
Concurrent Minisymposia	2:00 pm - 5:30 pm
1. Photobiology Raleigh Convention Center 305 B	
2. Auto-immunity and Inflammation Raleigh Convention Center 306 C	
3. Cell Adhesion/Matrix Biology Raleigh Convention Center 302 B	
4. Epidemiology/Health Services Research Raleigh Convention Center 306 B	
5. Hair and Cutaneous Development Raleigh Convention Center 305 A	
Cutaneous T Cell Lymphoma Symposium <i>International Society for Cutaneous Lymphomas Scientific (ISCL) & Cutaneous Lymphoma Foundation (CLF)</i> Raleigh Convention Center 302 A	2:00 pm - 5:30 pm
Social Event <i>TICKETED EVENT; PRE-REGISTRATION REQUIRED</i> <i>See page 46 for additional information.</i> Raleigh Convention Center Ballroom A	6:00 pm - 10:00 pm

ANCILLARY MEETINGS

THURSDAY, MAY 10, 2012

Society for Pediatric Dermatology 7:00 am - 8:00 am Raleigh Convention Center 206
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Research in Cutaneous Surgery Symposium 10:00 am - 1:00 pm Raleigh Convention Center 305 A

JDS Editorial Board Luncheon 12:00 pm - 1:30 pm Raleigh Convention Center 307
--

Cutaneous T Cell Lymphoma Symposium 2:00 pm - 5:45 pm Raleigh Convention Center 302 A
--

Indicates CME Credit Offered

ANCILLARY MEETINGS

THURSDAY, MAY 10, 2012

Society for Pediatric Dermatology

7:00 am - 8:00 am
Raleigh Convention Center 206

Research in Cutaneous Surgery

10:00 am - 1:00 pm
Raleigh Convention Center 305 A

JDS Editorial Board Luncheon

12:00 pm - 1:30 pm
Raleigh Convention Center 307

Cutaneous T Cell Lymphoma Symposium

2:00 pm - 5:45 pm
Raleigh Convention Center 302 A

SOCIETY FOR PEDIATRIC DERMATOLOGY

NO CME CREDIT OFFERED

Moderator: Amy Paller, MD

Thursday, May 10, 2012
7:00 am - 8:00 am
Raleigh Convention Center 206

OPEN TO ALL MEETING ATTENDEES

Overview I: Pediatric Dermatology at SID

Amy Paller, Northwestern University

Presentations

1. **Functional analysis of candidate genes identified by genomewide association study (GWAS) of infantile hemangiomas (IH).** Eun-Kyung M Kwon, Dawn H Siegel, Ulrich Broeckel, Paula E North, Elizabeth Worthey, Yvonne E Chiu and Beth A Drolet. Milwaukee, WI. 7:15 am, Poster #393, *Presented by Mary Kwon, Medical College of Wisconsin*
2. **Therapies for dystrophic epidermolysis bullosa require close evaluation for development of antibodies to type VII collagen.** Emily S Gorell, Ngon Nguyen, Zurab Siprashvili, Peter Marinkovich and Alfred Lane. Stanford, CA. 7:25 am, Poster #399, *Presented by Alfred Lane, MD, Stanford University*
3. **Eczema severity is associated with multiple comorbid conditions and increased healthcare utilization.** Jonathan I Silverberg and Eric L Simpson. New York, NY and Portland, OR 7:35 am, Poster #260, *Presented by Jonathan Silverberg, MD, Oregon Health Sciences University*

Concluding Remarks and Networking

*Special thanks to
the Society for Pediatric Dermatology and its Task Force on Research
for supporting these sessions.*

PLenary Session I

1 CME CREDIT

Presiders: Kim Yancey, MD and Thomas Kupper, MD

Thursday, May 10, 2012

8:00 am - 9:00 am

Raleigh Convention Center Ballroom B/C

OPEN TO ALL MEETING ATTENDEES

1. **Epigenetic regulation of cathelicidin expression by PTH/PTHrP controls skin infection.** Beda Muehleisen, George Sen, Douglas W Burton, Leonard J Deftos and Richard L Gallo. San Diego, CA. 8:00 am, Poster #638
2. **GLI2* engages the mTOR pathway to drive development of malignant peripheral nerve sheath tumors (MPNSTs) in skin.** Alexandre N Ermilov, Elizabeth DeLassus, Jennifer Ferris, Deborah Hong, Joanna Pero, Jianhong Liu, Marina Grachtchouk, Simon J Conway, David R Lucas and Andrzej A Dlugosz. Ann Arbor, MI and Indianapolis, IN. 8:12 am, Poster #177
3. **Efforts to provide a comprehensive overview of genetic changes in canine melanoma as a means to identify genetic correlates for drug response.** Aleksandar Sekulic, Victoria Zismann, Roe Froman, April Allen, Matthew Huentleman, Melissa Paoloni, Mark Neff, Barbara Davis, Allison Cox, Nick Duesbery, Jianfeng Xu, Michael Bittner, Craig Webb, Kevin Brown, Patricia LoRusso and Jeffrey Trent. Phoenix, AZ; Scottsdale, AZ; Grand Rapids, MI; Bethesda, MD; Medford, MA; Winston-Salem, NC and Detroit, MI. 8:24 am, Poster 781
4. **Germline mutation in ATR underlying a new autosomal dominant oropharyngeal cancer syndrome.** Akio Tanaka, Sarah Weinel, Nikoletta Nagy, Mark O'Driscoll, Joey E Lai-Cheong, Carol L Kulp-Shorten, Alfred Knable, Michihiro Hide, Jeffrey Callen and John A McGrath. London, United Kingdom; Hiroshima, Japan; Louisville, KY and Brighton, United Kingdom. 8:36 am, Poster #404
5. **PDK1 regulates keratinocyte differentiation.** Teruki Dainichi, Matthew S Hayden and Sankar Ghosh. New York, NY. 8:48 am, Poster #298

ANCILLARY MEETINGS

THURSDAY, MAY 10, 2012

Society for Pediatric Dermatology

7:00 am - 8:00 am

Raleigh Convention Center 206

Research in Cutaneous Surgery

10:00 am - 1:00 pm

Raleigh Convention Center 305 A

JDS Editorial Board Luncheon

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Raleigh Convention Center 307

Cutaneous T Cell Lymphoma

Symposium

2:00 pm - 5:45 pm

Raleigh Convention Center 302 A

ANCILLARY MEETINGS

THURSDAY, MAY 10, 2012

Society for Pediatric Dermatology
7:00 am - 8:00 am
Raleigh Convention Center 206

Research in Cutaneous Surgery
10:00 am - 1:00 pm
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JDS Editorial Board Luncheon
12:00 pm - 1:30 pm
Raleigh Convention Center 307

Cutaneous T Cell Lymphoma Symposium
2:00 pm - 5:45 pm
Raleigh Convention Center 302 A

EUGENE M. FARBER LECTURE

GENOMICS MEETS THE IMMUNE SYSTEM: AN INTEGRATED SYSTEMS PERSPECTIVE ON PSORIASIS

.5 CME CREDITS

Thursday, May 10, 2012
9:00 am - 9:30 am
Raleigh Convention Center Ballroom B/C

OPEN TO ALL MEETING ATTENDEES

LECTURER BIO



Frank Nestle, MD
King's College London
London, United Kingdom

Professor Frank O. Nestle holds the Mary Dunhill Chair of Cutaneous Medicine and Immunotherapy at St. John's Institute of Dermatology, King's College London. His main research interests include the pathogenesis and immunotherapy of psoriasis, and the role and therapeutic modulation of dendritic cells in inflammatory and neoplastic skin disease.

LECTURESHIP HISTORY

The Eugene M. Farber endowment was established by the family of Eugene M. Farber, MD, who devoted his scientific career to understanding the pathogenesis of psoriasis. In 2007, the SID Board of Directors voted to create the Eugene M. Farber Endowed Lecture. It is presented at the Society's Annual Meeting by an investigator whose work is relevant to expanding our insights into the pathophysiology and treatment of psoriasis.

NAOMI M. KANOF LECTURE

THE NEUROFIBROMA STORY: A ROLE FOR MAST CELLS IN TUMOR POTENTIATION AND CLINICAL IMPLICATIONS

.5 CME CREDITS

Thursday, May 10, 2012

9:30 am - 10:00 am

Raleigh Convention Center Ballroom B/C

OPEN TO ALL MEETING ATTENDEES

LECTURER BIO



Luis Parada, PhD
University of Texas, Southwestern
Dallas, Texas

Dr. Parada's research interest lies in the elucidation of intracellular regulatory pathways that control the complex process of vertebrate development. Central efforts have focused on the functions of the Trk gene family and the modeling of human disease including autism, brain cancer, and Von Recklinghausen's Neurofibromatosis type 1 (NF-1).

ANCILLARY MEETINGS

THURSDAY, MAY 10, 2012

Society for Pediatric Dermatology

7:00 am - 8:00 am

Raleigh Convention Center 206

Research in Cutaneous Surgery

10:00 am - 1:00 pm

Raleigh Convention Center 305 A

JDS Editorial Board Luncheon

12:00 pm - 1:30 pm

Raleigh Convention Center 307

Cutaneous T Cell Lymphoma Symposium

2:00 pm - 5:45 pm

Raleigh Convention Center 302 A

LECTURESHIP HISTORY

Established in 1988, this award was established to honor the memory of Naomi Kanof, MD. The Naomi M. Kanof Lectureship honors an individual making significant contributions to the improvement of health through clinical research. Clinical research is broadly defined as any scientific endeavor with a direct application to improving the prevention, diagnosis or treatment of clinical disease. This investigative work can be based in the laboratory and should be implemented or just ready to be implemented in clinical practice.

ANCILLARY MEETINGS

THURSDAY, MAY 10, 2012

Society for Pediatric Dermatology
7:00 am - 8:00 am
Raleigh Convention Center 206

Research in Cutaneous Surgery
10:00 am - 1:00 pm
Raleigh Convention Center 305 A

JDS Editorial Board Luncheon
12:00 pm - 1:30 pm
Raleigh Convention Center 307

Cutaneous T Cell Lymphoma Symposium
2:00 pm - 5:45 pm
Raleigh Convention Center 302 A

AMERICAN SKIN ASSOCIATION ACHIEVEMENT AWARDS & DAVID MARTIN CARTER MENTOR AWARD

NO CME CREDIT OFFERED

Thursday, May 10, 2012
10:00 am - 10:15 am
Raleigh Convention Center Ballroom B/C

OPEN TO ALL MEETING ATTENDEES

American Skin Association Achievement Awards

The American Skin Association presents its 2012 Achievement Awards to Angela Christiano, PhD; Mark Lebwohl, MD; Gian Paolo Dotto, MD/PhD; Alain Taieb, MD; and Ponciano Cruz, MD.

David Martin Carter Mentor Award

The American Skin Association presents the 2012 David Martin Carter Mentor Award to Stuart Yuspa, MD.

RESEARCH IN CUTANEOUS SURGERY SYMPOSIUM

NO CME CREDIT OFFERED

Presiders: Sherrif Ibrahim MD/PhD; Murad Alam, MD; Jeremy Bordeaux, MD MPH; Diana Bolotin, MD/PhD

Thursday, May 10, 2012

10:00 am - 1:00 pm

Raleigh Convention Center 305 A

OPEN TO ALL MEETING ATTENDEES

1. **Bulge-derived stem cells form BCC-like tumors upon wounding.** Sunny Y Wong and Jeremy F Reiter. Ann Arbor, MI and San Francisco, CA. *10:00 am, Poster #122*
2. **BRAF inhibitors suppress apoptosis through off-target inhibition of JNK signaling.** Harina Vin, Marco L Leung, Vida Chitsazadeh, Sandra Ojeda, David W Dwyer, Kristen N Richards, Larissa R Stewart, Jonathan L Curry, Kevin Kim, Ana M Ciurea, Madeleine Duvic, Victor G Prieto, Stephen E Ullrich, Elsa R Flores and Kenneth Y Tsai. Houston, TX. *10:10 am, Poster #505*
3. **MicroRNAs signatures in cutaneous squamous cell carcinomas of immunocompetent and organ transplant patients.** E B Olasz, M Neuburg, J Lazar, N E Duncan, A M Schock, L Seline, A Lopez, Y Lu, P Liu and Z Lazarova. Milwaukee, WI. *10:20 am, Poster #121*
4. **Trends of *in situ* melanoma in U.S. men and women.** Erin X Wei-Passanese, Jiali Han, Jennifer Y Lin and Abrar A Qureshi. Boston, MA. *10:30 am, Poster #224*
5. **Dramatically improved overall survival and predictors of disease in 17 metastatic basal cell carcinoma patients.** Christina Danial, Bharathi Lingala, Anthony E Oro and Anne Lynn S Chang. Redwood City, CA. *10:40 am, Poster #227*
6. **Dermal matrix composition promotes development of aggressive squamous cell carcinoma in recessive dystrophic epidermolysis bullosa.** Yi-Zhen Ng, Celine Pourreyron, Julio Salas-Alanis, R Cepeda-Valdes, W Yan, Sheila Wright, Mei Chen, Fiona Hogg, John McGrath, Deedee Murrell, Irene Leigh, Ellen Lane and Andrew South. Dundee, United Kingdom; Singapore, Singapore; Monterrey, Mexico; Sydney, Australia; Los Angeles, CA and London, United Kingdom. *10:50 am, Poster #119*
7. **Stage I primary cutaneous SCCs from solid organ transplant recipients show increased IL-22 producing CD8⁺ T-cells.** Shali Zhang, Hideki Fujita, Julia S Pettersen, Mark J Bluth, Hiroshi Mitsui, James G Krueger, Diane Felsen and John A Carucci. New York, NY. *11:00 am, Poster #615*
8. **DC-HIL⁺ myeloid-derived suppressor cells (MDSC) are a new prognostic marker for melanoma and promising target for immunotherapy.** Kaveh Nezafati, Jin-Sung Chung, Kyoichi Tamura, Rohit Sharma, Amy Harker-Murray, James Huth, Ponciano Cruz and Kiyoshi Ariizumi. Dallas, TX. *11:10 am, Poster #744*
9. **Pre-diagnostic plasma 25-hydroxyvitamin D and risk of non-melanoma skin cancer in women.** Geyu Liang, Hongmei Nan, Abrar A Qureshi and Jiali Han. Boston, MA. *11:20 am, Poster #272*
10. **Plexin C1, a neural guidance receptor, suppresses melanoma progression.** Yulin Chen, Joanne Soong, Lei Xu, Sonali Mohanty and Glynis Scott. Rochester, NY. *11:30 am, Poster #718*
11. **Biopsy performance of a multi-spectral computer vision system for melanoma compared to physicians.** Judah N Greenberg, Alicia Toledano, Joanna S Adrian, Dina Gutkowicz-Krusin and Suephy C Chen. Atlanta, GA; Decatur, GA; Washington, DC and Irvington, NY. *11:40 am, Poster #766*
12. **New shallow wound model using ablative CO₂ fractional laser in hairless mice.** Ji-Hae Lee, Il-Hong Bae, Young-Ho Park and Kyung-Min Lim. Yongin-si, South Korea. *11:50 am, Poster #784*

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ANCILLARY MEETINGS

THURSDAY, MAY 10, 2012

Society for Pediatric Dermatology

7:00 am - 8:00 am

Raleigh Convention Center 206

Research in Cutaneous Surgery

10:00 am - 1:00 pm

Raleigh Convention Center 305 A

JDS Editorial Board Luncheon

12:00 pm - 1:30 pm

Raleigh Convention Center 307

Cutaneous T Cell Lymphoma Symposium

2:00 pm - 5:45 pm

Raleigh Convention Center 302 A

ANCILLARY MEETINGS

THURSDAY, MAY 10, 2012

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2:00 pm - 5:45 pm
Raleigh Convention Center 302 A

RESEARCH IN CUTANEOUS SURGERY SYMPOSIUM (CONT'D)

Presiders: Sherrif Ibrahim MD/PhD; Murad Alam, MD; Jeremy Bordeaux, MD MPH; Diana Bolotin, MD/PhD

Thursday, May 10, 2012
10:00 am - 1:00 pm
Raleigh Convention Center 305 A

OPEN TO ALL MEETING ATTENDEES

13. BI 6727, a second generation small molecule inhibitor of polo-like kinase 1 (Plk1), causes significant melanoma growth delay and regression *in vivo*. Brian D Cholewa, Joshua A Desotelle and Nihal Ahmad. Madison, WI. 12:00 pm, Poster #745
14. Epidermal growth factor facilitates melanoma lymph node metastasis by influencing tumor lymphangiogenesis. Andreas Bracher, Stefanie Tauber, Ana Soler, Astrid M Fink, Andreas Steiner, Hubert Pehamberger, Peter Petzelbauer, Marion Gröger and Robert Loewe. Vienna, Austria. 12:10 pm, Poster #722
15. Melanoma simulation model: Promoting opportunistic melanoma screening and appropriate patient counseling through education. M Anderson , N Jain , J Bierman, J A Vozenilek, M J Kwasny and JK Robinson. Chicago, IL. 12:20 pm, Poster #737
16. Single-cell analysis of mechanical properties of melanoma using deformability cytometry. Rajan P Kulkarni, Henry Tse, Daniel Gossett and Dino Di Carlo. Los Angeles, CA. 12:30 pm, Poster #756
17. Human melanoma cells resist to oxidative stress due to active EGFR/AKT and overproduction of melanin. Kevin Szulak, David Calianese, Gabriella Brum, Charles Best, Nicola Kouatab, Wenjun Wang, Aie Xu and Yinsheng Wan. Providence, RI and Hangzhou, China. 12:40 pm, Poster #729

CLINICAL SCHOLARS PROGRAM

2 CME CREDITS

Thursday, May 10, 2012

10:15 am - 12:15 pm

Raleigh Convention Center 305 B

OPEN TO CLINICAL SCHOLARS & YOUNG INVESTIGATOR/TRAINEE TRACK PARTICIPANTS ONLY

Plenary Presentations

1. Skin commensal bacteria acts as antimicrobial shield: Identification of firmocidin, a novel small-molecule antibiotic produced by *Staphylococcus epidermidis*. 10:20 am, Poster #642, Presented by Richard Gallo, MD/PhD
2. Response to self antigen imprints regulatory memory in the skin. 10:40 am, Poster #107, Presented by Michael Rosenblum, MD/PhD

Lecture



The mTOR Pathway and Dermatologic Disease

Tom Darling, MD/PhD

Associate Professor

Uniformed Services University, Bethesda, Maryland



Stem Cell Therapy/Epidermolysis Bullosa

Katsuto Tamai, MD/PhD

Dept. of Stem Cell Therapy Science

Osaka University, Osaka, Japan

ANCILLARY MEETINGS

THURSDAY, MAY 10, 2012

Society for Pediatric Dermatology

7:00 am - 8:00 am

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ANCILLARY MEETINGS

THURSDAY, MAY 10, 2012

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Raleigh Convention Center 302 A

YOUNG INVESTIGATOR & TRAINEE SYMPOSIUM DEVELOPING AN ACADEMIC CAREER

3.5 CME CREDITS

Thursday, May 10, 2012
10:00 am - 1:30 pm
Raleigh Convention Center 302 A

OPEN TO YOUNG INVESTIGATOR/TRAINEE TRACK PARTICIPANTS ONLY



Welcome and Introduction

Kristina Callis Duffin, MD
Assistant Professor
University of Utah, Salt Lake City, Utah



What Does an Academic Career in Investigative Dermatology Really Mean, and is it Right for You?

Amy Paller, MD
Professor and Chair
Northwestern University, Chicago, Illinois



Finding the Right Job and Negotiating a Contract

John Zone, MD
Professor and Chairman
University of Utah, Salt Lake City, Utah



Making the Most of Mentorship: From Finding a Mentor to Being One

Angela Christiano, PhD
Professor
Columbia University, New York, New York

CONTINUED ON NEXT PAGE

YOUNG INVESTIGATOR & TRAINEE SYMPOSIUM (CONT'D)

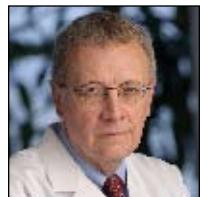
DEVELOPING AN ACADEMIC CAREER

Thursday, May 10, 2012

10:00 am - 1:30 pm

Raleigh Convention Center 302 A

OPEN TO YOUNG INVESTIGATOR/TRAINEE TRACK PARTICIPANTS ONLY



Funding: A Brief Overview of Funding Opportunities Available to Young Investigators, and Strategies to Improve Your Grant Application

Kim Yancey, MD
Professor and Chairman
University of Texas, Southwestern, Dallas, Texas



Putting It All Together: Words of Advice on Finding a Niche, Building Collaborations, and Mentoring

Joel Gelfand, MD, MSCE
Assistant Professor
University of Pennsylvania, Philadelphia, Pennsylvania



What Can the SID Do for Me?

Jodi Johnson, PhD
Research Assistant Professor
Northwestern University, Chicago, Illinois

Q & A and Closing Comments

Kristina Callis Duffin, MD
Assistant Professor
University of Utah, Salt Lake City, Utah

ANCILLARY MEETINGS

THURSDAY, MAY 10, 2012

Society for Pediatric Dermatology

7:00 am - 8:00 am
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ANCILLARY MEETINGS

THURSDAY, MAY 10, 2012

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12:00 pm - 1:30 pm
Raleigh Convention Center 307

Cutaneous T Cell Lymphoma Symposium
2:00 pm - 5:45 pm
Raleigh Convention Center 302 A

MERKEL CELL CARCINOMA SYMPOSIUM FROM VIROLOGY AND IMMUNOLOGY TOWARD RATIONAL THERAPY

2 CME CREDITS

Thursday, May 10, 2012
12:00 pm - 2:00 pm
Raleigh Convention Center Ballroom B/C

OPEN TO ALL MEETING ATTENDEES

Introduction & Overview

Paul Nghiem, MD/PhD
Associate Professor
University of Washington, Seattle, Washington

Discovery and Implications of the Merkel Cell Polyomavirus in Merkel Cell Carcinoma Management

Yuan Chang, MD
Professor and Co-discoverer of Merkel polyomavirus and Kaposi's sarcoma herpes virus
University of Pittsburgh Cancer Institute, Pittsburgh, Pennsylvania

Summary of MCC-related Abstracts Submitted to SID Meeting

1. **Exploiting deregulated apoptotic signaling as a therapeutic strategy for Merkel cell carcinoma.** Monique E Verhaegen, Chris K Bichakjian, Tracy Vozheiko, Jack Weick, Melissa Voutsalath, Timothy M Johnson and Andrzej A Dlugosz. Ann Arbor, MI. 1:00 pm, Poster #158
2. **CD200, a molecule that can suppress T cell responses, is expressed on human Merkel cell carcinomas.** Mitra Dowlatshahi, Travis Hollmann, Jessica Scanlon, Linda Wang, Qian Zhan, George Murphy, Ahmed Gehad, Jessica Teague and Rachael A Clark. Boston, MA. 1:15 pm, Poster # 055
3. **Defective cell cycle arrest and DNA repair in Merkel cell carcinogenesis.** Stephanie K Demetriou, Katherine Ona-Vu, Erin M Sullivan, Tiffany K Dong, Shu-Wei Hsu and Dennis H Oh. San Francisco, CA. 1:30 pm, Poster #161
4. **Merkel cell carcinoma therapy with viral oncoprotein-specific T cells in combination with immunostimulatory adjuvants.** Olga Afanasiev, Aude Chapuis, Jayasri Iyer, Kotaro Nagase, Kelly Paulson, Aaron Seo, Ivy Lai, Ilana Roberts, Erik Farrar, Chris McClurkan, Josh Marshak, Lichun Dong, Joo Ha Hwang, David Koelle, Cassian Yee and Paul Nghiem. Seattle, WA. 1:45 pm, Poster #563

CONCURRENT MINISYMPOSIUM 1

PHOTOBIOLOGY

3.5 CME CREDITS

Presiders: Tatiana Oberyszyn PhD and Yu-Ying He, PhD

Thursday, May 10, 2012

2:00 pm - 5:30 pm

Raleigh Convention Center 305 B

OPEN TO ALL MEETING ATTENDEES

1. **Toll-like receptor-4 augments ultraviolet radiation induced cutaneous tumor development by DNA damage mechanism.** Israr Ahmad, Purushotham Guroji, Eva Simanyi, Craig A Elmets and Nabiha Yusuf. Birmingham, AL. 2:00 pm, Poster #695
2. **Diclofenac decreases tumor burden in male and female mice in two models of UVB-induced SCC.** Erin M Burns, Kathleen L Tober, Judith A Rigganbach and Tatiana M Oberyszyn. Columbus, OH. 2:12 pm, Poster #681
3. **The acute response to UVB in human skin includes infiltration of multiple dendritic cell subtypes and activation of innate defense molecules.** Milene K Crispin, Judilyn Fuentes-Duculan, Nicholas Gulati, Leanne M Johnson-Huang, Tim Lentini, Mary Sullivan-Whalen, Patricia Gilleauadeau, Mayte Suárez-Fariñas, Michelle A Lowes and James G Krueger. New York, NY. 2:24 pm, Poster #679
4. **AMPK activation prevents UVB-induced skin tumorigenesis through promoting DNA repair and growth control.** Chunli Wu, Lei Qiang, Weinong Han, Mei Ming, Benoit Viollet and Yu-Ying He. Chicago, IL; Shenyang, China and Paris, France. 2:36 pm, Poster #680
5. **Vitamin D3 activates DNA repair pathways in UV-irradiated human melanocytes.** Joshua Jameson, Viki Swope, Renny Starner and Zalfa Abdel-Malek. Cincinnati, OH. 2:48 pm, Poster #693
6. **The role of α -melanocyte stimulating hormone in the DNA damage response of human melanocytes.** Viki B Swope, Christina Alexander, Renny Starner, George Babcock and Zalfa A Abdel-Malek. Cincinnati, OH. 3:00 pm, Poster #711
7. **A topical NF- κ B inhibitor protects skin cells from photodamage and enhances DNA repair.** Simarna Kaur, Thierry Oddos, Helene Wong and Michael D Southall. Skillman, NJ and Val de Reuil, France. 3:12 pm, Poster #714
8. **20-Hydroxyvitamin D3 possesses high efficacy against proliferation of cancer cells while being non-toxic.** Jin Wang, Andrzej Slominski, Robert Tuckey, Zorica Janjetovic, Anand Kulkarni, Jianjun Chen, Arnold Postlethwaite, Duane Miller and Wei Li. Memphis, TN and Crawley, Australia. 3:24 pm, Poster #690
9. **IL-11, IL-1 α , IL-6, and TNF α are induced by solar radiation and involved in the facial subcutaneous fat loss.** Wen-Hwa Li, Li Zhang and Apostolos Pappas. Skillman, NJ. 3:36 pm, Poster #706
10. **Induction of microRNA miR-21 by UV irradiation down-regulates TGF- β type II receptor and type I procollagen in human skin fibroblasts.** Tianyuan He, Taihao Quan, Zhaoping Qin, John J Voorhees and Gary J Fisher. Ann Arbor, MI. 3:48 pm, Poster #704
11. **Cyclophilin D alters UVA-induced apoptosis in keratinocytes through a mechanism involving mitochondrial ROS generation.** Jaroslav Janda, Jana Jandova and James Sligh. Tucson, AZ. 4:00 pm, Poster #707
12. **UVA-1 and UVA-1 oxidized phospholipids elicit an autophagic stress response in primary keratinocytes.** Yi Zhao, Chengfeng Zhang, Heidemarie Rossiter, Ulrich König, Leopold Eckhart, Susanne Karner, Erwin Tschauder and Florian Gruber. Vienna, Austria and Neuilly, France. 4:12 pm, Poster #701
13. **The combination of 5-fluorouracil and aminolevulinate-photodynamic therapy enhances tumor cell death by targeting p53-MDM2 pathway in murine squamous cell carcinoma tumors.** Sanjay Anand, Nikoleta Brankov, Kishore Rollakanti, Tayyaba Hasan and Edward V Maytin. Cleveland, OH and Boston, MA. 4:24 pm, Poster #702
14. **Photodynamic therapy with pc 4 induces cell death of *trichophyton rubrum*.** Minh Lam, Sara Lin, Mauricio A Retuerto, Pranab K Mukherjee, Mahmoud A Ghannoum, Kevin D Cooper and Elma D Baron. Cleveland, OH. 4:36 pm, Poster #689
15. **Photo(chemo)therapy reduces circulating Th17 cells and restores dysfunctional regulatory T cells in psoriasis.** Takuya Furuhashi, Chiyo Saito, Kan Torii, Emi Nishida and Akimichi Morita. Nagoya, Japan. 4:48 pm, Poster #688

ANCILLARY MEETINGS

THURSDAY, MAY 10, 2012

Society for Pediatric Dermatology

7:00 am - 8:00 am

Raleigh Convention Center 206

Research in Cutaneous Surgery

10:00 am - 1:00 pm

Raleigh Convention Center 305 A

JDS Editorial Board Luncheon

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2:00 pm - 5:45 pm

Raleigh Convention Center 302 A

ANCILLARY MEETINGS

THURSDAY, MAY 10, 2012

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Raleigh Convention Center 302 A

CONCURRENT MINISYMPOSIUM 2

AUTO-IMMUNITY AND INFLAMMATION

3.5 CME CREDITS

Presiders: Dan Kaplan, MD/PhD and Bernhard Homey, PhD

Thursday, May 10, 2012
2:00 pm - 5:30 pm
Raleigh Convention Center 306 C

OPEN TO ALL MEETING ATTENDEES

1. **Ceramide deficiency in the epidermis leads to development of psoriasis-like lesions associated with IL-23-dependent proliferation of γδ-17 cells.** Kimiko Nakajima, Sayo Kataoka, Naoko Goto-Inoue, Mika Terao, Hiroyuki Murota, Hiroaki Azukizawa, Mitsutoshi Setou, Ichiro Katayama, Junji Takeda and Shigetoshi Sano. Kochi, Japan; Tokyo, Japan; Osaka, Japan and Hamamatsu, Japan. *2:00 pm, Poster #103*
2. **Functional interaction between complement and the proinflammatory cytokine TNF-α in experimental bullous pemphigoid.** Lisa Heimbach, Minglang Zhao, Ning Li, Jiang Fan, Janet Fairley, Luis A Diaz and Zhi Liu. Chapel Hill, NC; Milwaukee, WI and Iowa City, IA. *2:12 pm, Poster #022*
3. **Epidermal control of psoriasis like skin inflammation by a TNF-α and IL-24 dependent mechanism.** Snehlata Kumari, Manolis Pasparakis, Robert Sabat and Ingo Haase. Cologne, Germany and Berlin, Germany. *2:24 pm, Poster #102*
4. **IL-15 is a therapeutic target in human alopecia areata.** Luzhou Xing, Zhenpeng Dai, Weijuan Gong, Ali Jabbari, Annemieke de Jong, Sivan Harel, Angela M Christiano and Raphael Clynes. New York, NY. *2:36 pm, Poster #104*
5. **Effective prevention and treatment of CD8 T cell-mediated Graft-versus-host-like disease (GvHD) using a JAK inhibitor.** Naoko Okiyama, Yasuko Furumoto, Vadim Villaruel, Jan Gutermuth, Kamran Ghoreschi, Massimo Gadina and Stephen Katz. Bethesda, MD. *2:48 pm, Poster #040*
6. **Host genetics play a role in controlling skin bacterial species and autoimmune blistering skin disease.** Girish Srinivas, Steffen Moeller, Ralf Ludwig, Sven Kuenzel, Detlef Zillikens, John Baines and Saleh Ibrahim. Luebeck, Germany and Ploen, Germany. *3:00 pm, Poster #039*
7. **A key role for the polyclonal nature of pemphigus vulgaris IgG in p38 MAPK-dependent loss of keratinocyte adhesion.** Masataka Saito, Christopher Y Caughman, Dana K Tucker, Xuming Mao, Sara N Stahley, Aimee S Payne, Masayuki Amagai and Andrew P Kowalczyk. Atlanta, GA; Tokyo, Japan and Philadelphia, PA. *3:12 pm, Poster #032*
8. **Response to self antigen imprints regulatory memory in the skin.** Michael Rosenblum, Iris Gratz, Jonathan Paw, Hong-An Truong and Abul Abbas. San Francisco, CA. *3:24 pm, Poster #107*
9. **CD103-positive CD4+Foxp3+ T regulatory cells are necessary for optimal suppression of cutaneous inflammation.** Jane Yoo, John McGuire, Anne Manicone, Xiaodong Zhu, Piper Treuting, E Alden Landis, Timothy Birkland, Laura Johnston, Vivian Lee, Cliff Rims, Ying Wang and William Parks. Seattle, WA. *3:36 pm, Poster #087*
10. **Inhibition of the SDF-1/CXCR4 axis alleviates chronic and acute skin inflammation.** Silvana Zgraggen, Reto Huggenberger, Alexandra Ochsenbein and Michael Detmar. Zurich, Switzerland. *3:48 pm, Poster #008*
11. **Identification of cytotoxic T cell epitopes in alopecia areata.** Eddy Wang, Jan P Dutz, Jerry Shapiro and Kevin J McElwee. Vancouver, Canada. *4:00 pm, Poster #015*
12. **IL-17 Receptor A subunit is a central hub for inflammatory signaling in human psoriasis.** Chris B Russell, Keith Kerkof, Jeannette Bigler, Marty Timour, R L Diaz, Antony Symons, Hugh Rand, James G Krueger and David A Martin. Seattle, WA. *4:12 pm, Poster #041*

CONTINUED ON NEXT PAGE

CONCURRENT MINISYMPOSIUM 2 (CONT'D)

AUTO-IMMUNITY AND INFLAMMATION

Presiders: Dan Kaplan, MD/PhD and Bernhard Homey, PhD

Thursday, May 10, 2012

2:00 pm - 5:30 pm

Raleigh Convention Center 306 C

OPEN TO ALL MEETING ATTENDEES

13. Scurvy mice reveal strong autoimmune skin inflammation with Th2-deviation of skin-infiltrating CD4+ T cells and high epidermal expression of thymic stromal lymphopoietin (TSLP). Eva N Hadaschik, Britta Heckmann and Alexander H Enk. Heidelberg, Germany. 4:24 pm, Poster #046
14. Anti-desmoglein 1 autoantibodies from Fogo Selvagem recognize LJM11, a member of the "yellow" family of salivary proteins from *Lutzomyia longipalpis*. Ye Qian, Joseph S Jeong, Mike Maldonado, Flor Evangelista, Bahjat F Qaqish, Valeria Aoki, Gunter Hans-Filhio, Evandro A Rivitti, Jesus G Valenzuela and Luis A Diaz. Chapel Hill, NC; Sao Paulo, Brazil; Mato Grosso do Sul, Brazil and Rockville, MD. 4:36 pm, Poster #054

15. CORRECTION

TITLE: The role of the IL12B associated psoriasis risk allele in the pathogenesis of psoriasis

AUTHORS (FIRST NAME, LAST NAME): Xianying Xing1, MaryBeth Riblett1, James J. Kochkodan1, Rajan P. Nair1, John J. Voorhees1, James T. Elder1, Andrew Johnston1, Johann E. Gudjonsson

INSTITUTIONS (ALL):

1. Dermatology, University of Michigan, Ann Arbor, MI, United States.Poster #77

ANCILLARY MEETINGS

THURSDAY, MAY 10, 2012

Society for Pediatric Dermatology

7:00 am - 8:00 am

Raleigh Convention Center 206

Research in Cutaneous Surgery

10:00 am - 1:00 pm

Raleigh Convention Center 305 A

JDS Editorial Board Luncheon

12:00 pm - 1:30 pm

Raleigh Convention Center 307

Cutaneous T Cell Lymphoma Symposium

2:00 pm - 5:45 pm

Raleigh Convention Center 302 A

ANCILLARY MEETINGS

THURSDAY, MAY 10, 2012

Society for Pediatric Dermatology

7:00 am - 8:00 am
Raleigh Convention Center 206

Research in Cutaneous Surgery

10:00 am - 1:00 pm
Raleigh Convention Center 305 A

JDS Editorial Board Luncheon

12:00 pm - 1:30 pm
Raleigh Convention Center 307

Cutaneous T Cell Lymphoma Symposium

2:00 pm - 5:45 pm
Raleigh Convention Center 302 A

CONCURRENT MINISYMPOSIUM 3

CELL ADHESION/MATRIX BIOLOGY

3.5 CME CREDITS

Presiders: Peter Koch, PhD and Jonathan Jones, PhD

Thursday, May 10, 2012
2:00 pm - 5:30 pm
Raleigh Convention Center

OPEN TO ALL MEETING ATTENDEES

1. Inhibition of MK2 signaling prevents blister formation in pemphigus *in vivo*. Xuming Mao, Hong Li and Aimee S Payne. Philadelphia, PA. 2:00 pm, Poster #193
2. Fueling the keratinocyte motor: Factor-inhibiting Hypoxia-inducible Factor 1 (FIH-1) is a positive regulator of epithelial migration. Han Peng, Spiro Getsios and Robert M Lavker. Chicago, IL. 2:12 pm, Poster #191
3. Membrane raft microdomains are platforms for desmosome regulation. Sara N Stahley, Masataka Saito, Victor Faundez, Michael Koval and Andrew P Kowalczyk. Atlanta, GA. 2:24 pm, Poster #194
4. Plakoglobin as a regulator of desmocollin gene expression. Etienne Tokonzaba, Xing Cheng, Radhika Ganeshan, Eliane J Müller and Peter J Koch. Aurora, CO and Bern, Switzerland. 2:36 pm, Poster #208
5. Distinct functions of $\alpha 6\beta 4$ and $\alpha 3\beta 1$ integrins in keratinocyte migration. Kristina R Kligys, Susan B Hopkinson and Jonathan C Jones. Chicago, IL. 2:48 pm, Poster #202
6. Actinin-4 regulates the directed migration of keratinocytes and modulates cell-matrix interactions. Kevin J Hamill, Susan B Hopkinson, Omar Skalli and Jonathan C Jones. Chicago, IL and Memphis, TN. 3:00 pm, Poster #207
7. Obligatory roles of filamin A in calcium-induced cell-cell adhesion and differentiation in epidermal keratinocytes. Chia-Ling Tu, Wenhan Chang, Michael You and Daniel D Bikle. San Francisco, CA. 3:12 pm, Poster #181
8. Collective galvanotaxis - together we move better. Li Li, Robert Hartley, Bjoern Reiss, Yaohui Sun, Jin Pu, Trung Hoang, Soichiro Yamada, Jianxin Jiang and Min Zhao. Sacramento, CA; Chongqing, China; Aberdeen, United Kingdom and Davis, CA. 3:24 pm, Poster #195
9. Uncovering functional differences between kindlin-1 and kindlin-2 in keratinocytes. Aditi Bandyopadhyay, Gerson Rothschild, Sean Kim, David Calderwood and Srikala Raghavan. New York, NY and New Haven, CT. 3:36 pm, Poster #219
10. Characterization of CCN1 functional domains that stimulate MMP-1 through integrin $\alpha V\beta 3$ in human dermal fibroblasts. Zhaoping Qin, Patrick Robichaud, John J Voorhees, Gary J Fisher and Taihao Quan. Ann Arbor, MI. 3:48 pm, Poster #211
11. Intracellular collagen degradation mediates age-associated collagen deficit. Yong Li, Wei Xia, Andrew Little, Toru Okubo, John J Voorhees and Gary J Fisher. Ann Arbor, MI. 4:00 pm, Poster #209
12. Integrin-linked kinase is a key player for TGF β 1 homeostasis and myofibroblast differentiation. Katrin Blumbach, Georg Brunner, Andreas S Peters, Jan-Niklas Schulz, Thomas Krieg and Beate Eckes. Cologne, Germany and Münster, Germany. 4:12 pm, Poster #198
13. Development of a vascularized skin equivalent with a physiological perfused vascular network. Florian K Groeber, Jan Hansmann, Michaela Kaufmann and Heike Walles. Stuttgart, Germany and Würzburg, Germany. 4:24 pm, Poster #199
14. P120-catenin inhibits cadherin endocytosis by binding to a conserved endocytic signal in the cytoplasmic domain of classical cadherins. Benjamin A Nanes, Christine M Chiasson, Anthony M Lowery, Peter A Vincent and Andrew P Kowalczyk. Atlanta, GA and Albany, NY. 4:36 pm, Poster #182
15. Laminin alpha 5 regulates microvascular endothelial cell migration and tubule formation. Tengjiao Cui, Ling Tang and Jie Li. Miami, FL. 4:48 pm, Poster #218

CONCURRENT MINISYMPOSIUM 4

EPIDEMIOLOGY/HEALTH SERVICES RESEARCH

3.5 CME CREDITS

Presiders: Robert Kirsner, MD/PhD and April Armstrong, MD MPH

Thursday, May 10, 2012

2:00 pm - 5:30 pm

Raleigh Convention Center 306 B

OPEN TO ALL MEETING ATTENDEES

1. **Limitations of psoriatic arthritis screening instruments in patients with psoriasis.** Jessica A Walsh, Kristina Callis Duffin, Gerald Krueger and Daniel O Clegg. Salt Lake City, UT. 2:00 pm, Poster #229
2. **Validation of a large population-based basal cell carcinoma registry.** Maryam M Asgari, Melody Eide, Margaret Warton, Marianne Sadler and Suzanne Fletcher. Oakland, CA; Detroit, MI and Boston, MA. 2:12 pm, Poster #232
3. **Melanoma screening can substantially reduce melanoma mortality: Evidence from the SCREEN project in Schleswig-Holstein.** A Katalinic, A Waldmann, M A Weinstock, A Geller, N Eisemann, R Greinert, B Volkmer and E Brietbart. Providence, RI; Luebeck, Germany; Boston, MA and Buxtehude, Germany. 2:24 pm, Poster #233
4. **Differences between invasive and *in situ* melanoma according to age of diagnosis, mortality, host risk factors and lifetime ambient UV exposure.** Andrew C Walls, Jiali Han, Tricia Li and Abrar A Qureshi. Boston, MA. 2:36 pm, Poster #254
5. **Comparative effectiveness of commonly used systemic treatments or phototherapy for moderate to severe plaque psoriasis in clinical practice.** J M Gelfand, J Wan, G G Krueger, K Callis Duffin and A S Van Voorhees. Philadelphia, PA and Salt Lake City, UT. 2:48 pm, Poster #228
6. **Filaggrin mutations: Prognosis and response to therapy overtime.** David J Margolis, Nandita Mitra, Aileen Sandilands, Irwin McLean and Timothy Rebbeck. Philadelphia, PA and Dundee, United Kingdom. 3:00 pm, Poster #243
7. **Molecular epidemiology of non-syndromic ARCI in a Middle Eastern population.** Shirli Israeli, Dana Fuchs-Telem, Reuven Bergman, Margarita Indelman, Ora Bitterman-Deutsch, Avikam Harel, Yaakov Mashiach, Ofer Sarig and Eli Sprecher. Tel Aviv, Israel; Haifa, Israel and Nahariya, Israel. 3:12 pm, Poster #250
8. **Relative humidity, dew point, indoor heating and ultraviolet index are associated with the prevalence of eczema.** Jonathan I Silverberg, Jon M Hanifin and Eric L Simpson. Portland, OR and New York, NY. 3:24 pm, Poster #261
9. **Aspirin is associated with lower melanoma risk in a cohort of postmenopausal women in the Women's Health Initiative (WHI).** Susan M Swetter, Christina A Gamba, Marcia L Stefanick, Katrina M Spaunhurst, Jessica Kubo, Manisha Desai, Maryam M Asgari, Animesh A Sinha and Jean Y Tang. Palo Alto, CA; Stanford, CA; Los Angeles, CA; Oakland, CA and Buffalo, NY. 3:36 pm, Poster #236
10. **Improvement in performance of skin self-examinations after intervention with interactive computerized education and telecommunication reminders: A randomized controlled study.** Savina Aneja, Angela K Brimhall, Douglas R Kast, Sanjay Aneja, Diana Carlson, Kevin D Cooper and Jeremy S Bordeaux. Cleveland, OH and New Haven, CT. 3:48 pm, Poster #237
11. **Psoriasis and risk of inflammatory bowel disease in US women.** Wenging Li, Jiali Han, Andrew T Chan and Abrar A Qureshi. Boston, MA. 4:00 pm, Poster #288
12. **Treatment satisfaction with commonly used treatments for moderate to severe plaque psoriasis in clinical practice.** Howa Yeung, Kristina Callis Duffin, Joy Wan, Andrea B Troxel, Daniel B Shin and Joel M Gelfand. Philadelphia, PA and Salt Lake City, UT. 4:12 pm, Poster #223
13. **Factors related to the impact of pruritus on quality of life.** Christopher Carr, Emir Veledar and Suephy Chen. Atlanta, GA. 4:24 pm, Poster #230
14. **Association of eyeglasses use with periocular keratinocyte carcinomas and actinic keratosis.** Kachiul Lee and Martin A Weinstock. Providence, RI and Washington DC. 4:36 pm, Poster #256
15. **Low-fat dietary pattern and skin cancer risk: The Women's Health Initiative (WHI) randomized controlled dietary modification trial.** Christina A Gamba, Marcia L Stefanick, James M Shikany, Joseph Larson, Eleni Linos, Stacy T Sims, James Marshall, Linda Van Horn, Nathalie Zeitouni and Jean Y Tang. Stanford, CA; Birmingham, AL; Seattle, WA; San Francisco, CA; Buffalo, NY and Chicago, IL. 4:48 pm, Poster #258

ANCILLARY MEETINGS

THURSDAY, MAY 10, 2012

Society for Pediatric Dermatology

7:00 am - 8:00 am

Raleigh Convention Center 206

Research in Cutaneous Surgery

10:00 am - 1:00 pm

Raleigh Convention Center 305 A

JDS Editorial Board Luncheon

12:00 pm - 1:30 pm

Raleigh Convention Center 307

Cutaneous T Cell Lymphoma Symposium

2:00 pm - 5:45 pm

Raleigh Convention Center 302 A

ANCILLARY MEETINGS

THURSDAY, MAY 10, 2012

Society for Pediatric Dermatology

7:00 am - 8:00 am
Raleigh Convention Center 206

Research in Cutaneous Surgery

10:00 am - 1:00 pm
Raleigh Convention Center 305 A

JDS Editorial Board Luncheon

12:00 pm - 1:30 pm
Raleigh Convention Center 307

Cutaneous T Cell Lymphoma Symposium

2:00 pm - 5:45 pm
Raleigh Convention Center 302 A

CONCURRENT MINISYMPOSIUM 5

HAIR AND CUTANEOUS DEVELOPMENT

3.5 CME CREDITS

Presiders: Bruce Morgan, PhD and Luis Garza, MD/PhD

Thursday, May 10, 2012
2:00 pm - 5:30 pm
Raleigh Convention Center 305 A

OPEN TO ALL MEETING ATTENDEES

1. **Disruption of Tsc2 in dermal mesenchymal cells of mice results in skin defects observed in tuberous sclerosis complex.** P Klover, R Thangapazham, S Li, A Devine, J Wang and T N Darling. Bethesda, MD. 2:00 pm, Poster #456
2. **Conditional knock-in expression of a CYLD mutant leads to the abnormal growth of sebaceous glands.** Jane Jin, Sally Wang, George Mosiolas and Jennifer Zhang. Durham, NC and Thessaloniki, Greece. 2:12 pm, Poster #442
3. **A position effect on FGF13 underlies X-linked hypertrichosis.** Gina M DeStefano, Katherine Fantauzzo, Mazen Kurban, Lynn Petukhova, Marija Tadin-Strapps, Brynn Levy, Dorothy Warburton, Courtney Luke, Carolina Cela, Elizabeth T Cirulli, Yujun Han, David B Goldstein, Julio Salas-Alanis and Angela M Christiano. New York, NY; Durham, NC and Monterrey, Mexico. 2:24 pm, Poster #450
4. **Plasticity and cellular memory during epidermal differentiation in response to BRAF activation and inhibition.** Suguna R Krishnaswami, Shantanu Kumar, Christopher Cowing-Zitron and Benjamin D Yu. La Jolla, CA. 2:36 pm, Poster #494
5. **p63 transcription factor controls the establishment of nuclear architecture and higher-order chromatin remodelling during development of the epidermis.** Michael Y Fessing, Valentina Rapisarda, Andrei N Mardaryev, Michal R Gdula, Andrei A Sharov, Iakowos Karakesisoglu, Chris J Hutchison and Vladimir A Botchkarev. Bradford, United Kingdom; Boston, MA and Durham, United Kingdom. 2:48 pm, Poster #461
6. **The polarity protein aPKC λ regulates epidermal cell fate decisions.** Michaela Niessen, Jeanie Scott, Susanne Vorhagen, Panagiota Sotiropoulou, Cedric Blanpain, Michael Leitges and Carien M Niessen. Cologne, Germany; Brussels, Belgium and Oslo, Norway. 3:00 pm, Poster #469
7. **Wnt signaling in embryonic dermal papilla precursor cells is required for hair follicle morphogenesis.** Su-Yi Tsai, Rachel Sennett, Laura Grisanti, Roland Zemla, Sara Najam and Michael Rendl. New York, NY. 3:12 pm, Poster #453
8. **Dermal β -catenin activity in response to epidermal Wnt ligands is required for hair follicle initiation.** Demeng Chen, Andrew Jarrell, Richard Lang and Radhika Atit. Cleveland, OH and Cincinnati, OH. 3:24 pm, Poster #482
9. **The regulation of dermal papilla cell number to specify hair size.** Bruce A Morgan. Boston, MA. 3:36 pm, Poster #484
10. **Dkk family members pattern the development of multiple types of ectodermal appendage.** Mingang Xu, Yuhang Zhang and Sarah E Millar. Philadelphia, PA. 3:48 pm, Poster #452
11. **Two-photon microscopy to capture live cell behavior in the hair follicle stem cell niche.** Panteleimon Rompolas and Valentina Greco. New Haven, CT. 4:00 pm, Poster #439
12. **Requirement of TACE/ADAM17 for the maintenance of hair follicle stem cell niche.** Tetsuro Kobayashi, Keisuke Horiuchi, Manabu Ohyama, Haruhiko Akiyama, Masayuki Amagai and Keisuke Nagao. Tokyo, Japan and Kyoto, Japan. 4:12 pm, Poster #440
13. **Medium and long chain fatty acids elicit oxidative stress and stem cell death in human and animal models of cicatricial alopecia.** Mary C Consolo, Sreejith P Panicker and Pratima Karnik. Cleveland, OH. 4:24 pm, Poster #474
14. **Critical role of endothelin receptor signaling in follicular melanocyte stem cells in adult skin.** Makoto Takeo, Piul Rabban and Mayumi Ito. New York, NY. 4:36 pm, Poster #486
15. **Forkhead transcription factor FoxA1 regulates sweat secretion through Best2 and Nkcc1 ion transporters.** Chang-Yi Cui, Victoria Childress, Yulan Piao, Marc Michel, Adiv A Johnson, Makoto Kunisada, Minoru S Ko, Klaus H Kaestner, Alan D Marmorstein and David Schlessinger. Baltimore, MD; Tucson, AZ; Kobe, Japan and Philadelphia, PA. 4:48 pm, Poster #472

CUTANEOUS T CELL LYMPHOMA SYMPOSIUM

NO CME CREDIT OFFERED

Presiders: Sam Hwang, MD/PhD and Gary Wood, MD

Thursday, May 10, 2012

2:00 pm - 5:30 pm

Raleigh Convention Center 302 A

OPEN TO ALL MEETING ATTENDEES

Introduction

Cutaneous Lymphoma Foundation Young Investigator Award

Rei Watanabe, MD/PhD, Brigham and Women's Hospital, Boston, Massachusetts

1. **Mechanisms of resistance of L-CTCL patients to alemtuzumab: What failure can teach us.** Rei Watanabe, Emmanuella Guenova, Christoph Schlapbach, Marianne Tawa, Jennifer Desimone, Natalie Adams, Andrew Dorosario, David C Fisher, Thomas S Kupper and Rachael A Clark. Boston, MA. 2:12 pm, Poster #053
2. **Th2 cytokines from malignant T cells suppress benign Th1 responses in patients with L-CTCL.** Emmanuella Guenova, Rei Watanabe, Christoph Schlapbach, Jennifer Desimone, Andrew Dorosario, Natalie Adams, David C Fisher, Marianne Tawa, Thomas S Kupper and Rachael A Clark. Boston, MA. 2:24 pm, Poster #598
3. **Genetic and chemical knockdown of class III histone deacetylase (HDAC) Sirt1 decreases cellular growth and induces apoptosis in cutaneous T-cell lymphoma (CTCL).** Minakshi Nihal, Nihal Ahmad and Gary S Wood. Madison, WI. 2:36 pm, Poster #132
4. **IL-22, but not IL-17, dominant environment in cutaneous T-cell lymphoma.** Tomomitsu Miyagaki, Makoto Sugaya, Hiraku Suga, Masahiro Kamata, Hanako Ohmatsu, Hideki Fujita, Yoshihide Asano, Yayoi Tada, Takafumi Kadono and Shinichi Sato. Tokyo, Japan. 2:48 pm, Poster #568
5. **Exploratory study of brentuximab vedotin (SGN-35), a novel monoclonal antibody-drug-conjugate against CD30, in mycosis fungoides (MF) and Sézary syndrome (SS) demonstrates clinical responses regardless of CD30 expression levels.** Sameer Bashey, Michael Krathon, Katherine Sutherland, Uma Sundram, Bharathi Lingala, Steven Horwitz, Richard Hoppe, Melissa Pulitzer, Ranjana Advani and Youn Kim. Stanford, CA and New York, NY. 3:00 pm, Poster #560
6. **Successful treatment of human cutaneous T cell lymphoma xenografts by potassium antimony tartrate.** Adrian Tun-Kyi, Patrick A Oberholzer, Jian-Zhong Qin, Maria B Karpova, Alexander A Navarini, Udo Ungethüm, Reinhard Dummer and Udo Döbbeling. Boston, MA; Cambridge, MA; Bern, Switzerland; Maywood, IL and Zurich, Switzerland. 3:12 pm, Poster #149
7. **Induction of human epidermotropic T-cell lymphoma in immunodeficient transgenic mice after injection of CD34+ stem cells.** Chelsea A Peterson, Chao Sun, Paul Rennert, Gerry Majreau, Aimee Landry and Robert W Dunstan. Cambridge, MA and East Lansing, MI. 3:24 pm, Poster #604
8. **TOX, PLS3, and KIR3DL2 genes are differentially expressed in Sézary Syndrome.** Brittany L O'Neill, Ezra Mirvish, Rebecca Pomerantz, Louis D Falo and Larisa J Geskin. Pittsburgh, PA. 3:36 pm, Poster #148
9. **MiR-223 has altered expression and affects cell growth in mycosis fungoides/cutaneous t-cell lymphoma.** Laura Y McGirt, John A Zic and Christine M Eischen. Nashville, TN. 3:48 pm, Poster #150
10. **Reduced myeloid-derived suppressor cell function is associated with interferon therapy of cutaneous T-cell lymphoma.** Michael K Schowalter, Oleg E Akilov, Louis D Falo and Larisa J Geskin. Pittsburgh, PA. 4:00 pm, Poster #625
11. **Phenotypic analysis of dendritic cell polarization in the skin-draining lymph nodes of cutaneous T-cell lymphoma.** Toshihisa Hamada, Kotaro Tada, Kenji Asagoe, Hiroshi Umemura, Masaki Otsuka, Osamu Yamasaki, Yumi Aoyama, Kazuyasu Fujii and Keiji Iwatsuki. Okayama, Japan. 4:12 pm, Poster #587
12. **Pralatrexate alone and in combination with bexarotene inhibit tumor growth in a CTCL xenograft model.** Xiang Zhang, Sophia Rangwala, Madeleine Duvic and Chunlei Zhang. Houston, TX. 4:24 pm, Poster #115

ANCILLARY MEETINGS

THURSDAY, MAY 10, 2012

Society for Pediatric Dermatology

7:00 am - 8:00 am

Raleigh Convention Center 206

Research in Cutaneous Surgery

10:00 am - 1:00 pm

Raleigh Convention Center 305 A

JDS Editorial Board Luncheon

12:00 pm - 1:30 pm

Raleigh Convention Center 307

Cutaneous T Cell Lymphoma Symposium

2:00 pm - 5:45 pm

Raleigh Convention Center 302 A

ANCILLARY MEETINGS

THURSDAY, MAY 10, 2012

Society for Pediatric Dermatology
7:00 am - 8:00 am
Raleigh Convention Center 206

Research in Cutaneous Surgery
10:00 am - 1:00 pm
Raleigh Convention Center 305 A

JDS Editorial Board Luncheon
12:00 pm - 1:30 pm
Raleigh Convention Center 307

Cutaneous T Cell Lymphoma Symposium
2:00 pm - 5:45 pm
Raleigh Convention Center 302 A

SOCIAL EVENT

NO CME CREDIT OFFERED

Thursday, May 10, 2012
6:00 pm - 10:00 pm
Raleigh Convention Center Ballroom A

TICKETED EVENT; PRE-REGISTRATION REQUIRED

From the tallest mountain in Appalachia through Tobacco Road all the way to the Outer Banks, no other state has it all like the blue skies of North Carolina....sometimes referred to as a "little slice of heaven." The social event offers attendees the opportunity to learn about and experience some of the elements that North Carolina is best known for.

The Wright Brothers interactive museum is brought to life with interactive museum "curators" who have experience building these planes, and who know all about the history of flight. Guests can learn how to use the bicycle and flight simulators and other educational elements to really get a feel for what the Wright Brothers experienced that day in Kitty Hawk.

Around the ballroom, guests can see actual NASCARs and have the opportunity to talk with experienced drivers. Guests will also be able to sit in the driver's seat, and even have their photo made if they desire. Great photo ops even for the novice photographer! Interactive Daytona driving simulators and slot car racing games will be enjoyed by all as they compete NASCAR style....fulfilling that "need for speed."

Guests can also enjoy the Pinehurst golf simulator, as well as other interactive and decorative features reflecting the culture and nature of North Carolina.





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54	Clinical Scholars Program
55	Genomic Technology Workshop
56	Concurrent Minisymposium 6: Immunology II: Innate Immunity and Microbiology
57	Concurrent Minisymposium 7: Human Clinical Research and Therapeutics
59	Concurrent Minisymposium 8: Epidermal Structure and Function
61	Concurrent Minisymposium 9: Carcinogenesis, Growth Factors and Cancer Genetics
63	North American Hair Research Society Scientific Meeting
65	Trainee Dinner Session

FRIDAY MEETING-AT-A-GLANCE

Friday, May 11, 2012

Society for Pediatric Dermatology Raleigh Convention Center 206	7:00 am - 8:00 am
Registration Raleigh Convention Center 300 Level Registration Area	7:30 am - 4:00 pm
Business Meeting for Members Raleigh Convention Center Ballroom B/C	7:45 am - 8:30 am
Plenary Session II Raleigh Convention Center Ballroom B/C	8:30 am - 9:30 am
Stephen Rothman Award <i>Presented to Paul Bergstresser, MD</i> Raleigh Convention Center Ballroom B/C	9:30 am - 9:40 am
Herman Beerman Lecture <i>Why Don't We Get More Cancer: A Proposed Role of the Microenvironment in Restraining Cancer Progression</i> Mina Bissell, PhD Raleigh Convention Center Ballroom B/C	9:40 am - 10:10 am
State-of-the-Art Plenary Lecture 3 <i>Cytoskeletal Organization and Function in the Epidermis</i> Terry Lechler, PhD Raleigh Convention Center Ballroom B/C	10:15 am - 10:45 am
State-of-the-Art Plenary Lecture 4 <i>Genomic Tracking of Microbial Pathogens</i> Julie Segre, PhD Raleigh Convention Center Ballroom B/C	10:45 am - 11:15 am
BCCNS Life Support Network Raleigh Convention Center 301 A/B	11:00 am - 1:00 pm
Poster Session II/Technical Exhibits Open w/coffee break <i>Even 002-286 / Odd 575-863</i> Raleigh Convention Center Exhibit Hall A	11:15 am - 1:15 pm
Clinical Scholars Program Raleigh Convention Center 305 B	11:30 am - 1:30 pm
National Alopecia Areata Foundation Raleigh Convention Center 307	11:45 am - 1:30 pm
Genomic Technology Workshop Raleigh Convention Center Ballroom B/C	12:00 pm - 2:00 pm
Academic Dermatologists Luncheon <i>Sponsored by the Women's Dermatology Society</i> Raleigh Convention Center 302 B/C	12:00 pm - 2:00 pm
Concurrent Minisymposia	2:00 pm - 5:30 pm
6. Immunology II: Innate Immunity and Microbiology Raleigh Convention Center 305 B	
7. Human Clinical Research and Therapeutics Raleigh Convention Center 306 C	
8. Epidermal Structure and Function Raleigh Convention Center 306 B	
9. Carcinogenesis, Growth Factors, and Cancer Genetics Raleigh Convention Center 305 A	
JID Editorial Board Meeting Raleigh Convention Center 402	4:00 pm - 5:30 pm
Nanodermatology Society Raleigh Convention Center 302 A	4:00 pm - 7:00 pm
North American Hair Research Society Scientific Meeting Raleigh Convention Center 302 B/C	6:00 pm - 9:30 pm
Galderma Japan Scientific Forum Raleigh Convention Center 301 A/B	6:30 pm - 9:30 pm
Trainee Dinner Session Raleigh Convention Center Ballroom A	7:30 pm - 9:30 pm

ANCILLARY MEETINGS

FRIDAY, MAY 11, 2012

Society for Pediatric Dermatology

7:00 am - 8:00 am
Raleigh Convention Center 206

BCCNS Life Support Network

11:00 am - 1:00 pm
Raleigh Convention Center 301 A/B

National Alopecia Areata Foundation

11:45 am - 1:30 pm
Raleigh Convention Center 307

Academic Dermatologists Luncheon

Sponsored by the Women's Dermatology Society
Raleigh Convention Center 302 B/C

JID Editorial Board Meeting

4:00 pm - 5:30 pm
Raleigh Convention Center 402

Nanodermatology Society

4:00 pm - 7:00 pm
Raleigh Convention Center 302 A

North American Hair Research Society

Scientific Meeting
6:00 pm - 9:30 pm
Raleigh Convention Center 302 B/C

Galderma Japan Scientific Forum

6:30 pm - 9:30 pm
Raleigh Convention Center 301 A/B

Indicates CME Credit Offered

ANCILLARY MEETINGS

FRIDAY, MAY 11, 2012

Society for Pediatric Dermatology

7:00 am - 8:00 am
Raleigh Convention Center 206

BCCNS Life Support Network

11:00 am - 1:00 pm
Raleigh Convention Center 301 A/B

National Alopecia Areata Foundation

11:45 am - 1:30 pm
Raleigh Convention Center 307

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Raleigh Convention Center 301 A/B

SOCIETY FOR PEDIATRIC DERMATOLOGY

NO CME CREDIT OFFERED

Moderator: Amy Paller, MD

Friday, May 11, 2012
7:00 am - 8:00 am
Raleigh Convention Center 206

OPEN TO ALL MEETING ATTENDEES

Overview II: Pediatric Dermatology at SID

Amy Paller, MD, Northwestern University

Presentations

1. **Development of induced pluripotent stem cell-based therapy for pseudoxanthoma elasticum.**
7:15 am, Poster #832, Presented by Jouni Uitto, MD/PhD, Thomas Jefferson University
2. **Special Presentation: Progress in Understanding Alopecia Areata, 7:25 am**
Presented by Angela Christiano, PhD, Columbia University

Discussion and Concluding Remarks

*Special thanks to
the Society for Pediatric Dermatology and its Task Force on Research
for supporting these sessions.*

BUSINESS MEETING FOR MEMBERS

NO CME CREDIT OFFERED

Friday, May 11, 2012
7:45 am - 8:30 am
Raleigh Convention Center Ballroom B/C

OPEN TO ALL MEETING ATTENDEES

Presentations will be made by the President, Secretary-Treasurer, committee chairpersons of the SID and by the Journal editor. Members will elect new members and officers, approve the minutes of the 2011 Business Meeting and discuss SID affairs. Officials from the ESDR, JSID and SID leadership will also acknowledge travel grant recipients and provide updates on IID2013.

Election of New Officers

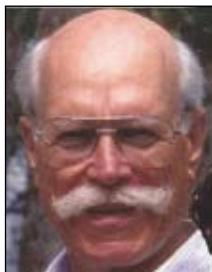
After conducting its annual request for nominations for new officers, the Committee on Nominations received a total of 25 nominees for office. After consideration of multiple factors including demographics, strategic planning, initiatives, commitment and prior service and/or participation in SID activities, the Committee recommends the following candidates to the Board of Directors: Paul Bergstresser, MD (President-elect); Lynn Cornelius, MD (Vice President-elect); James Elder, MD and Anthony Oro, MD (Board Members); and Anu Mathur, MD/PhD (Resident Board Member).

Appointment of Honorary Members

The SID is pleased to appoint the following honorary members.



Luis Diaz, MD
University of North Carolina, Chapel Hill
Chapel Hill, North Carolina



John Grupenhoff, PhD
Potomac, Maryland



Georg Stingl, MD
University of Vienna
Vienna, Austria



John Voorhees, MD
University of Michigan
Ann Arbor, Michigan



Jouni Uitto, MD/PhD
Jefferson Medical College
Philadelphia, Pennsylvania

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PLENARY SESSION II

1 CME CREDIT

Presiders: Julie Segre, PhD and Thomas Hornyak, MD/PhD

Friday, May 11, 2012
8:30 am - 9:30 am
Raleigh Convention Center Ballroom B/C

OPEN TO ALL MEETING ATTENDEES

1. **Cardiovascular risk factors and risk for recurrent cardiovascular events among psoriasis patients undergoing cardiac catheterization.** Jason M Farrow, Ehrin J Armstrong, Kristopher Klem, David Anderson, Sameen Azizi, John C Rutledge, Jason H Rogers and April W Armstrong. Sacramento, CA. 8:30 am, Poster #240
2. **Neutralization of IL-17A with LY2439821 compared to TNF with etanercept: effects on inflammatory gene expression underlying psoriasis pathogenesis.** James Krueger, Scott Fretzin, Mayte Suárez-Fariñas, Patrick Haslett, Krista Phipps, Gregory Cameron, Juliet McColm, Artemis Katcherian, Inna Cueto, Traci White, Subhashis Banerjee and Robert Hoffman. New York, NY and Indianapolis, IN. 8:42 am, Poster #498
3. **Overexpression of TGF β 1 in murine epidermis alters skin dendritic cell homeostasis and enhances adaptive immunity.** Javed Mohammed, Andrew Gunderson, Lina Khong, Richard Koubek, Mark Udey and Adam Glick. University Park, PA and Bethesda, MD. 8:54 am, Poster #609
4. **Inhibition of wound-induced hair neogenesis by prostaglandin D2.** Amanda M Nelson, Dorothy E Loy, John A Lawson, Adiya S Katseff, Garret A FitzGerald and Luis A Garza. Baltimore, MD and Philadelphia, PA. 9:06 am, Poster #783
5. **Toll-like receptor 2 signaling protects against ultraviolet-induced inflammation *in vivo*.** Dong-Hun H Lee, Youngae Lee, Changyup Y Shin, Serah Lee, Kyounghwan H Kong, Jeun E Kim, Kyuhan H Kim and Jinho H Chung. Seoul, South Korea. 9:18 am, Poster #676

STEPHEN ROTHMAN AWARD

NO CME CREDIT OFFERED

Friday, May 11, 2012
9:30 am - 9:40 am
Raleigh Convention Center Ballroom B/C

OPEN TO ALL MEETING ATTENDEES



The Stephen Rothman Memorial Award is presented annually for distinguished service to investigative cutaneous medicine. The recipient of this award has made major scientific achievements and excelled as a teacher and recruiter of outstanding dermatologists. The recipient is an individual who has distinctly altered the course and image of dermatology or its allied fields. It is the Society's highest award.

2012 Stephen Rothman Award Recipient

Paul R. Bergtresser, MD
Professor
University of Texas, Southwestern, Dallas, Texas

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HERMAN BEERMAN LECTURE

WHY DON'T WE GET MORE CANCER? A PROPOSED ROLE OF THE MICROENVIRONMENT IN RESTRAINING CANCER PROGRESSION

.5 CME CREDITS

Friday, May 11, 2012
9:40 am - 10:10 am
Raleigh Convention Center Ballroom B/C

OPEN TO ALL MEETING ATTENDEES

LECTURER BIO



Mina Bissell, PhD
Lawrence Berkeley National Laboratory
Berkeley, California

Dr. Bissell has been recognized for her lifetime contributions to the fields of breast cancer research, the enhanced role of extracellular matrix (ECM) and the nucleus environment to gene expression in normal and malignant tissues. One of the first to propose and elucidate the important signaling role of the extracellular-matrix (ECM), she recognized the crucial role of the microenvironment surrounding each tissue and organ and of the three-dimensional (3D) tissue structure in differentiation and cancer as factors that determined tissue-specificity.

LECTURESHIP HISTORY

This award is given in recognition of Dr. Herman Beerman's long and devoted service to the SID and his efforts to secure for it a position of respect in the scientific community. The Herman Beerman Lecture is given by a distinguished medical scholar at a scientific session of the Society's Annual Meeting. Traditionally, lecturers from fields other than dermatology are chosen in order to give meeting attendees the opportunity to learn about scientific advances in other fields.

STATE-OF-THE-ART PLENARY LECTURE 3

CYTOSKELETAL ORGANIZATION AND FUNCTION IN THE EPIDERMIS

.5 CME CREDITS

Friday, May 11, 2012
10:15 am - 10:45 am
Raleigh Convention Center Ballroom B/C

OPEN TO ALL MEETING ATTENDEES

LECTURER BIO



Terry Lechler, PhD
Duke University
Durham, North Carolina

Dr. Lechler studies the morphogenesis of epithelia, focusing on two highly proliferative tissues, the skin and the intestine. Both of these tissues turn over rapidly throughout adulthood, contain stem cells that contribute to tissue homeostasis and both are common sites for cancer development. His research seeks to understand how both cell shape and three-dimensional organization of cells is achieved to meet the diverse functions of these tissues.

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STATE-OF-THE-ART PLENARY LECTURE 4

GENOMIC TRACKING OF MICROBIAL PATHOGENS

.5 CME CREDITS

Friday, May 11, 2012
10:45 am - 11:15 am
Raleigh Convention Center Ballroom B/C

OPEN TO ALL MEETING ATTENDEES

LECTURER BIO



Julie Segre, PhD
National Human Genome Research Institute
Bethesda, Maryland

Dr. Segre's research has historically focused on how the epidermis creates a barrier at the interface of the body and the environment. Recently, Dr. Segre shifted her research focus to identifying the microbes that inhabit the skin. As the largest organ of the human body, skin serves as a critical barrier to invasion by microbes, while at the same time providing a major home to them. Using contemporary genomic methodologies, she is focusing on the role that these microbes may play in human health and disease.

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CLINICAL SCHOLARS PROGRAM

2 CME CREDITS

Friday, May 11, 2012
11:30 am - 1:30 pm
Raleigh Convention Center 305 B

OPEN ONLY TO CLINICAL SCHOLARS & YOUNG INVESTIGATOR/TRAINEE TRACK PARTICIPANTS

Plenary Presentations

1. Neural recruitment and dynamism in the pathogenesis of atopic dermatitis. Sarina B Elmariyah, Vemuri B Reddy and Ethan A Lerner. Charlestown, MA. 11:30 am, Poster #344, Presented by Ethan Lerner, PhD
2. A novel therapeutic strategy for correcting the desquamation defects in Harlequin Ichthyosis. Lei Zhang and Dennis R Roop. Aurora, CO. 11:50 am, Poster #372, Presented by Dennis Roop, PhD

Lectures



Role of IL-17 in Psoriasis and Other Skin Diseases

James Krueger, MD/PhD
Dept. of Investigative Dermatology
Rockefeller University, New York, New York



Update on Atopic Dermatitis

Lisa Beck, MD
Dept. of Dermatology
University of Rochester, Rochester, New York

GENOMIC TECHNOLOGY WORKSHOP

NEXT GEN SEQUENCING (THIS IS NOT YOUR MENTOR'S GENOMICS)

2 CME CREDITS

Friday, May 11, 2012
12:00 pm - 2:00 pm
Raleigh Convention Center Ballroom B/C

OPEN TO ALL MEETING ATTENDEES

Welcome, Overview of Workshop, Introductions

Julie Segre, PhD
Investigator
National Human Genome Research Institute, Bethesda, Maryland

Just Browsing—Demonstration of Online Browsers

Cristina de Guzman-Strong, PhD
Assistant Professor
Washington University, St. Louis, Missouri

Technically Speaking Genomics—New Technology

Heidi Kong, MD
Investigator
National Cancer Institute, Bethesda, Maryland

Questions

A Sequence of Events—Insights into Novel Gene Therapies

Keith Choate, MD/PhD
Assistant Professor
Yale University, New Haven, Connecticut

Questions

ChIP Away at the Unknown—Non-Coding DNA: Visualizing, Testing and Predicting

Kevin Wang, MD/PhD
Instructor
Stanford University, Stanford, California

Questions

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CONCURRENT MINISYMPOSIUM 6 IMMUNOLOGY II: INNATE IMMUNITY AND MICROBIOLOGY

3.5 CME CREDITS

Presiders: Lloyd Miller, MD/PhD and Anna DeBenedetto, MD

Friday, May 11, 2012
2:00 pm - 5:30 pm
Raleigh Convention Center 305 B

OPEN TO ALL MEETING ATTENDEES

1. **Epidermal dendritic cell function is controlled by the hyaluronan microenvironment.** Jun Muto, Aaron F Carlin, Margaret Kim, Andrea Garcia, Ajit Varki and Richard L Gallo. San Diego, CA. 2:00 pm, Poster #639
2. **Skin commensal bacteria acts as antimicrobial shield: Identification of firmocidin, a novel small-molecule antibiotic produced by *Staphylococcus epidermidis*.** Teruaki Nakatsuji, Sang-Jip Nam, William Fenical and Richard L Gallo. San Diego, CA. 2:12 pm, Poster #642
3. **Interleukin-33 mediates antibacterial defense against skin infections.** Changwei Li, Ziwei Jiang, Zhiheng Li and Yuping Lai. Shanghai, China. 2:24 pm, Poster #662
4. **Temporal shifts in the skin microbiome associated with atopic dermatitis disease flares and treatment.** Heidi H Kong, Julia Oh, Sean Conlan, Clay Deming, Elizabeth A Grice, Maria L Turner and Julia A Segre. Bethesda, MD. 2:36 pm, Poster #665
5. **Cutaneous TLR2-6 ligands limit T cell mediated skin inflammation by IL-6 dependent induction of myeloid derived suppressor cells.** Yuliya Skabytska, Ko-Ming Chen, Susanne Kaesler and Tilo Biedermann. Tübingen, Germany. 2:48 pm, Poster #664
6. **The role of NOD-like receptor (NLR) signaling pathways in *P. acnes*' induction of innate immune response.** Min Qin, Aslan Pirouz, George Agak and Jenny Kim. Los Angeles, CA. 3:00 pm, Poster #667
7. **Dysregulation of the NKG2D axis in human and mouse AA.** Zhenpeng Dai, Lisa Rothman, Raphael Clynes, Angela M Christiano and Matthew S Hayden. New York, NY. 3:12 pm, Poster #668
8. **Neutrophil-derived IL-1 β is required for abscess formation in immunity against *Staphylococcus aureus*.** John Cho, Yi Guo, Frank Hebroni, Romela Ramos, Seema Plasier, Hironori Matsushima, Yoichiro Iwakura, Akira Takashima, Delphine Lee, Scott Simon and Lloyd Miller. Los Angeles, CA; Santa Monica, CA; Toledo, OH; Tokyo, Japan and Davis, CA. 3:24 pm, Poster #648
9. **Interleukin-36y is released through pyroptosis by polynucleic-polyctydyl acid activated keratinocytes.** Katelynn A Milora, Li-Hua Lian, Katherine K Manupipatpong and Liselotte E Jensen. Philadelphia, PA. 3:36 pm, Poster #651
10. **Intracellular dsRNA activates inflammasome in the keratinocytes resulting in the release of IL-1 β and IL-18.** Xiuju Dai, Yuji Shirakata, Mikiko Tohyama, Yasushi Hanakawa, Hidenori Okazaki and Koji Sayama. Toon, Japan. 3:48 pm, Poster #656
11. **Epidermal Toll-like receptor 2 (TLR2) enhances skin barrier recovery and its expression is decreased in atopic dermatitis.** I-Hsin Kuo, Anna De Benedetto, Takeshi Yoshida, Donald Y Leung and Lisa A Beck. Rochester, NY and Denver, CO. 4:00 pm, Poster #637
12. **Analysis of bacterial communities in hidradenitis suppurativa lesions.** Natalia Vlassova, Omolara Olowoyeye and Ginette Hinds. Baltimore, MD. 4:12 pm, Poster #646
13. **Deficiency in mouse beta-defensin 14 leads to a delay in skin permeability barrier repair.** Nina Graumann, Claudia Neumann, Harder Jürgen, Catherine Walker, Werner Müller and Ehrhardt Proksch. Kiel, Germany and Manchester, United Kingdom. 4:24 pm, Poster #647
14. **Distinct immune responses induced by lipoteichoic acid from *S. aureus* or *S. epidermidis* despite common pattern recognition pathways.** Thomas Volz, Susanne Kaesler, Christian Draing, Friedrich Götz, Thomas Hartung, Martin Röcken and Tilo Biedermann. Tübingen, Germany; Konstanz, Germany and Baltimore, MD. 4:36 pm, Poster #660
15. **Langerhans cells and dendritic cells require AhR for constitutive expression of the immunosuppressive enzyme IDO.** Stephanie Kadow, Bettina Jux, Rebecca Scholz, Heike Weighardt and Charlotte Esser. Duesseldorf, Germany and Bonn, Germany. 4:48 pm, Poster #640

CONCURRENT MINISYMPOSIUM 7

HUMAN CLINICAL RESEARCH AND THERAPEUTICS

3.5 CME CREDITS

Presiders: Robert Dellavalle, MD/PhD and Victoria Werth, MD

Friday, May 11, 2012
2:00 pm - 5:30 pm
Raleigh Convention Center 306 C

OPEN TO ALL MEETING ATTENDEES

1. **Hematopoietic and mesenchymal cell transplantation after myeloablative and non-myeloablative conditioning for recessive dystrophic and junctional epidermolysis bullosa (RDEB, JEB).** Jakub Tolar, John A McGrath, Douglas R Keene, Kristen Hook, Mark J Osborn, Megan J Riddle, Sima Kavand, Maria Hordinsky, David Woodley, Mei Chen, Alain Hovnanian, Katsuto Tamai, Bruce R Blazar and John E Wagner. Minneapolis, MN; London, United Kingdom; Portland, OR; Los Angeles, CA; Paris, France and Osaka, Japan. 2:00 pm, Poster #534
2. **Efficacy and safety of vismodegib in advanced basal cell carcinoma.** Anne Chang, Aleksandar Sekulic, Michael R Migden, Axel Hauschild, Karl Lewis, John D Hainsworth, Simon Yoo, Luc Dirix, Jeannie Hou, Howard Mackey and Anthony E Oro. Stanford, CA; Scottsdale, AZ; Houston, TX; Kiel, Germany; Denver, CA; Nashville, TN; Evanston, IL; Antwerp, Belgium and South San Francisco, CA. 2:12 pm, Poster #546
3. **Barrier enhancement for eczema prevention- the BEEP feasibility study.** Eric L Simpson, Joanne R Chalmers, Jon M Hanifin, Matthew E French, Troy Lubianski, Aman Samrao, YiYi Chen, Zunqiu Chen and Hywel C Williams. Portland, OR and Nottingham, United Kingdom. 2:24 pm, Poster #529
4. **Merkel cell carcinoma therapy with viral oncoprotein-specific T cells in combination with immunostimulatory adjuvants.** Olga Afanasyev, Aude Chapuis, Jayasri Iyer, Kotaro Nagase, Kelly Paulson, Aaron Seo, Ivy Lai, Ilana Roberts, Erik Farrar, Chris McClurkan, Josh Marshak, Lichun Dong, Joo Ha Hwang, David Koelle, Cassian Yee and Paul Nghiem. Seattle, WA. 2:36 pm, Poster #563
5. **Adalimumab treatment for moderate to severe psoriasis substantially improves PASI scores as analyzed by body region and individual PASI component: Sub-analysis from the CHAMPION study.** Alexander A Navarini, Yves Poulin, Yihua Gu and Henrique D Teixeira. Zurich, Switzerland; Quebec, Canada and Abbott Park, IL. 2:48 pm, Poster #497
6. **Punch incision with removal of cyst contents leaves a smaller scar yet has a similar rate of recurrence compared to elliptical excision of truncal epidermal inclusion cysts.** Justin T Cheeley, Laura K DeLong, Suephy C Chen, Michelle M Pennie, Seema P Kini and Shannon Setzer. Atlanta, GA. 3:00 pm, Poster #541
7. **Long-term treatment with ustekinumab does not compromise the immune response to T-cell dependent or T-cell independent vaccines in patients with moderate-to-severe psoriasis: A comparison of ustekinumab-treated versus untreated psoriasis patients.** C Brodmerkel, R Langley, K Papp, M Bourcier, Y Poulin, V Ho, L Guenther, M C Hsu and P O Szapary. Spring House, PA; Halifax, Canada; Waterloo, Canada; Moncton, Canada; Quebec, Canada; Vancouver, Canada and London, Canada. 3:12 pm, Poster #545
8. **Graft-versus-lymphoma effect after non-myeloablative allogeneic transplant induces molecular remission assessed by high-throughput sequencing of T cell receptor in patients with advanced stage mycosis fungoides (MF) and Sézary syndrome (SS).** Wen-Kai K Weng, Randall Armstrong, Sally Arai, Katherine Sutherland, Richard T Hoppe and Youn H Kim. Stanford, CA. 3:24 pm, Poster #561
9. **Preliminary results of a Phase 2 trial evaluating efficacy and safety of vismodegib (GDC-0449) in operable basal cell carcinoma.** Kenneth G Gross, Howard Sofen, Leonard H Goldberg, Harry Sharata, Tiffani K Hamilton, Kenneth Zerivitz, Huibin Yue, Ron Firestein and Ivor Caro. San Diego, CA; Los Angeles, CA; Houston, TX; Madison, WI; Atlanta, GA and South San Francisco, CA. 3:36 pm, Poster #543

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CONCURRENT MINISYMPOSIUM 7 (CONT'D)

HUMAN CLINICAL RESEARCH AND THERAPEUTICS

Presiders: Robert Dellavalle, MD/PhD and Victoria Werth, MD

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OPEN TO ALL MEETING ATTENDEES

10. **Effect of extracorporeal photopheresis on Th1/Th2/Th17/Treg cytokines in cutaneous T-cell lymphoma patients.** Hua Zhong, Lisa Shiu, Yasmin Mekhail, Meghali Goswami, Madeleine Duvic and Xiao Ni. Houston, TX. 3:48 pm, Poster #527
11. **Cross-sectional evaluation of biological markers of cardiovascular disease risk in children and adolescents with psoriasis.** Wynnis L Tom, Pristine W Lee and Lawrence F Eichenfield. San Diego, CA. 4:00 pm, Poster #540
12. **Investigator-initiated, open-label trial of ustekinumab for the treatment of moderate to severe palmoplantar psoriasis showed higher doses may be required.** Shiu-chung Au, Ari M Goldminz, Noori Kim, Nicole Dumont, Melissa Michelon, Eva Volf, Meghan Hession, Paul F Lizzul, Israel Andrews, Todd Kerensky, Andrew Wang, Shimrat Yaniv and Alice B Gottlieb. Boston, MA. 4:12 pm, Poster #547
13. **Treatment of pemphigus vulgaris(PV) patients with infliximab and prednisone is associated with decreased autoantibodies and an increase in immature B cells.** Russell Hall, Janet Fairley, David Woodley and Victoria Werth. Durham, NC; Iowa City, IA; Los Angeles, CA and Philadelphia, PA. 4:24 pm, Poster #525
14. **Imatinib mesylate for the treatment of sclerotic skin chronic graft-versus-host disease.** Kristin Baird, Susan Booher, Leora Comis, Galen Joe, Seth M Steinberg, William D Figg, Shawn D Spencer, Naoko Takebe, Steven Pavletic and Edward W Cowen. Bethesda, MD. 4:36 pm, Poster #518
15. **Double-blind, randomized, bilateral comparison of skin irritancy following application of the combination acne products clindamycin/tretinoin and benzoyl peroxide/adapalene.** Renato Goreshi, Aman Samrao and Benjamin D Ehst. Portland, OR and Torrence, CA. 4:48 pm, Poster #508

CONCURRENT MINISYMPOSIUM 8

EPIDERMAL STRUCTURE AND FUNCTION

3.5 CME CREDITS

Presiders: Terry Lechler, PhD and Bogi Ansersen, MD

Friday, May 11, 2012

2:00 pm - 5:30 pm

Raleigh Convention Center 306 B

OPEN TO ALL MEETING ATTENDEES

1. Increased retinoic acid levels through ablation of *Cyp26b1* determine the processes of embryonic skin barrier formation and peridermal development. Junko Okano, Ulrike Lichti, Satoru Mamiya, Maria Aronova, Guofeng Zhang, Stuart H Yuspa, Hiroshi Hamada, Yasuo Sakai and Marial Morasso. Bethesda, MD and Osaka, Japan. 2:00 pm, Poster #313
2. CXCR4 regulates lymphangiogenesis and keratinocyte proliferation in contact and IL23-mediated dermatitis. Tomonori Takekoshi, Xuesong Wu, Michael B Dwinell and Sam T Hwang. Milwaukee, WI. 2:12 pm, Poster #316
3. Beta-catenin is essential for complete epidermal barrier formation. Samriddha Ray and Terry Lechler. Durham, NC. 2:24 pm, Poster #333
4. A novel therapeutic strategy for correcting the desquamation defects in Harlequin Ichthyosis. Lei Zhang and Dennis R Roop. Aurora, CO. 2:36 pm, Poster #372
5. BAF53A enforces the epidermal progenitor state by re-targeting the SWI/SNF/BAF chromatin remodeling complex away from differentiation gene promoters. Xiaomin Bao, Jiong Tang, Shiyi Tao, Kun Qu, Gerald R Crabtree and Paul A Khavari. Stanford, CA. 2:48 pm, Poster #373
6. GPHR-dependent functions of the Golgi apparatus are essential for formation of lamellar granules and the skin barrier. Masahito Tarutani, Kimiko Nakajima, Yoshikazu Uchida, Mikiro Takaishi, Naoko Goto-Inoue, Masahito Ikawa, Mitsutoshi Setou, Peter M Elias, Taroh Kinoshita, Yusuke Maeda and Shigetoshi Sano. Nankoku, Japan; San Francisco, CA; Minamiosawa, Japan; Suita, Japan and Handayama, Japan. 3:00 pm, Poster #320
7. The Trithorax complex promotes epidermal keratinocyte differentiation in part through GRHL3/GET1- mediated recruitment. Amelia Hopkin, William Gordon, Rachel Klein, Francisco Espitia, Kenneth Daily, Michael Zeller, Pierre Baldi and Bogi Andersen. Irvine, CA. 3:12 pm, Poster #354
8. Desmosomal cadherins crosstalk to the nucleus via a novel potent transcriptional regulator of the Wnt pathway: Plakoglobin (PG, JUP, γ -catenin). Arnaud Galichet, Christian Strauss, Beyza S Sayar, Denise Howald and Eliane J Mueller. Bern, Switzerland. 3:24 pm, Poster #356
9. A novel human psoriatic skin reconstruct: The role of transit amplifying keratinocytes and of p75 neurotrophin receptor. Francesca Truzzi, Alessandra Marconi, Roberta Lotti, Katiuscia Dallaglio, Elisabetta Palazzo, Tiziana Petrachi, Annalisa Saltari and Carlo Pincelli. Modena, Italy. 3:36 pm, Poster #310
10. KLK7 participates in the maturation of caspase-14 during keratinocyte terminal differentiation - Role of an intermediate form. Mami Yamamoto, Yuuko Matsumoto, Masashi Miyai, Ryoji Tsuboi and Toshihiko Hibino. Yokohama, Japan and Tokyo, Japan. 3:48 pm, Poster #341
11. Imaging mass spectrometry visualizes epidermal barrier ceramides and their immediate precursors. Naoko Goto-Inoue, Takahiro Hayasaka, Nobuhiro Zaima, Kimiko Nakajima, Walter M Holleran, Shigetoshi Sano, Mitsutoshi Setou and Yoshikazu Uchida. San Francisco, CA; Hamamatsu, Japan; Nara, Japan and Kochi, Japan. 4:00 pm, Poster #317
12. Redundant roles of Ovol1 and Ovol2 transcription factors in epidermal morphogenesis. Briana Lee and Xing Dai. Irvine, CA. 4:12 pm, Poster #363

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ANCILLARY MEETINGS

FRIDAY, MAY 11, 2012

Society for Pediatric Dermatology

7:00 am - 8:00 am

Raleigh Convention Center 206

BCCNS Life Support Network

11:00 am - 1:00 pm

Raleigh Convention Center 301 A/B

National Alopecia Areata Foundation

11:45 am - 1:30 pm

Raleigh Convention Center 307

Academic Dermatologists Luncheon

*Sponsored by the Women's
Dermatology Society*

Raleigh Convention Center 302 B/C

JID Editorial Board Meeting

4:00 pm - 5:30 pm

Raleigh Convention Center 402

Nanodermatology Society

4:00 pm - 7:00 pm

Raleigh Convention Center 302 A

North American Hair Research Society

Scientific Meeting

6:00 pm - 9:30 pm

Raleigh Convention Center 302 B/C

Galderma Japan Scientific Forum

6:30 pm - 9:30 pm

Raleigh Convention Center 301 A/B

ANCILLARY MEETINGS

FRIDAY, MAY 11, 2012

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Raleigh Convention Center 302 A

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Scientific Meeting

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Raleigh Convention Center 302 B/C

Galderma Japan Scientific Forum

6:30 pm - 9:30 pm
Raleigh Convention Center 301 A/B

CONCURRENT MINISYMPOSIUM 8 (CONT'D)

EPIDERMAL STRUCTURE AND FUNCTION

Presiders: Terry Lechler, PhD and Bogi Anseren, MD

Friday, May 11, 2012
2:00 pm - 5:30 pm
Raleigh Convention Center 306 B

OPEN TO ALL MEETING ATTENDEES

13. **Apoptosis of proliferating keratinocytes by targeted delivery of tumor necrosis factor-related apoptosis-inducing ligand (TRAIL) with an anti-desmoglein monoclonal antibody.** Michiyoshi Kouno, Xiaoping Yang, Norman Schechter, John Seykora and John Stanley. Philadelphia, PA. 4:24 pm, Poster #312
14. **Neural recruitment and dynamism in the pathogenesis of atopic dermatitis.** Sarina B Elmariah, Vemuri B Reddy and Ethan A Lerner. Charlestown, MA. 4:36 pm, Poster #344
15. **Mandatory role of kallikrein 5 in profilaggrin maturation and possible association of its impairment with atopic dermatitis.** Jun-ichi Sakabe, Mami Yamamoto, Akira Motoyama, Satoshi Hirakawa, Miwa Kobayashi, Motonobu Nakamura, Toshihiko Hibino and Yoshiki Tokura. Hamamatsu, Japan; Yokohama, Japan; Tokyo, Japan and Kitakyushu, Japan. 4:48 pm, Poster #325

CONCURRENT MINISYMPOSIUM 9

CARCINOGENESIS, GROWTH FACTORS AND CANCER GENETICS

3.5 CME CREDITS

Presiders: Brian Pollack, MD/PhD and Santosh Katiyah, PhD

Friday, May 11, 2012

2:00 pm - 5:30 pm

Raleigh Convention Center 305 A

OPEN TO ALL MEETING ATTENDEES

1. **SMO inhibitor effectiveness in a patient with a SHH locus translocation causing holoprosencephaly and basal cell carcinomas.** Natalia Gomez-Ospina, Charles D Bangs, Kun Qu, Anne L Chang and Anthony E Oro. Stanford, CA. 2:00 pm, Poster #167
2. **Loss of Keratin 17 delays HPV-induced tumor growth in skin.** Daryle Depianto, Ryan P Hobbs, Minerva Han and Pierre A Coulombe. Baltimore, MD. 2:12 pm, Poster #114
3. **Human papillomavirus mechanisms in squamous cell carcinogenesis in BRAF-inhibitor treated melanoma patients.** Daniel N Cohen, James D Chappell and Jason B Robbins. Nashville, TN. 2:24 pm, Poster #110
4. **Manipulating and monitoring Fas expression by cutaneous T-cell lymphoma (CTCL) tumor cells *in vitro* and *in vivo*.** Jianqiang Wu, Nathalie Stutz and Gary S Wood. Madison, WI. 2:36 pm, Poster #125
5. **Gene expression profiling of basal cell carcinoma using laser capture microdissection reveals over-expression of oncogene anaplastic lymphoma kinase.** Hanna Ning, Hiroshi Mitsui, Mayte Suarez-Farinás, Kajal R Shah, Israel Coats, John A Carucci and James G Krueger. New York, NY and Dallas, TX. 2:48 pm, Poster #128
6. **Human basal cell carcinoma tumor initiating cells express MDR1 and are resistant to etoposide killing.** Chantal S Colmont, Antsar Ben Ketah, Raheal Errington, Carole L Yee, Mark Udey, Jonathan C Vogel and Girish K Patel. Cardiff, United Kingdom and Bethesda, MD. 3:00 pm, Poster #124
7. **Transcriptome analysis identifies thymocyte developmental factor TOX as a novel diagnostic and prognostic marker for mycosis fungoides.** Yang Wang, Ivan Litvinov, Yuanshen Huang, Mingwan Su, Denis Sasseville and Youwen Zhou. Vancouver, Canada. 3:12 pm, Poster #113
8. **Histone deacetylase-3 promotes melanoma metastasis by deacetylating ganglioside GM3 and increases cell proliferation through p70S6 kinase signaling.** Daniel Q Bach, Qiu Yan, Ji-Wei Liu, Amy S Paller, Shuang-ni Yang, Tom Traczyk, Pedram Gerami and Xiao Q Wang. Chicago, IL. 3:24 pm, Poster #126
9. **Quantitative RT-PCR reveals a similar pattern of cytokine dysregulation in mycosis fungoides skin compared to those identified in a mouse model of CTCL.** Xuesong Wu, Alexander C Mackinnon and Sam T Hwang. Milwaukee, WI. 3:36 pm, Poster #112
10. **Protein Kinase C ϵ and its interacting proteins Hsp90 β and Stat3 are potential molecular targets for prevention of ultraviolet radiation-induced cutaneous damage and development of squamous cell carcinomas.** Ajit K Verma, Jordan M Sand, Moammir H Aziz and Absarul Haque. Madison, WI. 3:48 pm, Poster #131
11. **Elevated epidermal thymic stromal lymphopoietin levels prevent skin tumorigenesis.** Shadmehr Demehri, Ahu Turkoz, Laura J Yockey, Mustafa Turkoz and Raphael Kopan. St. Louis, MO. 4:00 pm, Poster #142

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ANCILLARY MEETINGS

FRIDAY, MAY 11, 2012

Society for Pediatric Dermatology

7:00 am - 8:00 am

Raleigh Convention Center 206

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11:00 am - 1:00 pm

Raleigh Convention Center 301 A/B

National Alopecia Areata Foundation

11:45 am - 1:30 pm

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Academic Dermatologists Luncheon

Sponsored by the Women's Dermatology Society

Raleigh Convention Center 302 B/C

JID Editorial Board Meeting

4:00 pm - 5:30 pm

Raleigh Convention Center 402

Nanodermatology Society

4:00 pm - 7:00 pm

Raleigh Convention Center 302 A

North American Hair Research Society

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6:30 pm - 9:30 pm

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6:30 pm - 9:30 pm
Raleigh Convention Center 301 A/B

CONCURRENT MINISYMPOSIUM 9 (CONT'D) CARCINOGENESIS, GROWTH FACTORS AND CANCER GENETICS

Presiders: Brian Pollack, MD/PhD and Santosh Katiyah, PhD

Friday, May 11, 2012
2:00 pm - 5:30 pm
Raleigh Convention Center 305 A

OPEN TO ALL MEETING ATTENDEES

12. **Epidermal growth factor receptor transactivation is suppressed in diabetic wounds, but stimulated by ganglioside depletion.** Sarah Lee, Heather Wilson, Xiaoqi Wang and Amy S Paller. Chicago, IL. 4:12 pm, Poster #117
13. **Keratinocyte-specific p38δ mitogen-activated protein kinase (MAPK) deletion reveals a context and gender dependent regulation of skin carcinogenesis.** Alexi Kiss, Aaron C Koppel, Joanna Anders, Christophe Cataisson, Stuart H Yuspa and Tatiana Efimova. St. Louis, MO and Bethesda, MD. 4:24 pm, Poster #130
14. **Inhibitors of oncogenic signal transduction pathways augment the induction of MHC class I molecules by IFN-γ.** Brian P Pollack and Bishu Sapkota. Atlanta, GA and Decatur, GA. 4:36 pm, Poster #129
15. **Interferon-γ renders myeloid-derived suppressor cells (MDSC) with the potent immunosuppressive activity via inducing expression of DC-HIL and inducible nitric oxide synthase (iNOS).** Jin Sung Chung, Kyoichi Tamura, Ponciano D Cruz and Kiyoshi Ariizumi. Dallas, TX. 4:48 pm, Poster #164

NORTH AMERICAN HAIR RESEARCH SOCIETY

SCIENTIFIC MEETING

NO CME CREDIT OFFERED

Presider: Wilma F. Bergfeld, MD and Stephen Lyle, MD/PhD

Friday, May 11, 2012
6:00 pm - 9:30 pm
Raleigh Convention Center 302 B/C

OPEN TO ALL MEETING ATTENDEES

6:00 pm - 6:45 pm **Poster Presentations & Reception**

1. **P-cadherin regulates human hair follicle growth and pigmentation through canonical wnt signaling.** Liat Samuelov, Jennifer E Kloepper, Daisuke Tsuruta, Tamás Bíró, Suman K Singh, Desmond J Tobin, Eli Sprecher and Ralf Paus. Luebeck, Germany; Tel Aviv, Israel; Kurume, Japan; Debrecen, Hungary; Bradford, United Kingdom; Ramat Aviv, Israel and Manchester, United Kingdom. *Poster #443*
2. **DP-specific Sox2 ablation impairs hair follicle growth.** Carlos Clavel, Laura Grisanti, Roland Zemla, Amelie Rezza, Rita Barros and Michael Rendl. New York, New YorkNY and Porto, Portugal. *Poster #489*
3. **RNA-binding Pumilio proteins are expressed in mammalian epidermis and regulate the balance between keratinocyte proliferation and apoptosis.** Sean R Christensen and Haifan Lin. New Haven, CT. *Poster #483*
4. **Hairless is a histone demethylase involved in hair follicle cycling and epidermal homeostasis.** Liang Liu, Hyunmi Kim, Claire A Higgins and Angela M Christiano. New York, NY. *Poster #476*
5. **The role of a novel immunoglobulin-like protein in hair and sebaceous development.** Carmen Perez, Angel G Leiva, Joaquin Jimenez and Tongyu C Wikramanayake. Miami, FL. *Poster #471*
6. **Dlx3 is a critical regulator on hair follicle differentiation and development.** Jin-Chul Kim, Joonsung Hwang and Marial Morasso. Bethesda, MD and Cheongwon-gun, South Korea. *Poster #449*
7. **Characterization of the human hair keratin-associated protein 2 (KRTAP2) gene family.** Hiroki Fujikawa, Atsushi Fujimoto, Muhammad Farooq, Masaaki Ito and Yutaka Shimomura. Niigata, Japan. *Poster #445*
8. **Tolbutamide, an ATP-sensitive potassium (K_{ATP}) channel blocker, inhibits hair growth, promotes catagen and stimulates TNF/TNFRSF1A signalling in human hair follicles in organ culture.** Heero Rahman, Nilofer Farjo, Bassam Farjo and Valerie Randall. Bradford, United Kingdom and Manchester, United Kingdom. *Poster #488*
9. **Somatostatin is expressed in hair follicles and may play a role in immune privilege.** Trisia Breitkopf, Blanche K Lo, Gigi Leung, Mei Yu, Jerry Shapiro and Kevin J McElwee. Vancouver, Canada. *Poster #441*
10. **Neurogenic inflammation: Evidence for a causal role in lichen planopilaris.** Margareth Pierre-Louis, Isabella Doche, Marna Ericson, Sima Kavand, Rebecca Speltz-Paiz, George L Wilcox and Maria K Hordinsky. Minneapolis, MN and São Paulo, Brazil. *Poster #485*
11. **Spatially mapping changes in protein secondary structure and lipid distribution in human hair with FTIR imaging microscopy.** David J Moore and Samuel Gourion-Arsiquaud. Princeton, NJ. *Poster #491*

6:45 pm - 7:15 pm **Keynote Speaker**

Wnt-dependent regeneration of pigmented hair
Mayumi Ito, PhD
Assistant Professor, Department of Dermatology and Cell Biology
New York University School of Medicine

ANCILLARY MEETINGS

FRIDAY, MAY 11, 2012

Society for Pediatric Dermatology
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Raleigh Convention Center 301 A/B

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ANCILLARY MEETINGS

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Raleigh Convention Center 301 A/B

NORTH AMERICAN HAIR RESEARCH SOCIETY SCIENTIFIC MEETING (CONT'D)

Presider: Wilma F. Bergfeld, MD and Stephen Lyle, MD/PhD

Friday, May 11, 2012
6:00 pm - 9:30 pm
Raleigh Convention Center 302 B/C

OPEN TO ALL MEETING ATTENDEES

7:15 pm - 8:30 pm

Oral Abstract Presentations

1. **A perivascular stem cell niche in the hair follicle.** Ying Xiao, Wei-Meng Woo, Atsushi Terunuma, Anthony E Oro, Jonathan C Vogel and Isaac Brownell. Bethesda, MD and Stanford, CA. *Poster #467*
2. **Human induced pluripotent stem cell-derived keratinocyte precursors contribute to hair follicle regeneration in vivo.** Ophelia K Veraitch, Tetsuro Kobayashi, Yoichi Imaizumi, Wado Akamatsu, Masayuki Amagai, Hideyuki Okano and Manabu Ohyama. Tokyo, Japan. *Poster #446*
3. **Defining the role of p63 in hair follicle stem cells.** Velmurugan Balaiya, Merlin Ariefdjohan, Peter J Koch and Marankel Koster. Aurora, CO. *Poster #473*
4. **Complex pigment patterning and topology of melanocyte stem cell niche in feathers.** Sung-Jan Lin, John Foley and Cheng-Ming Chuong. Los Angeles, CA; Taipei, Taiwan and Bloomington, IN. *Poster #448*
5. **Disruption of the cholesterol biosynthesis pathway contributes to hair follicle cycling deficiency and stem cell apoptosis in a mouse model.** Sreejith P Panicker, Mary C Consolo, Kord Honda and Pratima Karnik. Cleveland, OH. *Poster #481*

8:30 pm - 9:30 pm

NAHRS Business Meeting

TRAINEE DINNER SESSION

NO CME CREDIT OFFERED

Friday, May 11, 2012
7:30 pm - 9:30 pm
Raleigh Convention Center Ballroom A

TICKETED EVENT; PRE-REGISTRATION IS REQUIRED

Over the past several years, the SID has encouraged meetings between residents and post-doctoral fellows. To promote collegiality, the SID annually presents a Trainee Dinner—small group meetings in which senior and junior scientists and a group of four to six residents and post-doctoral fellows discuss issues over dinner. These sessions provide an opportunity to talk informally about subject matter of interest including research opportunities in dermatology, a career in industry, life in academia or how to combine clinical work with research.

ANCILLARY MEETINGS

FRIDAY, MAY 11, 2012

Society for Pediatric Dermatology
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Raleigh Convention Center 302 B/C

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4:00 pm - 7:00 pm
Raleigh Convention Center 302 A

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Raleigh Convention Center 302 B/C

Galderma Japan Scientific Forum
6:30 pm - 9:30 pm
Raleigh Convention Center 301 A/B



NOTES



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74	Concurrent Minisymposium 10: Pigmentation and Melanoma
76	Concurrent Minisymposium 11: Genetic Disease, Gene Regulation and Gene Therapy
78	Concurrent Minisymposium 12: Tissue Regeneration, Stem Cells and Wound Healing
79	Concurrent Minisymposium 13: Immunology I: Adaptive Immunity

SATURDAY MEETING-AT-A-GLANCE

Saturday, May 12, 2012

SID Board of Directors Meeting Raleigh Convention Center 402	7:00 am - 8:00 am
Registration Raleigh Convention Center 300 Level Registration Area	7:30 am - 12:00 pm
Plenary Session III Raleigh Convention Center Ballroom B/C	8:00 am - 9:00 am
American Dermato-Epidemiology Network Business/Scientific Session Raleigh Convention Center 302 A	8:00 am - 12:00 pm
William Montagna Lecture <i>Genome Regulation by Long Noncoding RNAs</i> Howard Chang, MD/PhD Raleigh Convention Center Ballroom B/C	9:00 am - 9:30 am
Julius Stone Lecture <i>The Hyper IgE Syndromes</i> Rebecca Buckley, MD Raleigh Convention Center Ballroom B/C	9:30 am - 10:00 am
Poster Session III/Technical Exhibits Open w/coffee break <i>Odd 289-573 / Even 576-864</i> Raleigh Convention Center Exhibit Hall A	10:00 am - 12:00 pm
Clinical Scholars Program Raleigh Convention Center Room 305 B	10:15 am - 12:15 pm
Concurrent Minisymposia 10. Pigmentation and Melanoma Raleigh Convention Center 306 B 11. Genetic Disease, Gene Regulation and Gene Therapy Raleigh Convention Center 305 B 12. Tissue Regeneration, Stem Cells and Wound Healing Raleigh Convention Center 306 C 13. Immunology I: Adaptive Immunity Raleigh Convention Center 305 A	12:30 pm - 4:00 pm

ANCILLARY MEETINGS

SATURDAY, MAY 12, 2012

SID Board of Directors Meeting

7:00 am - 8:00 am

Raleigh Convention Center 402

American DermatoEpidemiology Network Business/Scientific Session

8:00 am - 12:00 pm

Raleigh Convention Center 302 A

Indicates CME Credit Offered

ANCILLARY MEETINGS

SATURDAY, MAY 12, 2012

SID Board of Directors Meeting

7:00 am - 8:00 am
Raleigh Convention Center 402

American DermatoEpidemiology

Network Business/Scientific Session
8:00 am - 12:00 pm
Raleigh Convention Center 302 A

PLENARY SESSION III

1 CME CREDIT

Presider: Michael Girardi, MD and James Elder, MD/PhD

Saturday, May 12, 2012
8:00 am - 9:00 am
Raleigh Convention Center Ballroom B/C

OPEN TO ALL MEETING ATTENDEES

1. **Extracellular Hsp90alpha promotes human dermal fibroblast migration and skin wound healing via the NPTY motif within LRP-1 receptor and three downstream Akt kinases: Direct evidence for a cross-membrane signal transduction mechanism.** F Tsen, C Cheng, M Chen, D Woodley and W Li. Los Angeles, CA. 8:00 am, Poster #210
2. **CXCL10, an IFN- γ -induced chemokine, is required for the development of depigmentation in a mouse model of vitiligo.** Mehdi Rashighi, Priti Agarwal, TajieH Harris, April Deng, ChristopherA Hunter and JohnE Harris. Worcester, MA and Philadelphia, PA. 8:12 am, Poster #001
3. **The role of the microRNA miR-17~92 cluster in hair follicle biology.** Thomas Andl and Liming Luan. Nashville, TN. 8:24 am, Poster #466
4. **Structural insight into the organization and function of keratin filaments.** Chang-Hun Lee, Min-Sung Kim, Byung Min Chung, Daniel Leahy and Pierre A Coulombe. Baltimore, MD. 8:36 am, Poster #332
5. **The role of voltage-gated calcium channels in controlling stem cells in non-excitable tissues.** Gozde Yucel, Banu Altindag, Natalia Gomezospina, Ricardo Dolmetsch and Anthony Oro. Stanford, CA. 8:48 am, Poster #810

AMERICAN DERMATOEPIDEMIOLOGY NETWORK

BUSINESS/SCIENTIFIC SESSION

NO CME CREDIT OFFERED

Saturday, May 12, 2012
8:00 am - 12:30 pm
Raleigh Convention Center 302 A

OPEN TO ALL MEETING ATTENDEES

1. **Gender is an age-specific effect modifier for ulcerated malignant melanomas.** Blakely S Richardson, William F Anderson, Jill S Barnholtz-Sloan, Margaret A Tucker and Meg R Gerstenblith. Cleveland, OH and Bethesda, MD. *8:00 am, Poster #282*
2. **Clinical characteristics and outcomes of Merkel cell carcinomas in the Kaiser Permanente Northern California population.** Maryam M Asgari, E Margaret Warton, Monica M Sokil, Jayasri Iyer, Kelly G Paulson and Paul Nghiem. Oakland, CA and Seattle, WA. *8:12 am, Poster #296*
3. **Risk of second primary malignancies after dermatofibrosarcoma protuberans.** David E Kurlander, Kathryn J Martires and Jeremy S Bordeaux. Cleveland, OH. *8:24 am, Poster #226*
4. **Dramatically improved overall survival and predictors of disease in 17 metastatic basal cell carcinoma patients.** Christina Danial, Bharathi Lingala, Anthony E Oro and Anne Lynn S Chang. Redwood City, CA. *8:36 am, Poster #227*
5. **Predictors of squamous cell carcinoma in a high-risk population: VA Topical Tretinoin Chemoprevention Trial (VATTC).** Amilcar E Rizzo, Robert K Dyer, Tobias Cohen and Martin A Weinstock. Providence, RI. *8:48 am, Poster #247*
6. **Web-based curriculum improves primary care providers' skin cancer detection skills.** Melody J Eide, M Asgari, W Shaikh, L L Li, S W Fletcher, A Halpern, A Geller, G Alexander, A Altschuler, S Dusza, A Marghoob, E Quigley and M A Weinstock. Detroit, MI; Oakland, CA; Providence, RI; Boston, MA and New York, NY. *9:00 am, Poster #275*

Break

7. **Variation in dermatologist beliefs about the safety and effectiveness of treatments for moderate-to-severe psoriasis.** Katrina Abuabara, Joy Wan, Andrea B Troxel, Daniel B Shin, Abby S Van Voorhees, Bruce F Bebo, Gerald G Krueger, Kristina Callis Duffin and Joel M Gelfand. Philadelphia, PA; Portland, OR and Salt Lake City, UT. *9:24 am, Poster #252*
8. **Interactions between adiposity and genetic polymorphisms on the risk of psoriasis.** Wenqing Li, Jiali Han, Mingfeng Zhang and Abrar A Qureshi. Boston, MA. *9:36 am, Poster #287*
9. **Prevalence of comorbidities is lower among HLA-Cw6-positive psoriasis patients.** Trilokraj Tejasvi, Philip E Stuart, Rajan P Nair, John J Voorhees and James T Elder. Ann Arbor, MI. *9:48 am, Poster #270*
10. **Eczema severity is associated with multiple comorbid conditions and increased healthcare utilization.** Jonathan I Silverberg and Eric L Simpson. New York, NY and Portland, OR. *10:00 am, Poster #260*
11. **Atopic dermatitis prevalence and co-morbidities in US women.** Longde Lin, Jiali Han, Carlos Camargo and Abrar A Qureshi. Boston, MA and Nanning, China. *10:12 am, Poster #273*
12. **Increasing sustainability of teledermatology practices: A study of operational models and challenges in modern-day teledermatology.** April W Armstrong, Mei W Kwong, Lynda Ledo, Thomas S Nesbitt and Sandra L Shewry. Sacramento, CA. *10:24 am, Poster #242*

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ANCILLARY MEETINGS

SATURDAY, MAY 12, 2012

SID Board of Directors Meeting

7:00 am - 8:00 am
Raleigh Convention Center 402

American DermatoEpidemiology Network Business/Scientific Session

8:00 am - 12:00 pm
Raleigh Convention Center 302 A

ANCILLARY MEETINGS

SATURDAY, MAY 12, 2012

SID Board of Directors Meeting

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AMERICAN DERMATOEPIDEMIOLOGY NETWORK

BUSINESS/SCIENTIFIC SESSION (CONT'D)

Saturday, May 12, 2012

8:00 am - 12:30 pm

Raleigh Convention Center 302 A

OPEN TO ALL MEETING ATTENDEES

Invited Lecture

Health Services Research in Dermatology

Suephy Chen, MD/MS

Associate Professor

Dept. of Dermatology

Emory University, Atlanta, Georgia

13. Racial disparities in the degree of dyspigmentation and scarring in patients with cutaneous lupus. S M Verma, J Okawa, V P Werth and K Propert. Philadelphia, PA. 10:56 am, Poster #278
14. Internet crowdsourcing as a venue for collection of dermatologic quality of life data. Andrew Ostrowski, Suephy Chen, Emir Veledar, Adam Sperduto and Robert Swerlick. Augusta, GA and Atlanta, GA. 11:08 am, Poster #265
15. Willingness-to-pay stated preferences in cutaneous lupus erythematosus: A pilot study. Stephanie W Liu, Christina Lam, Abrar Qureshi and Ruth Ann Vleugels. Boston, MA. 11:20 am, Poster #246

ADEN Business Meeting

WILLIAM MONTAGNA LECTURE

GENOME REGULATION BY LONG NONCODING RNAs

.5 CME CREDITS

Saturday, May 12, 2012

9:00 am - 9:30 am

Raleigh Convention Center Ballroom B/C

OPEN TO ALL MEETING ATTENDEES

LECTURER BIO



Howard Chang, MD/PhD
Stanford University
Palo Alto, California

Dr. Chang's research is focused on how the activities of hundreds or even thousands of genes (gene parties) are coordinated to achieve biological meaning. He and his team have pioneered methods to predict, dissect, and control large-scale gene regulatory programs; these methods have provided insights into human development, cancer, and aging. A particular interest is how cells know and remember their locations in the body, particularly with the help of long noncoding RNAs.

LECTURESHIP HISTORY

The William Montagna Lecture is given annually at the Society's Annual Meeting. This award is intended to honor and reward young active investigators. Primary emphasis is given to researchers in skin biology.

ANCILLARY MEETINGS

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ANCILLARY MEETINGS

SATURDAY, MAY 12, 2012

SID Board of Directors Meeting

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American DermatoEpidemiology

Network Business/Scientific Session

8:00 am - 12:00 pm

Raleigh Convention Center 302 A

JULIUS STONE LECTURE

THE HYPER IGE SYNDROMES

.5 CME CREDITS

Saturday, May 12, 2012

9:30 am - 10:00 am

Raleigh Convention Center Ballroom B/C

OPEN TO ALL MEETING ATTENDEES

LECTURER BIO



Rebecca Buckley, MD
Duke University
Durham, North Carolina

The overall emphasis of Dr. Buckley's research is in human T,B and NK cell development and in aberrations in their development and regulation. Research examines the cellular and molecular bases of genetically-determined human immunodeficiency diseases; the use of bone marrow stem cells to cure genetically-determined immunodeficiency diseases; and the use of human SCID bone marrow stem cell chimeras to study human thymic education, T and B cell ontogeny, tolerance induction and MHC restriction mechanisms.

LECTURESHIP HISTORY

The Julius Stone Lectureship is intended to promote the advancement of knowledge in immunology as it relates to the skin and skin disease. The Lectureship is intended to honor Dr. Julius Stone, whose great commitment to the application of new principles of immunology to the benefit of patients with skin disorders is recognized by this award.

CLINICAL SCHOLARS PROGRAM

2 CME CREDITS

Saturday, May 12, 2012

10:15 am - 12:15 pm

Raleigh Convention Center 305 B

OPEN ONLY TO CLINICAL SCHOLARS & YOUNG INVESTIGATOR/TRAINEE TRACK PARTICIPANTS

Plenary Presentations

1. Resident memory T cells are much more effective than central memory T cells in protection against viral skin infection. Xiaodong Jiang, Rachael A Clark, Luzheng Liu, Amy J Wagers, Robert C Fuhlbrigge and Thomas S Kupper. Boston, MA.. 10:20 am, Poster #616, Presented by Thomas Kupper, MD
2. IL-15 is a therapeutic target in human alopecia areata. Luzhou Xing, Zhenpeng Dai, Weijuan Gong, Ali Jabbari, Annemieke de Jong, Sivan Harel, Angela M Christiano and Raphael Clynes. New York, NY. 10:40 am, Poster #104, Presented by Angela Christiano, PhD

Lectures



The Impact of High Throughput Sequencing in Genetic Skin Disease

David Kelsell, PhD

Professor

Dept. of Human Molecular Genetics

Barts and the London School of Medicine and Dentistry, London, United Kingdom



Notch and SCC

Raymond Cho MD/PhD

Dept. of Dermatology

University of California, San Francisco, San Francisco, California

ANCILLARY MEETINGS

SATURDAY, MAY 12, 2012

SID Board of Directors Meeting

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American DermatoEpidemiology

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Raleigh Convention Center 302 A

ANCILLARY MEETINGS

SATURDAY, MAY 12, 2012

SID Board of Directors Meeting

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Raleigh Convention Center 402

American DermatoEpidemiology

Network Business/Scientific Session
8:00 am - 12:00 pm
Raleigh Convention Center 302 A

CONCURRENT MINISYMPOSIUM 10

PIGMENTATION AND MELANOMA

3.5 CME CREDITS

Presiders: Neil Box, PhD and Connie Lin, PhD

Saturday, May 12, 2012
12:30 pm - 4:00 pm
Raleigh Convention Center 306 B

OPEN TO ALL MEETING ATTENDEES

1. **MC1R determines melanocyte viability upon UV irradiation by protecting PTEN activity.** Juxiang Cao, Fang Liu, James Shen, Stefania Lenna, Stefania Celia Jimenez-Cervantes, Nick Leslie, George X Xu, Yongjun Wang and Ruta Cui. Boston, MA; Murcia, Spain; Shanghai, China; Dundee, United Kingdom and Philadelphia, PA. 12:30 pm, Poster #739
2. **Targeting protein trafficking pathways synergizes melanoma sensitivity to inhibition of the PI3K pathway and cytotoxic agents.** Zhi-ming Huang, Glenn Millhauser and Maria L Wei. San Francisco, CA and Santa Cruz, CA. 12:42 pm, Poster #753
3. **Melanosome biogenesis protein complexes interact with the endosomal WASH complex.** P V Ryder, A Gokhale, M N Seaman and V Faundez. Atlanta, GA and Cambridge, United Kingdom. 12:54 pm, Poster #720
4. **The dichotomous effects of IL-17 and TNF on normal human melanocytes may contribute to both hyper- and hypo-pigmentation associated with skin inflammation.** Claire Q Wang, Yemratch T Akalu, Judilyn Fuentes-Duculan, Mayte Suarez-Farinias, Hiroshi Mitsui and James G Krueger. New York, NY. 1:06 pm, Poster #776
5. **A mouse model of vitiligo with spontaneous epidermal depigmentation.** Jonathan Eby, Jared Klarquist, Hee-Kap Kang, Michael Nishimura, Shikhar Mehrotra and I Caroline Le Poole. Maywood, IL and Charleston, SC. 1:18 pm, Poster #778
6. **Keratinocyte p53, skin tanning and melanoma.** Tamara Terzian, Kayla Boortz, Regan Stiegmann, Victoria Gonzalez, Graeme Walker and Neil Box. Aurora, CO and Brisbane, Australia. 1:30 pm, Poster #782
7. **Deficiency in IL-23, but not IL-12, promotes the development of melanocytic tumors with regional lymph node involvement in C3H/HeN mice.** Tahseen Nasti, Tarannum Jaleel, Barry Cochran, Laura Timares and Craig Elmets. Birmingham, AL. 1:42 pm, Poster #780
8. **Melanoma differs from other cancers in generating a subset of DC-HIL⁺ myeloid-derived suppressor cells (MDSC) that cause potent T cell suppression.** JinSung Chung, Kyoichi Tamura, Ponciano D Cruz and Kiyoshi Ariizumi. Dallas, TX. 1:54 pm, Poster #755
9. **Dysregulation of the unfolded protein response contributes to chemoresistance in melanocytes.** Tsing Cheng, Seth J Orlow and Prashiela Manga. New York, NY. 2:06 pm, Poster #768
10. **Side population cells from human melanoma tumors reveal diverse mechanisms for chemoresistance.** Yuchun Luo, Lixia Z Ellis, Katiuscia Dallaglio, Weimin Liu, Moe Takeda, William A Robinson, Steven Robinson, Karl D Lewis, Martin D McCarter, Rene Gonzalez, David A Norris, Dennis R Roop, Natalie G Ahn and Mayumi Fujita. Aurora, CO and Boulder, CO. 2:18 pm, Poster #767

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CONCURRENT MINISYMPOSIUM 10 (CONT'D)

PIGMENTATION AND MELANOMA

Presiders: Neil Box, PhD and Connie Lin, PhD

Saturday, May 12, 2012

12:30 pm - 4:00 pm

Raleigh Convention Center 306 B

OPEN TO ALL MEETING ATTENDEES

11. **MITF-driven subcompartment-specific distribution of differentially cycling tumor cells in melanoma.** Nikolas K Haass, Andrea Anfosso, Kimberley A Beaumont, David S Hill, Paulus Mrass, Ichiko Kinjyo, Osami Kanagawa and Wolfgang Weninger. Newtown, Australia; Sydney, Australia; Camperdown, Australia and Yokohama, Japan. 2:30 pm, Poster #724
12. **A genome-wide shRNA screen identified the WNT pathway as a potential target for combination treatments with BRAF inhibitors in melanoma.** Adam R Almeida, Katie A Partyka, Aik Choon Tan, Jihye Kim, Chris Porter, Matias Casas, Mark Gregory, Shilo Smith, Mayumi Fujita, James DeGregori, David A Norris and Yiqun G Shellman. Aurora, CO. 2:42 pm, Poster #746
13. **A locked, dimeric CXCL12 variant effectively inhibits pulmonary metastasis of CXCR4-expressing melanoma cells due to enhanced serum stability.** Tomonori Takekoshi, Joshua J Ziarek, Brian F Volkman and Sam T Hwang. Milwaukee, WI. 2:54 pm, Poster #733
14. **Characterization of the effects of BRAF inhibitors on melanoma metabolism *in vivo* and *in vitro*.** Alexander Marzuka and Marcus Bosenberg. New Haven, CT. 3:06 pm, Poster #719
15. **Fisetin inhibits human melanoma cell invasion through promotion of mesenchymal to epithelial transition and by targeting MAPK and NF- κ B signaling pathways.** Harish C Pal, Samriti Sharma, Craig A Elmets and Farrukh Afaq. Birmingham, AL. 3:18 pm, Poster #757

ANCILLARY MEETINGS

SATURDAY, MAY 12, 2012

SID Board of Directors Meeting

7:00 am - 8:00 am

Raleigh Convention Center 402

American DermatoEpidemiology

Network Business/Scientific Session

8:00 am - 12:00 pm

Raleigh Convention Center 302 A

ANCILLARY MEETINGS

SATURDAY, MAY 12, 2012

SID Board of Directors Meeting

7:00 am - 8:00 am
Raleigh Convention Center 402

American DermatoEpidemiology

Network Business/Scientific Session
8:00 am - 12:00 pm
Raleigh Convention Center 302 A

CONCURRENT MINISYMPOSIUM 11

GENETIC DISEASE, GENE REGULATION AND GENE THERAPY

3.5 CME CREDITS

Presiders: Andrew South, MD MPH and Olga Igoucheva, PhD

Saturday, May 12, 2012
12:30 pm - 4:00 pm
Raleigh Convention Center 305 B

OPEN TO ALL MEETING ATTENDEES

1. **Coactivator MED1 regulates epidermal and hair follicular keratinocyte proliferation and differentiation.** Lizhi Hu, Vadim Bul, Daniel D Bikle and Yuko Oda. San Francisco, CA. 12:30 pm, Poster #422
2. **ZNF750 is a p63 target that induces KLF4 to drive epidermal differentiation.** George L Sen, Lisa Boxer, Dan Webster, Rose Bussat, Kun Qu, Brian Zarnegar, Danielle Johnston, Zurab Siprashvili and Paul A Khavari. Stanford, CA and San Diego, CA. 12:42 pm, Poster #438
3. **TRIM32 regulates Th1/17 vs Th2 response to TLR activation, leading to psoriasis-like vs atopic dermatitis-like inflammatory diseases in mice.** Yun Wang, Emily Swanzey, James Lagowski, Yuangang Liu and Molly Kulesz-Martin. Portland, OR. 12:54 pm, Poster #428
4. **HDAC inhibition prevents loss of subcutaneous fat in CSB-deficient mice.** Marc Majora, Christine Goetz, Christine Schumacher, Maren Schneider and Jean Krutmann. Duesseldorf, Germany. 1:06 pm, Poster #407
5. **Whole-exome sequencing in a single proband reveals a mutation in the CHST8 gene in autosomal recessive peeling skin syndrome.** Mazen Kurban, Rita Cabral, Muhammad Wajid, Yutaka Shimomura, Lynn Pethukova and Angela M Christiano. New York, NY. 1:18 pm, Poster #426
6. **Intravenously injected recombinant human type VII collagen restores collagen function in dystrophic epidermolysis bullosa.** Xinyi Wang, Mahsa Amir, Brian Hwang, Douglas Keene, Yingping Hou, Aditi Bauskar, David Woodley and Mei Chen. Los Angeles, CA and Portland, OR. 1:30 pm, Poster #419
7. **mtDNA mutations seen in UV-induced mouse models of skin cancer induce CCL20 overexpression promoting tumorigenic phenotypes.** Jana Jandova, Jaroslav Janda and James E Slight. Tucson, AZ. 1:42 pm, Poster #425
8. **Developing a stem cell-based therapy for epidermolysis bullosa simplex by promoting an allele-specific knockout of mutant keratin 14 in induced pluripotent stem cells.** Ganna Bilousova, Jiang Chen, Masahito Yasuda and Dennis R Roop. Aurora, CO. 1:54 pm, Poster #434
9. **CSA and CSB proteins localize in a large multiprotein complex involved in repair and transcription of mitochondrial DNA: Involvement for neurodegeneration.** York Kamenisch, Sara Giovannini, Nurgül Dützenli, Martin Röcken and Mark Berneburg. Tuebingen, Germany. 2:06 pm, Poster #388
10. **Elucidation of the molecular basis of a novel osteocutaneous disease.** Ofer Sarig, Sagi Nahum, Debora Rapaport, Akemi Ishida-Yamamoto, Dana Fuchs, Li Qiaoli, Ksenya Cohen, Ronen Spiegel, Janna Nousbeck, Shirli Israeli, Zvi Borochowitz, Gilly Padalon, Jouni Uitto, Mia Horowitz, Stavit Shalev and Eli Sprecher. Tel Aviv, Israel; Haifa, Israel; Asahikawa, Japan; Philadelphia, PA and Afula, Israel. 2:18 pm, Poster #405

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CONCURRENT MINISYMPOSIUM 11 (CONT'D)

GENETIC DISEASE, GENE REGULATION AND GENE THERAPY

Presiders: Andrew South, MD MPH and Olga Igoucheva, PhD

Saturday, May 12, 2012

12:30 pm - 4:00 pm

Raleigh Convention Center 305 B

OPEN TO ALL MEETING ATTENDEES

11. **Cutaneous features of pseudoxanthoma elasticum in generalized arterial calcification of infancy due to *ENPP1* gene mutations.** Qiaoli Li, Wendy Schumacher, Dawn Siegel and Jouni Uitto. Philadelphia, PA and Milwaukee, WI. 2:30 pm, *Poster #418*
12. **AP-1 proteins are induced by irritant and field injury through purinoceptor and EGFR activation.** Kellie J White, Vincent J Maffei and Robert A Swerlick. Atlanta, GA and Decatur, GA. 2:42 pm, *Poster #420*
13. **Recombinant filaggrin successfully internalized and processed in epidermal cells.** Thomas Stout, Trevor McFarland and Binoy Appukuttan. Portland, OR. 2:54 pm, *Poster #389*
14. **Circadian genes are expressed in human sebocytes and regulate sebaceous lipid production.** Suzanne Berkovitz, Min Qin, Myung-Hwa Kim, George Agak, Diane M Thiboutot and Jenny Kim. Los Angeles, CA; Cheonan, South Korea and Hershey, PA. 3:06 pm, *Poster #390*
15. **A photoaging-like phenotype in dermal equivalents: Evidence for proteasomal dysregulation in KSS fibroblasts.** Christine Goetz, Bianca Schuermann, Marc Majora, Susanne Franke, Maren Schneider, Françoise Bernerd and Jean Krutmann. Duesseldorf, Germany and Clichy, France. 3:18 pm, *Poster #410*

ANCILLARY MEETINGS

SATURDAY, MAY 12, 2012

SID Board of Directors Meeting

7:00 am - 8:00 am

Raleigh Convention Center 402

American DermatoEpidemiology

Network Business/Scientific Session

8:00 am - 12:00 pm

Raleigh Convention Center 302 A

ANCILLARY MEETINGS

SATURDAY, MAY 12, 2012

SID Board of Directors Meeting

7:00 am - 8:00 am
Raleigh Convention Center 402

American DermatoEpidemiology

Network Business/Scientific Session
8:00 am - 12:00 pm
Raleigh Convention Center 302 A

CONCURRENT MINISYMPOSIUM 12

TISSUE REGENERATION, STEM CELLS AND WOUND HEALING

3.5 CME CREDITS

Presiders: Cheng Ming Chuong, MD/PhD and Tom Darling, MD/PhD

Saturday, May 12, 2012
12:30 pm - 4:00 pm
Raleigh Convention Center 306 C

OPEN TO ALL MEETING ATTENDEES

1. **Fgf9 secreted by gamma delta T cells is a critical component of hair follicle neogenesis in wounding.** Denise Gay, Oh Sang Kwon, Zhiyun Zhang, Michelle Burrows, Chang Deok Kim, Sheena Baratono, Maksim Plikus, Mayumi Ito, Zaixin Yang, Fen Wang, Ornitz M David and George Cotsarelis. Philadelphia, PA; New York, NY; Houston, TX; St Louis, MO and Daejeon, South Korea. 12:30 pm, Poster #847
2. **Epidermal Wnt ligands are required for adult hair follicle regeneration.** Peggy Myung, Makoto Takeo, Mayumi Ito and Radhika Atit. Cleveland, OH and New York, NY. 12:42 pm, Poster #802
3. **Hair follicle-induced de novo adipogenesis in adult cutaneous wounds.** Maksim Plikus, Mayumi Ito, Priya Dedhia, Denise Gay, Olga Shetova, Sarah Millar, Mitchell Lazar and George Cotsarelis. Philadelphia, PA and New York, NY. 12:54 pm, Poster #835
4. **Wnt signaling in nail epithelium is required for nail differentiation and digit regeneration.** Makoto Takeo, WeiChin Chou and Mayumi Ito. New York, NY. 1:06 pm, Poster #860
5. **CD133+ keratinocytes are a subpopulation of CD34+ cells, are enriched in label retaining cells and possess multipotential differentiation ability.** Alexandra Charruyer, Lili Yue, Lauren R Strachan, Maria L Mancianti and Ruby Ghadially. San Francisco, CA and Berkeley, CA. 1:18 pm, Poster #841
6. **Molecular mechanisms that controls keratinocyte specification.** Ana Tadeu, Mei Zhong, Wei Zheng and Valerie Horsley. New Haven, CT. 1:30 pm, Poster #838
7. **Differentiation of human induced pluripotent stem cells into dermal fibroblasts.** Munenari Itoh and Angela M Christiano. New York, NY and Tokyo, Japan. 1:42 pm, Poster #817
8. **Reprogramming of dermal fibroblasts to epithelial precursors using one defined factor.** Joyce Teng, Erin McMillan, Alexandra Bryant, Emily Gebhardt and B Jack Longley. Madison, WI. 1:54 pm, Poster #848
9. **Differentiation-associated silencing of the Nanog locus is accompanied by changes in its nuclear positioning in human embryonic stem cells.** Mohammed I Ahmed, Neil J Harrison, Andrei Mardaryev, Michael Y Fessing, Krzysztof Poterlowicz, Peter W Andrews and Vladimir A Botchkarev. Bradford, United Kingdom; Boston, MA and Sheffield, United Kingdom. 2:06 pm, Poster #819
10. **New intrinsic mechanism of ligand-receptor dependent cross-talk between BMP and WNT signaling in hair follicle stem cell homeostasis.** Eve Kandyba, Yvonne Leung, Yi-Bu Chen, Randall Widelitz, Cheng-Ming Chuong and Krzysztof Kobilak. Los Angeles, CA. 2:18 pm, Poster #864
11. **Nestin-expressing multi-potent stem cells originate in the bulge of the hair follicle and migrate to the dermal papilla.** Aisada Uchuganova, Jennifer Duong, Nan Zhang, Karsten Koenig and Robert M Hoffman. San Diego, CA and Saarbruecken, Germany. 2:30 pm, Poster #811
12. **Localization, isolation and characterization of new skin stem cells from sweat glands.** Yvonne Leung, Eve Kandyba, Yi-Bu Chen and Krzysztof Kobilak. Los Angeles, CA. 2:42 pm, Poster #857
13. **Dissociated human dermal papilla cells induce hair follicle neogenesis when incorporated into dermal-epidermal composites grafted to nude mice.** R Thangapazham, P Klover, J Wang, Y Zheng, A Devine, S Li, L Sperling, G Cotsarelis and T N Darling. Bethesda, MD and Philadelphia, PA. 2:54 pm, Poster #815
14. **Human hair follicle neogenesis using dermal papilla cells.** Claire A Higgins, Colin A Jahoda and A M Christiano. Columbia, NY and Durham, United Kingdom. 3:06 pm, Poster #797
15. **The role of miRNA-21 in inhibition of epithelialization and wound closure.** Aron G Nusbaum, Irena Pastar, Olivera Stojadinovic, Aly Azeem Kahn, Christina Leslie, Harold Brem, Robert Kirsner, Joaquin J Jimenez and Marjana Tomic-Canic. Miami, FL; New York, NY and Mineola, NY. 3:18 pm, Poster #849

CONCURRENT MINISYMPOSIUM 13

IMMUNOLOGY I: ADAPTIVE IMMUNITY

3.5 CME CREDITS

Presiders: Dan Kaplan, MD/PhD and Adriana Larregina, MD/PhD

Saturday, May 12, 2012

12:30 pm - 4:00 pm

Raleigh Convention Center 305 A

OPEN TO ALL MEETING ATTENDEES

1. **Botulinum neurotoxin A decreases infiltrating cutaneous lymphocytes and improves acanthosis in psoriasisiform KC-Tie2 mice.** Nicole L Ward, Kevin D Kavlick, Doina Diaconu, Kellie A Michaels, Sean M Dawes and Erin Gilbert. Cleveland, OH and Brooklyn, NY. 12:30 pm, Poster #581
2. **Resident memory T cells are much more effective than central memory T cells in protection against viral skin infection.** Xiaodong Jiang, Rachael A Clark, Luzheng Liu, Amy J Wagers, Robert C Fuhlbrigge and Thomas S Kupper. Boston, MA. 12:42 pm, Poster #616
3. **Clarification of the roles of cutaneous dendritic cell subsets in the elicitation phase of contact hypersensitivity response.** Yohei Natsuaki, Gyohei Egawa, Satoshi Nakamizo, Hideaki Tanizaki, Takashi Hashimoto, Yoshiki Miyachi and Kenji Kabashima. Kyoto, Japan and Kurume, Japan. 12:54 pm, Poster #596
4. **Tissue specific homing and antigen specificity: The majority of human peripheral blood Th9 cells are tropic for the skin.** Christoph Schlapbach, Emmanuella Guenova, Ahmed Gehad, Rei Watanabe, Jessica Teague, Thomas S Kupper and Rachael A Clark. Boston, MA. 1:06 pm, Poster #614
5. **Th9 lymphocytes contribute to human allergic contact dermatitis.** Julia Liu, Antonella Tammaro, Nick Girardi, Ayako Nakazono, Rita Fishelevich and Anthony A Gaspari. Baltimore, MD; Rome, Italy; Philadelphia, PA and Fukuoka, Japan. 1:18 pm, Poster #589
6. **Modulation of lymph node cell cytokine production by intradermal administration of calcitonin gene-related peptide (CGRP).** Wanhong Ding, Michela Manni, Jason Lee, John A Wagner and Richard D Granstein. New York, NY. 1:30 pm, Poster #575
7. **CD4⁺ T cells regulate skin resident memory CD8⁺ T cells (T_{RM}).** Xiaodong Jiang, Rachael A Clark, Luzheng Liu, Julien Seneschal, Rahul Purar, Tian Tian, Robert C Fuhlbrigge and Thomas S Kupper. Boston, MA and Bordeaux, France. 1:42 pm, Poster #605
8. **Migratory properties of skin-resident γδ T cell populations.** Xiaodong Jiang, Min Jae Yoo and Thomas S Kupper. Boston, MA. 1:54 pm, Poster #611
9. **Lipids from human epidermis can function as antigens for CD1a-restricted T cells.** Annemieke de Jong, Tan-Yun Cheng, Shouxiong Huang, Anne G Kasmar, Victor Pena-Cruz, John Altman and D Branch Moody. New York, NY; Boston, MA and Atlanta, GA. 2:06 pm, Poster #627
10. **microRNAs regulate epidermal Langerhans cell cross-presentation.** Qing-Sheng Mi, Ying-Ping Xu, Rui-Qun Qi and Li Zhou. Detroit, MI. 2:18 pm, Poster #628
11. **Galectin-3 modulates Th17 responses by regulating dendritic cell cytokine expression.** Agnes Fermin, Daniel K Hsu, Huan-Yuan Chen, Shang-Yang Wu, Jhang-Sian Yu, Lei Wan, Betty Wu-Hsieh and Fu-Tong Liu. Sacramento, CA; Taipei, Taiwan and Taichung, Taiwan. 2:30 pm, Poster #600
12. **Global T_{RM} mediated immune protection in skin after single or multiple skin infections.** Xiaodong Jiang, Luzheng Liu, Rachael A Clark and Thomas S Kupper. Boston, MA. 2:42 pm, Poster #617
13. **Treatment with Ruxolitinib, an orally bioavailable JAK1/2 inhibitor, prevents the onset of alopecia areata in C3H/HeJ mice.** Zhenpeng Dai, Luzhou Xing, Ali Jabbari, Annemieke de Jong, Angela M Christiano and Raphael Clynes. New York, NY. 2:54 pm, Poster #626
14. **Effective immunoprevention against chemical carcinogenesis is induced by genetic immunization vectors that selectively expand mutant H-ras-specific CD8 T cells.** Tahseen Nasti, Kyle Rudemiller, George Twitty, Hee Kyung Kim, Yuko Tsuruta, Mohammad Athar, Craig Elmets and Laura Timares. Birmingham, AL. 3:06 pm, Poster #631
15. **EpCAM (CD326) enables epidermal Langerhans cell motility and migration.** Maria R Gaiser, Tim Lämmermann, Xu Feng, Botond Z Iggyarto, Daniel H Kaplan, Lino Tessarollo, Ronald N Germain and Mark C Udey. Bethesda, MD; Heidelberg, Germany; Minneapolis, MN and Frederick, MD. 3:18 pm, Poster #578

ANCILLARY MEETINGS

SATURDAY, MAY 12, 2012

SID Board of Directors Meeting

7:00 am - 8:00 am

Raleigh Convention Center 402

American DermatoEpidemiology

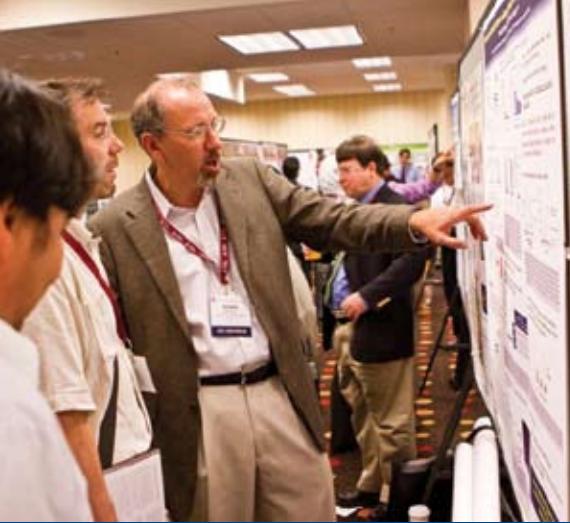
Network Business/Scientific Session

8:00 am - 12:00 pm

Raleigh Convention Center 302 A

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ABSTRACT PRESENTATION INFORMATION

Oral Presentations

Oral presentations and lectures will take place at the Raleigh Convention Center. Minisymposium and Plenary oral presentations are scheduled at the rate of five per hour. This allows ten minutes for presentation and two minutes for discussion. In order to coordinate sessions, the time limit will be strictly enforced, and you will be asked to terminate your presentation by the session chairperson.

LCD projectors will be available in each lecture hall. There will be resources to display only with IBM-compatible PowerPoint XP and Windows XP or earlier versions. 35mm projectors will not be available. Computer technicians will be able to download ZIP and CD files. All oral presentations must also be presented in poster format.

All presentations must be uploaded to a common storage device at least six (6) hours prior to your presentation. Uploads may be completed in the Speaker Ready Room (Raleigh Convention Center 303).

Poster Presentations

All posters will be displayed until Saturday, May 12 at 12:00 p.m. in Exhibit Hall A. Posters will be viewed in three sessions as outlined below. Presenters should be at their posters for the entire discussion session. Posters must be displayed until 12:00 p.m. on Saturday, May 12. Posters may not be removed early. The SID is not responsible for posters left unclaimed as of 6:00 p.m. on Saturday, May 12. Unclaimed posters will not be returned.

Install All Posters

Wednesday, May 9, 2012 • 8:00 am - 4:00 pm

Poster Session I

Odd poster numbers 001-287 & Even poster numbers 288-574

Thursday, May 10, 2012 • 10:00 am - 12:00 pm

Poster Session II

Even Poster numbers 002-286 & Odd Poster numbers 575-863

Friday, May 11, 2012 • 11:15 am - 1:15 pm

Poster Session III

Odd Poster numbers 289-573 & Even Poster numbers 576-864

Saturday, May 12, 2012 • 10:00 am - 12:00 pm

Dismantle All Posters

Saturday, May 12, 2012 • 12:15 pm - 6:00 pm

Conflict of Interest

If there is a real or perceived conflict of interest pertaining to your work, an announcement must be made prior to your oral presentation or be displayed on your poster. For oral presentations, we suggest using a slide to indicate the conflict.

Speaker Ready Room

Raleigh Convention Center 303 will be available to all presenters.

Tuesday, May 8, 2012	4:00 pm - 7:00 pm
Wednesday, May 9, 2012	7:00 am – 8:00 pm
Thursday, May 10, 2012	7:00 am – 5:00 pm
Friday, May 11, 2012	7:00 am – 5:00 pm
Saturday, May 12, 2012	7:00 am – 4:00 pm

Keyword Index

The keyword index is located on pages 108-114 and appears in the May issue of the *Journal of Investigative Dermatology* (JID).

POSTER PRESENTATIONS / ABSTRACT TITLES

Auto-immunity and Inflammation

All orals [designated with an asterisk (*)] listed below are presented in the Autoimmunity and Inflammation Minisymposium on Thursday, May 10, 2012 from 2:00-5:30 pm p.m. in Raleigh Convention Center 306 C. Orals designated by two asterisks (**) will be presented during a Plenary Session.

- 001** CXCL10, an IFN- γ -induced chemokine, is required for the development of depigmentation in a mouse model of vitiligo.** Mehdi Rashighi, Priti Agarwal, TajieH Harris, April Deng, ChristopherA Hunter and JohnE Harris. Worcester, MA and Philadelphia, PA.
- 002 Visfatin enhances human β -defensin-2, human β -defensin-3, LL-37, and S100A7 production in human keratinocytes and murine skin.** Naoko Kanda, CarrenS Hau, Yayoi Tada, Shinichi Sato and Shinichi Watanabe. Tokyo, Japan.
- 003 Cutaneous expression of neutrophil elastase in relation to IgG autoantibodies to desmogleins 1 and 3 in pemphigus foliaceus and pemphigus vulgaris.** Marian Dmochowski, Justyna Gornowicz-Porowska, Agnieszka Seraszek-Jaros, Elzbieta Kaczmarek, Paweł P Pietkiewicz and Monika Bowszyc-Dmochowska. Poznan, Poland.
- 004 Genome-wide analyses of generalized vitiligo identify 31 loci that define an interacting network of melanocyte-specific and immunoregulatory proteins.** Richard A Spritz. Aurora, CO.
- 005 Decreased expression of acetylcholine esterase in cholinergic urticaria.** Yu Sawada, Motonobu Nakamura, Rieko Kubo, Ryosuke Hino, Miwa Kobayashi, Toshinori Bito and Yoshiki Tokura. Kitakyushu, Japan; Kobe, Japan and Hamamatsu, Japan.
- 006 IL-36 cytokines are over-expressed in psoriasis, induce keratinocyte chemokine expression and alter antigen-presenting cell phenotype and function.** Cynthia S Chen, Andrew M Guzman, Paul M Al-Attar, Alexander M Foster, Xianying Xing, Marybeth Riblett, Johann E Gudjonsson and Andrew Johnston. Ann Arbor, MI.
- 007 A natural biotechnological active ingredient dedicated to skin troubles management.** Caroline Baudouin, Sophie Leclerc-Bienfait, Sebastien Garnier, Johan Rocheteau, Stephanie Bredif, Sebastien Debrock, Alex Saunois and Philippe Msika. Epernon, France.
- 008* Inhibition of the SDF-1/CXCR4 axis alleviates chronic and acute skin inflammation.** Silvana Zgraggen, Reto Huggenberger, Alexandra Ochsenebein and Michael Detmar. Zurich, Switzerland.
- 009 Antibodies against desmoglein 1 in healthy Tunisians in the area of endemic pemphigus foliaceus are mostly against the precursor molecule.** Amina Toumi, Marwah A Saleh, Jun Yamagami, Olfa Abida, Maryem Kallel, Abderrahmen Masmoudi, Sondes Makni, Hamida Turki, Takahisa Hachiya, Keiko Kuroda, John R Stanley, Hatem Masmoudi and Masayuki Amagai. Sfax, Tunisia; Tokyo, Japan; Cairo, Egypt; Tunis, Tunisia; Nagoya, Japan and Philadelphia, PA.
- 010 Preclinical anti-inflammatory activity of SIG1311, a candidate for the topical treatment of atopic dermatitis.** Jose R Fernandez, Eduardo Perez, Michael Voronkov, Karl Rouzard, Maxwell Stock, Joel S Gordon and Braham Shroot. Monmouth Junction, NJ.
- 011 Signaling through the P2X7 receptor for ATP induces psoriasis-like inflammation: A human skin model.** Alicia R Mathers, Meaghan E Killeen, Laura Ferris and Louis Falo, Jr. Pittsburgh, PA.
- 012 The *in vitro* effects of neuropeptides and bicyclic monoterpenone diol on the inflammatory pathway using primary human keratinocytes.** Catherine Y Ding, Yaping Ee, Alan R Shalita and Wei-Li S Lee. Brooklyn, NY.
- 013 IL-4 up-regulates epidermal IL-19 expression in atopic dermatitis.** Lei Bao, Jaime Alexander, Vivian Y Shi and Lawrence S Chan. Chicago, IL.
- 014 IgG4 as a potential therapeutic target for disease-specific antibodies in pemphigus.** Luisa Lunardon, Takeru Funakoshi, Arielle R Nagler, Claire E O'Leary, David M Allman and Aimee S Payne. Philadelphia, PA and Tokyo, Japan.
- 015* Identification of cytotoxic T cell epitopes in alopecia areata.** Eddy Wang, Jan P Dutz, Jerry Shapiro and Kevin J McElwee. Vancouver, Canada.
- 016 Vaspin as a possible link of obesity and psoriasis.** Katharina Vester, Anja Saalbach, Kathrin Rall, Jenny Tremel, Ulf Anderegg, Marco Averbeck, Marc Bodendorf, Mirjana Ziemer, Annette G Beck-Sickinger, Matthias Blüher and Jan C Simon. Leipzig, Germany.
- 017 Elevated EPHA2 in the psoriatic epidermis provides a molecular target for restoring keratinocyte differentiation.** Johann E Gudjonsson, Hanz Blatt, Kristin Gordon, James Kochkodan, Andrew Johnston, Samantha Lin, Paul Hoover, Bethanee J Schlosser, James T Elder and Spiro Getsios. Chicago, IL and Ann Arbor, MI.
- 018 Social stress prevents the development of psoriasis in modified transgenic K14/VEGF mice.** Oscar Vegas, Brian Poligone, JoAnne VanBuskirk and Francisco Tausk. San Sebastián, Spain and Rochester, NY.
- 019 Calcineurin inhibitors suppress cytokine production from memory T cells and differentiation of naïve T cells into cytokine-producing mature T cells.** Keiichi Yamanaka, Kenshiro Tsuda, Hiroshi Kitagawa, Tomoko Akeda, Masanao Naka, Kaori Niwa, Takehisa Nakanishi, Masato Kakeda and Hitoshi Mizutani. Tsu, Japan.
- 020 Effect of Liang Xue Huo Xue Capsules on mice psoriasis-like lesions induced by Imiquimod.** Ping Li and Tingting Di. Beijing, China.
- 021 The alpha adrenergic receptor agonist oxymetazoline inhibits temperature-induced vasodilation and LL-37-induced skin inflammation.** Edward Hsia, Mingting Tian, Emily Santori, Dolly Mistry and Daniel Gil. Irvine, CA.
- 022* Functional interaction between complement and the proinflammatory cytokine TNF- α in experimental bullous pemphigoid.** Lisa Heimbach, Minglang Zhao, Ning Li, Jiang Fan, Janet Fairley, Luis A Diaz and Zhi Liu. Chapel Hill, NC; Milwaukee, WI and Iowa City, IA.
- 023 Whole tissue molecular profiling identifies unique cytokine-related gene sets of disease progression and response to therapy.** Gayathri K Perera, Chrysanthy Ainali, Christian Hundhausen, Guillermo Barinaga, Deepika Kassen, Andrew Williams, Muddassar Mirza, Sophia Tsoka, Wenjun Ouyang and Frank O Nestle. London, United Kingdom and San Francisco, CA.
- 024 Successful engraftment of human skin and T cells in NOD-scid-IL2yr null mice for the investigation of human inflammatory skin responses.** Priti Agarwal, Waldemar J Racki, Amy Cuthbert, Michael S Brehm, Leonard D Shultz, Dale L Greiner and John E Harris. Worcester, MA and Bar Harbor, ME.
- 025 Autoantibodies vs. desmogleins (Dsg) 1 or 3 do not represent tissue-specific disease amplifiers in subjects with discoid or systemic lupus erythematosus (LE).** Lin-chiang Tseng, Loderick A Matthews, Kim B Yancey and Benjamin F Chong. Dallas, TX.
- 026 Early detection and therapy of hemophagocytic lymphohistiocytosis improves patient outcome.** Terry T Farsani, William Tsiaras and Arturo P Saavedra. Boston, MA.
- 027 Regulation of IL-33 expression by interferon- γ and tumor necrosis factor- α in normal human epidermal keratinocytes.** Jitlada Meephansan, Hideyoshi Tsuda, Mayumi Komine, Masaru Karakawa, Shin-ichi Tominaga and Mamitaro Ohtsuki. Shimotsuke, Japan.
- 028 Loss of hTid-1_s expression and aberrant actin cytoskeleton organization in lesional psoriatic skin.** Ji hye Choi and Cheol O Joe. Daejeon, South Korea.
- 029 Regulation of immune responses by kurarinone through the JAK/STAT and TCR-mediated signaling.** Byung-Hak Kim and Tae-Yoon Kim. Seoul, South Korea.
- 030 Mapping conformational epitopes on the ectodomain of desmoglein 1 for Fogo Selvagem IgG4 autoantibodies by proteolytic footprinting.** Flor Evangelista, Aleeza Roth, Zhi Liu, David G Klapper and Luis A Diaz. Chapel Hill, NC.
- 031 Facial pseudolymphoma responsive to pulsed-dye-laser therapy.** Terry T Farsani, Clarissa F Yang and Arturo P Saavedra. Boston, MA.

- 032*** **A key role for the polyclonal nature of pemphigus vulgaris IgG in p38 MAPK-dependent loss of keratinocyte adhesion.** Masataka Saito, Christopher Y Caughman, Dana K Tucker, Xuming Mao, Sara N Stahley, Aimee S Payne, Masayuki Amagai and Andrew P Kowalczyk. Atlanta, GA; Tokyo, Japan and Philadelphia, PA.
- 033** **Cathelicidin anti-microbial peptide is expressed and secreted from adipocytes—a novel mechanism for fat cells in the innate immune system.** Ling-juan Zhang, Alvin Coda, Tissa Hata and Richard Gallo. San Diego, CA.
- 034** **Cynaropicrin, an extract from artichoke, inhibits UVB-induced oxidative stress in cultured human keratinocytes.** Gaku Tsuji, Masakazu Takahara, Xianghong Yan, Akiko Hachiya, Hiroshi Uchi, Satoshi Takeuchi, Fumiko Yasukawa, Kenjiro Takei, Yoichi Moroi and Masutaka Furue. Fukuoka, Japan and Kobe, Japan.
- 035** **RNASeq reveals new insights into psoriasis biology.** Lam C Tsoi, Bingshan Li, Rajan P Nair, Jun Ding, Johann E Gudjonsson, Philip E Stuart, John J Voorhees, Trilokraj Tejasvi, Hyun M Kang, Goncalo R Abecasis and James T Elder. Ann Arbor, MI.
- 036** **Newly developed enzyme-linked immunosorbent assays using eukaryotic recombinant proteins of desmocollins (Dsc) are highly sensitive and revealed Dsc2 and Dsc3 as autoantigens specific for paraneoplastic pemphigus.** Norito Ishii, Shunpei Fukuda, Kwesi Teye, Atsunari Tsuchisaka, Takahiro Hamada, Daisuke Tsuruta, Teruki Dainichi and Takashi Hashimoto. Fukuoka, Japan.
- 037** **Increased serum VEGF levels correlate with therapeutic responsiveness to biologics in patients with psoriasis.** Takatoshi Shimauchi, Satoshi Hirakawa, Takahiro Suzuki, Ayako Yasuma, Taisuke Ito and Yoshiki Tokura. Hamamatsu, Japan.
- 038** **Bullous pemphigoid is characterized by a reduction of skin-homing/ circulating FOXP3+ Tregs and by a down-regulation of the IL-10 pathway.** Pietro Quaglino, Emiliano Antiga, Mauro Novelli, Tiziana Nardò, Paolo Fava, Renata Ponti, Simona Osella-Abate, Marzia Caproni, Paolo Fabbri and Maria Grazia Bernengo. Torino, Italy and Firenze, Italy.
- 039*** **Host genetics play a role in controlling skin bacterial species and autoimmune blistering skin disease.** Girish Srinivas, Steffen Moeller, Ralf Ludwig, Sven Kuenzel, Detlef Zillikens, John Baines and Saleh Ibrahim. Luebeck, Germany and Ploen, Germany.
- 040*** **Effective prevention and treatment of CD8 T cell-mediated Graft-versus-host-like disease (GvHD) using a JAK inhibitor.** Naoko Okiyama, Yasuko Furumoto, Vadim Villaruel, Jan Gutermuth, Kamran Ghoreschi, Massimo Gadina and Stephen Katz. Bethesda, MD.
- 041*** **IL-17 Receptor A subunit is a central hub for inflammatory signaling in human psoriasis.** Chris B Russell, Keith Kerkof, Jeannette Bigler, Marty Timour, R L Diaz, Antony Symons, Hugh Rand, James G Krueger and David A Martin. Seattle, WA.
- 042** **Dermal mesenchymal stem cells suppress CD8+ T lymphocyte derived from vitiligo patients.** Miaoni Zhou, Jilong Wu, Fuquan Lin, Xingang Wu, Yinsheng Wan and Aie Xu. Hangzhou, China and Providence, RI.
- 043** **Immunization with MOG fused to a novel single chain fragment variable (scFv) for murine DEC-205 suppresses allergic experimental encephalomyelitis (EAE) in mice.** Sabine Ring, Alexander Enk and Karsten Mahnke. Heidelberg, Germany.
- 044** **Perilesional CD8+ T cells from vitiligo patients that fail in transplantation induce autologous melanocyte apoptosis.** Jilong Wu, Miaoni Zhou, Dongyin Liu, Fuquan Lin, Xianyan Luo, Yongwei Li, Dekuang Zhao, Yinsheng Wan and Aie Xu. Hangzhou, China and Providence, RI.
- 045** **Dysregulation of the Th17 pathway in alopecia areata.** Monica M Van Acker, Kelly Andrews, Kristina Seiffert-Sinha and Animesh A Sinha. East Lansing, MI and Buffalo, NY.
- 046*** **Scurfy mice reveal strong autoimmune skin inflammation with Th2-deviation of skin-infiltrating CD4+ T cells and high epidermal expression of thymic stromal lymphopoietin (TSLP).** Eva N Hadaschik, Britta Heckmann and Alexander H Enk. Heidelberg, Germany.
- 047** **Benefits of psychological stress in inflammatory dermatoses explain conservation of this component of the stress response during evolution.** Tzu-Kai Lin, Mao-Qiang Man, Juan-Luis Santiago, Melanie Hupe, Gemma Martin-Ezquerra, Jong-Kyung Youm, Carles Trullas and Ken Feingold. San Francisco, CA; Tainan, Taiwan; Cuidad Real, Spain and Barcelona, Spain.
- 048** **Meta-analysis reveals ‘global’ psoriasis transcriptome with links to cardiovascular, metabolic and other comorbidities.** Suyan Tian, James G Krueger, Ali Jabbari, Katherine Li, Carrie Brodmerkel, Michelle Lowes and Mayte Suarez-Farinis. New York, NY and Radnor, PA.
- 049** **Myeloid-derived suppressor cells (MDSC) regulate autoimmunity via the DC-HIL receptor.** Jin Sung Chung, Kyoichi Tamura, Ponciano D Cruz and Kiyoshi Ariizumi. Dallas, TX.
- 050** **Soluble adenylyl cyclase is necessary for IL-22-dependent keratinocyte proliferation.** Ana Diaz, Lonny Levin, Jochen Buck and Jonathan Zippin. New York, NY.
- 051** **Epiplakin is the major autoantigen in paraneoplastic pemphigus and is related to bronchiolitis obliterans.** Atsunari Tsuchisaka, Yohei Natsuaki, Tamihiro Kawakami, Norito Ishii, Daisuke Tsuruta, Sakuhiko Fujihara and Takashi Hashimoto. Kurume, Japan and Yufu, Japan.
- 052** **Expanding the psoriasis disease profile: Risk pathways for cardiovascular and metabolic diseases are expressed in psoriasis skin lesions.** Katherine Li, Mayte Suarez-Farinis, Judilyn Fuentes-Duculan, Karen Hayden, Carrie Brodmerkel and James G Krueger. Radnor, PA and New York, NY.
- 053** **Mechanisms of resistance of L-CTCL patients to alemtuzumab: What failure can teach us.** Rei Watanabe, Emmanuella Guenova, Christoph Schlapbach, Marianne Tawa, Jennifer Desimone, Natalie Adams, Andrew Dorosario, David C Fisher, Thomas S Kupper and Rachael A Clark. Boston, MA.
- 054*** **Anti-desmoglein 1 autoantibodies from Fogo Selvagem recognize LJM11, a member of the “yellow” family of salivary proteins from *Lutzomyia longipalpis*.** Ye Qian, Joseph S Jeong, Mike Maldonado, Flor Evangelista, Bahjat F Qaqish, Valeria Aoki, Gunter Hans-Filhio, Evandro A Rivitti, Jesus G Valenzuela and Luis A Diaz. Chapel Hill, NC; Sao Paulo, Brazil; Mato Grosso do Sul, Brazil and Rockville, MD.
- 055** **CD200, a molecule that can suppress T cell responses, is expressed on human Merkel cell carcinomas.** Mitra Dowlatshahi, Travis Hollmann, Jessica Scanlon, Linda Wang, Qian Zhan, George Murphy, Ahmed Gehad, Jessica Teague and Rachael A Clark. Boston, MA.
- 056** **The pro-fibrotic cytokines IL-33 and IL-13 modulate dermal fibrosis via the A2A adenosine receptor.** Ross C Radusky, Lisa Franks, Jessica Feig, Patricia Fernandez, Andrew G Franks, Bruce N Cronstein and Edwin S Chan. New York, NY.
- 057** **A role for IgE receptor expression on eosinophils in BP.** Kelly N Messingham, Alexandra Frydman, Raymond J Roewe and Janet A Fairley. Iowa City, IA.
- 058** **Functional regulation of IL-31 production by its genetic polymorphism in patients with extrinsic atopic dermatitis.** Chien-Hui Hong, Hsin-Su Yu, Ying-Chin Ko, Wei-Chiao Chang, Hung-Yi Chuang, Gwo-Shin Chen and Chih-Hung Lee. Kaohsiung, Taiwan.
- 059** **Studies using newly developed Dsg1/Dsg2 swapped molecules showed unique epitopes on Dsg1 in five Japanese cases of oral pemphigus foliaceus, possibly new disease entity, which showed oral mucosal lesion and reacted with Dsg1 but not Dsg3.** Hiroshi Koga, Bungo Ohyama, Norito Ishii, Takahiro Hamada, Teruki Dainichi, Daisuke Tsuruta and Takashi Hashimoto. Fukuoka, Japan.
- 060** **Measurement of skin surface S100A7 / psoriasis amount in psoriasis patients during the biologics treatment.** Masaru Karakawa, Mayumi Komine, Satomi Hosoda, Jitlada Meephansan, Hidetoshi Tsuda, Junichi Sugai and Mamitaro Ohtsuki. Shimotsuke, Japan.
- 061** **Next generation sequencing technology to explore anti-inflammatory activity of IKK α in psoriasis.** Giulia Spallone, Elisabetta Botti, Marina Talamonti, Barbara Marinari, Valentina Pinetti, Sergio Chimenti and Antonio Costanzo. Rome, Italy.
- 062** **Comprehensive analysis of psoriatic skin and blood microarray datasets highlights novel genomic “hot spots” of differential gene expression.** Alvin Coda, Murat Icen and Animesh Sinha. Buffalo, NY.
- 063** **TREM-1 is present on inflammatory antigen presenting cells in psoriasis.** Luke A Hyder, Judilyn Fuentes-Duculan, Lisa C Zaba, Katherine C Pierson, Narat John Eungdamrong, Leanne Johnson-Huang, Mayte Suarez-Farinis and Michelle A Lowes. New York, NY.

- 064 Agonistic binding of neurokinin 1 receptor is necessary for the development of cutaneous effector Th1 and Th2 immunity.** Chin H Ho, Tina L Sumpter, Olga A Tkacheva, William J Shufesky, Adrian E Morelli and Adriana T Larregina. Pittsburgh, PA.
- 065 Granular C3 dermatosis, a possibly new disease entity.** Daisuke Tsuruta, Norito Ishii, Hiroshi Koga, Takahiro Hamada, Teruki Dainichi, Chika Ohata, Minao Furumura and Takashi Hashimoto. Fukuoka, Japan.
- 066 Evaluation of differential gene expression in alopecia areata patients with concurrent autoimmune and nail disease.** Alvin Coda and Animesh A Sinha. Buffalo, NY.
- 067 High degree of reproducibility in psoriasis gene expression analysis of two independent patient populations.** Daniel Aires, Alan Menter, Graham Rockwell, Patrick Prath, Stephanie Sedivy, Ossama Tawfik, Anne Bowcock and Animesh A Sinha. Kansas City, KS; Dallas, TX; Boston, MA; Overland Park, KS; St. Louis, MO and Buffalo, NY.
- 068 Delphinidin induces epidermal differentiation and inhibits proliferation and inflammation in a three dimensional reconstituted skin model of psoriasis.** Harish C Pal, Samriti Sharma, Seyoum Ayehunie and Farrukh Afaq. Birmingham, AL and Ashland, MA.
- 069 The presence of anti-type VII collagen antibodies in the patients with dystrophic epidermolysis bullosa.** D Woodley, X Wang, J Cogan, D Keene, Y Hou, M Amir and M Chen. Los Angeles, CA and Portland, OR.
- 070 Use of constitutively active STAT6 transgenic mice to characterize calcipotriene-mediated worsening of atopic dermatitis.** Matthew J Turner, Sonia Da Silva, Mark H Kaplan and Jeffrey B Travers. Indianapolis, IN.
- 071 IKK α /IKK β mediates inflammatory induction of DEFB4 in keratinocytes.** Sylviane Lambert, Stefan W Stoll, Maeran Uhm, Alan R Saltiel and James T Elder. Ann Arbor, MI.
- 072 Differential activation of the inflammasome in loaded skin of young and elderly individuals.** Olivera Stojadinovic, Julia Minkiewicz, Andrew Sawaya, Juan De Rivero Vaccari, Robert W Keane and Marjana Tomic-Canic. Miami, FL.
- 073 Direct recruitment of slan (6-sulfo LacNAc) dendritic cells to immune complexes in a model of physiologically relevant fluid shear stress.** Thomas Döbel, Anke Lonsdorf, Anja Hänsel, Alexander Enk and Knut Schäkel. Heidelberg, Germany.
- 074 Keratinocyte specific inactivation of Sharpen is critical in the mouse chronic proliferative dermatitis (Sharpen<cpdm>) phenotype.** Christopher S Potter, Kathleen A Silva, Victoria Kennedy, Zhe Wang, Harm Hogen Esch and John P Sundberg. Bar Harbor, ME and West Lafayette, IN.
- 075 Organotypic *in vitro* human epithelial models with engineered gene knockdown or mechanistic reporter functions.** Patrick Hayden, Courtney E Mankus, Pedro Lei, George R Jackson, Jennifer Bolmarcich, Alexander Armento, Stelios Andreadis and Mitchell Klausner. Ashland, MA and Amherst, NY.
- 076 IL-13 is a pro-inflammatory cytokine active in psoriasis.** James J Kochkodan, Xianying Xing, Riblett MaryBeth, Reem Jan, Andrew Johnston and Johann E Gudjonsson. Ann Arbor, MI.
- 077* The role of the IL12B associated psoriasis risk allele in the pathogenesis of psoriasis.** Xianying Xing, MaryBeth Riblett, James J Kochkodan, Rajan P Nair, John J Voorhees, James T Elder, Andrew Johnston and Johann E Gudjonsson. Ann Arbor, MI.
- 078 Th2 and Th22 mediators initiate and maintain progression of atopic dermatitis.** Julia K Gittler, Avner Shemer, Mayte Suarez-Farinias, Irma Cardinale, James G Krueger and Emma Guttman-Yassky. New York, NY and Tel Aviv, Israel.
- 079 Persistence of identical anti-Dsg 3 B cell clones in a pemphigus vulgaris (PV) patient for 4 years.** Christoph M Hammers, S Kacir, C Lin, A S Payne, D Siegel and J R Stanley. Philadelphia, PA.
- 080 Carbon monoxide releasing molecule-2 inhibits the inflammatory response induced by tumor necrosis factor- α in dermal fibroblasts.** Susan Ward and Dorne Yager. Richmond, VA.
- 081 CD11c $+$ inflammatory dendritic cells and CD163 $+$ macrophages are the main source of TNF-alpha in chronic plaque-type psoriasis.** Patrick M Brunner, Frieder Koszik, Madeleine L Kalb, Baerbel Reininger and Georg Stingl. Vienna, Austria.
- 082 Evaluation of the immunotoxicological potential of small molecular weight compounds in THP-1 cells and primary monocyte-derived dendritic cells.** Katrin Sebastian, Claudia Skazik-Voogt, Hagen Ott, Yvonne Marquardt, Katharina Czaja, Gabriele Zwadlo-Klarwasser, Jens M Baron and Hans F Merk. Aachen, Germany and Hamburg, Germany.
- 083 Hyaluronan small oligosaccharides regulate TLR3-dependent autoimmune inflammatory responses.** Margaret Kim, Jun Muto and Richard L Gallo. San Diego, CA.
- 084 Investigating the role of the transcriptional repressor Blimp1 in the interplay between adult epithelial cells and the immune system.** Natalie A Roberts, Weigu Cui and Valerie Horsley. New Haven, CT.
- 085 Oxidized fatty acids and inflammatory response in acne: A potential therapeutic role for apolipoprotein A-I (apoA-I) mimetic peptide 4F as an anti-inflammatory agent.** Aslan Pirouz, Min Qin, Alan M Fogelman and Jenny Kim. Los Angeles, CA.
- 086 Discoid lupus exhibits a weaker Th17- and stronger Th1- molecular signature when compared with psoriasis.** Mayte Suarez-Farinias, Judilyn Duculan, Juana Gonzalez, Andrew G Franks, James G Krueger and Ali Jabbari. New York, NY.
- 087* CD103-positive CD4+Foxp3+ T regulatory cells are necessary for optimal suppression of cutaneous inflammation.** Jane Yoo, John McGuire, Anne Manicone, Xiaodong Zhu, Piper Treuting, E Alden Landis, Timothy Birkland, Laura Johnston, Vivian Lee, Cliff Rims, Ying Wang and William Parks. Seattle, WA.
- 088 Regulation of integrin $\alpha 6$ in scleroderma keratinocytes.** Wei Li, Xiao-Yong Man, Jia-Qi Chen, Jiong Zhou, Sui-Qing Cai and Min Zheng. Hangzhou, China.
- 089 Comparison of the expression of cytokeratin 19, integrin $\alpha 6$ and $\beta 1$ in normal and psoriatic skin.** Min Zheng, Wei Li, Xiao-Yong Man, Jiong Zhou, Jia-Qi Chen and Sui-Qing Cai. Hangzhou, China.
- 090 Differential regulation of Integrin $\alpha 5$ and $\beta 4$ in normal and psoriatic epidermal keratinocytes.** Jiong Zhou, Xiao-Yong Man, Jia-Qi Chen, Wei Li, Sui-Qing Cai and Min Zheng. Hangzhou, China.
- 091 Maximal TNF α -induced interleukin-8 in keratinocytes requires EGFR activation.** Vincent J Maffei, Kellie J White and Robert A Swerlick. Atlanta, GA and Decatur, GA.
- 092 Involucrin in scleroderma epidermal keratinocytes.** Jia-Qi Chen, Xiao-Yong Man, Wei Li, Jiong Zhou, Sui-Qing Cai and Min Zheng. Hangzhou, China.
- 093 Mast cells and neuropeptide expression are increased in erythematotelangiectatic rosacea in comparison to telangiectatic photoaging.** Yolanda R Helfrich, James Varani, Gary Fisher, Craig Hammerberg, Allen Bruce, Andrew Lin, Lisa Maier, Dana Sachs and John Voorhees. Ann Arbor, MI and Portland, ME.
- 094 TGF β 1-dependent ERK activation through Smads signaling in scleroderma dermal fibroblasts.** Hua-Li Cao, Xiao-Yong Man, Jiong Zhou, Jia-Qi Chen, Wei Li, Qiu-Hua Lei, Sui-Qing Cai and Min Zheng. Hangzhou, China.
- 095 Increased depression in cutaneous lupus erythematosus compared to the general population and dermatomyositis.** Elizabeth R Ghazi, Mitchel A Kling, Kathleen Propert, Joyce Okawa and Victoria P Werth. Philadelphia, PA and Piscataway, NJ.
- 096 Slow clinical response to combined treatment with rituximab and low dose steroid in two cases of recalcitrant epidermolysis bullosa acquisita.** Wataru Fujimoto, Hiroaki Hayashi and Shunsuke Sasaoka. Kurashiki, Japan.
- 097 Human epidermal Langerhans cells replenishing skin xenografts are depleted by alloreactive T cells *in vivo*.** Rudolf E Schopf, J Hemmerling, J Wegner-Kops, E von Stebut-Borschitz, E M Wagner, U F Hartwig, M C André and R G Meyer. Mainz, Germany.
- 098 The up-regulation of cyclic AMP in monocytes inhibit the differentiation to multinucleated giant cells.** Kana Mizuno, Manabu Osawa, Hirotugu Tanimura, Fumikazu Yamazaki and Hiroyuki Okamoto. Moriguchi, Japan.
- 099 Rituximab decreases all anti BP180 IgG subclasses in patients with refractory bullous pemphigoid(BP).** Arash Ronagh, Robert D Streilein and Russell P Hall. Durham, NC.

- 100 **Spectratype analysis of alopecia areata T cells identifies an oligoclonal population of CD8 effector T cells.** Annemieke de Jong, John O’Malley, Zhenpeng Dai, Mazen Kurban, Ali Jabbari, Julian Mackay-Wiggan, Angela M Christiano and Raphael Clynes. New York, NY.
- 101 **Human monocytic Myeloid-Derived Suppressor Cells (MDSC) are increased in the peripheral blood of psoriatic patients.** David C Soler, Andrew Young, Jackelyn Golden, Thomas S McCormick and Kevin D Cooper. Cleveland, OH.
- 102* **Epidermal control of psoriasis like skin inflammation by a TNF- α and IL-24 dependent mechanism.** Snehlata Kumari, Manolis Pasparakis, Robert Sabat and Ingo Haase. Cologne, Germany and Berlin, Germany.
- 103* **Ceramide deficiency in the epidermis leads to development of psoriasis-like lesions associated with IL-23-dependent proliferation of $\gamma\delta$ -T cells.** Kimiko Nakajima, Sayo Kataoka, Naoko Goto-Inoue, Mika Terao, Hiroyuki Murota, Hiroaki Azukizawa, Mitsutoshi Setou, Ichiro Katayama, Junji Takeda and Shigetoshi Sano. Kochi, Japan; Tokyo, Japan; Osaka, Japan and Hamamatsu, Japan.
- 104* **IL-15 is a therapeutic target in human alopecia areata.** Luzhou Xing, Zhenpeng Dai, Weijuan Gong, Ali Jabbari, Annemieke de Jong, Sivan Harel, Angela M Christiano and Raphael Clynes. New York, NY.
- 105 **The role of ALK5 in production of CTGF in psoriatic dermal fibroblasts.** Qiu-Hua Lei, Xiao-yong Man, Jiong Zhou, Wei Li and Min Zheng. Hangzhou, China.
- 106 **Glucocorticoid receptor localizes to adherens junctions at the plasma membrane of keratinocytes.** Irena Pastar, Olivera Stojadinovic, Andrew Shawaya and Marjana Tomic-Canic. Miami, FL.
- 107* **Response to self antigen imprints regulatory memory in the skin.** Michael Rosenblum, Iris Gratz, Jonathan Paw, Hong-An Truong and Abul Abbas. San Francisco, CA.
- 117* **Epidermal growth factor receptor transactivation is suppressed in diabetic wounds, but stimulated by ganglioside depletion.** Sarah Lee, Heather Wilson, Xiaoqi Wang and Amy S Paller. Chicago, IL.
- 118 **Transforming growth factor- β 1 (TGF- β 1)-mediated transcriptional regulation of CXCR4 in human basal cell carcinoma cells is mediated by extracellular signal-related kinase 1/2 (ERK1/2) and ETS-1 pathways.** Shiou-Hwa Jee, Chia-Yu Chu, Shih-Ting Cha, Hsien-Ching Chiu and Min-Liang Kuo. Taipei, Taiwan.
- 119 **Dermal matrix composition promotes development of aggressive squamous cell carcinoma in recessive dystrophic epidermolysis bullosa.** Yi-Zhen Ng, Celine Pourreynon, Julio Salas-Alanis, R Cepeda-Valdes, W Yan, Sheila Wright, Mei Chen, Fiona Hogg, John McGrath, Deedee Murrell, Irene Leigh, Ellen Lane and Andrew South. Dundee, United Kingdom; Singapore, Singapore; Monterrey, Mexico; Sydney, Australia; Los Angeles, CA and London, United Kingdom.
- 120 **Genome-wide association studies on human pigmentation traits and non-melanoma skin cancer risk.** Mingfeng Zhang, Fengju Song, Abrar Qureshi, Jiangwen Zhang, Liming Liang and Jiali Han. Boston, MA and Cambridge, MA.
- 121 **MicroRNAs signatures in cutaneous squamous cell carcinomas of immunocompetent and organ transplant patients.** E B Olasz, M Neuburg, J Lazar, N E Duncan, A M Schock, L Seline, A Lopez, Y Lu, P Liu and Z Lazarova. Milwaukee, WI.
- 122 **Bulge-derived stem cells form BCC-like tumors upon wounding.** Sunny Y Wong and Jeremy F Reiter. Ann Arbor, MI and San Francisco, CA.
- 123 **Aldo-keto reductase 1C3 (AKR1C3) is highly expressed in cutaneous squamous cell carcinoma (SCC) and affects SCC cell proliferation.** Alon Mantel, Amanda Mendini, JoAnne Vanbuskirk and Alice P Pentland. Rochester, NY.
- 124* **Human basal cell carcinoma tumor initiating cells express MDR1 and are resistant to etoposide killing.** Chantal S Colmont, Antsar Ben Ketah, Raheal Errington, Carole L Yee, Mark Udey, Jonathan C Vogel and Girish K Patel. Cardiff, United Kingdom and Bethesda, MD.
- 125* **Manipulating and monitoring Fas expression by cutaneous T-cell lymphoma (CTCL) tumor cells *in vitro* and *in vivo*.** Jianqiang Wu, Nathalie Stutz and Gary S Wood. Madison, WI.
- 126* **Histone deacetylase-3 promotes melanoma metastasis by deacetylation of ganglioside GM3 and increases cell proliferation through p70S6 kinase signaling.** Daniel Q Bach, Qiu Yan, Ji-Wei Liu, Amy S Paller, Shuang-ni Yang, Tom Traczek, Pedram Gerami and Xiao Q Wang. Chicago, IL.
- 127 **Expression of CD10 in squamous cell carcinoma and precancerous lesion.** Jong-Rok Lee, Jeong-Hyan Youn and Joo-Young Roh. Incheon, South Korea.
- 128* **Gene expression profiling of basal cell carcinoma using laser capture microdissection reveals over-expression of oncogene anaplastic lymphoma kinase.** Hanna Ning, Hiroshi Mitsui, Mayte Suarez-Farinaz, Kajal R Shah, Israel Coats, John A Carucci and James G Krueger. New York, NY and Dallas, TX.
- 129* **Inhibitors of oncogenic signal transduction pathways augment the induction of MHC class I molecules by IFN- γ .** Brian P Pollack and Bishu Sapkota. Atlanta, GA and Decatur, GA.
- 130* **Keratinocyte-specific p38 β mitogen-activated protein kinase (MAPK) deletion reveals a context and gender dependent regulation of skin carcinogenesis.** Alexi Kiss, Aaron C Koppel, Joanna Anders, Christophe Cataisson, Stuart H Yuspa and Tatiana Efimova. St. Louis, MO and Bethesda, MD.
- 131* **Protein Kinase C ϵ and its interacting proteins Hsp90 β and Stat3 are potential molecular targets for prevention of ultraviolet radiation-induced cutaneous damage and development of squamous cell carcinomas.** Ajit K Verma, Jordan M Sand, Moammir H Aziz and Absarul Haque. Madison, WI.
- 132 **Genetic and chemical knockdown of class III histone deacetylase (HDAC) Sirt1 decreases cellular growth and induces apoptosis in cutaneous T-cell lymphoma (CTCL).** Minakshi Nihal, Nihal Ahmad and Gary S Wood. Madison, WI.

Carcinogenesis and Cancer Genetics

All orals [designated with an asterisk (*)] listed below are presented in the Carcinogenesis and Cancer Genetics Minisymposium on Friday, May 11, 2012 from 2:00-5:30 p.m. in Raleigh Convention Center 305 A. Orals designated by two asterisks (**) will be presented during a Plenary Session.

- 108 **Expression of RUNX3 in skin cancers.** Moon Kyun Cho, Kyu Uang Whang, Jong Suk Lee, Young Lip Park, Sang Hoon Lee and Hong Ki Cho. Seoul, South Korea.
- 109 **Association of Merkel cell polyomavirus-small T antigen with cutaneous carcinogenesis.** Rachel Gordon, Harrison Phu Nguyen, Andrea L Haws, Peter L Rady and Stephen K Tyring. Houston, TX.
- 110* **Human papillomavirus mechanisms in squamous cell carcinogenesis in BRAF-inhibitor treated melanoma patients.** Daniel N Cohen, James D Chappell and Jason B Robbins. Nashville, TN.
- 111 **Ultraviolet A radiation increases invasiveness of melanoma cells.** Anna K von Thaler, York Kamenisch, Martin Röcken, Friedegund Meier and Mark Berneburg. Tuebingen, Germany.
- 112* **Quantitative RT-PCR reveals a similar pattern of cytokine dysregulation in mycosis fungoidea skin compared to those identified in a mouse model of CTCL.** Xuesong Wu, Alexander C Mackinnon and Sam T Hwang. Milwaukee, WI.
- 113* **Transcriptome analysis identifies thymocyte developmental factor TOX as a novel diagnostic and prognostic marker for mycosis fungoidea.** Yang Wang, Ivan Litvinov, Yuanshen Huang, Mingwan Su, Denis Sasseville and Youwen Zhou. Vancouver, Canada.
- 114* **Loss of Keratin 17 delays HPV-induced tumor growth in skin.** Daryle Depianto, Ryan P Hobbs, Minerva Han and Pierre A Coulombe. Baltimore, MD.
- 115 **Pralatrexate alone and in combination with bexarotene inhibit tumor growth in a CTCL xenograft model.** Xiang Zhang, Sophia Rangwala, Madeleine Duvic and Chunlei Zhang. Houston, TX.
- 116 **Loss of Desmoglein 1 disrupts epidermal differentiation following ultraviolet light exposure.** Jodi L Johnson, Evangeline V Amargo, Jennifer L Koetsier and Kathleen J Green. Chicago, IL.

- 133 Transcripotomal analysis in basal cell carcinoma provides insights into the genetic basis of disease.** Elizabeth R Heller, Ankit Gor, Dan Wang, Qiang Hu, Meena Kadare, Song Liu and Animesh A Sinha. Buffalo, NY and Hampton, VA.
- 134 An embryonic tumor suppressor isoform, Δ40p53, stabilizes p53 and suppresses p21 in melanoma.** Rie Takahashi, Svetomir N Markovic and Heidi J Scoble. Rochester, MN.
- 135 Next-generation sequencing identifies Notch receptors as integral tumor suppressors in cutaneous and lung squamous cell carcinomas.** Nicholas J Wang, Zachary Sanborn, Kelly L Arnett, Laura J Bayston, Wilson Liao, Charlotte M Proby, Irene M Leigh, Patricia B Gordon, Mimansa Sharma, Jeffrey P North, Swapna S Vemula, Theodora M Mauro, Issac M Neuhaus, Philip E LeBoit, Pui-Yan Kwok, Sarah T Arron, Allen E Bale, David Haussler, James E Cleaver, Joe W Gray, Paul T Spellman, Andrew P South, Jon C Aster, Stephen C Blacklow and Raymond J Cho. Portland, OR; Santa Cruz, CA; Boston, MA; San Francisco, CA; Dundee, United Kingdom and New Haven, CT.
- 136 Human bioengineered proteins induce apoptosis in skin cancers.** Emmett Pinney, Mayra Montes-Camacho, Robert Hoffman, Mark Baumgartner and Gail K Naughton. San Diego, CA.
- 137 Dual role of apoptosis-associated speck-like protein containing a CARD (ASC) in tumorigenesis of human melanoma.** Weimin Liu, Jeffrey H Dunn, David A Norris, Charles A Dinarello and Mayumi Fujita. Aurora, CO.
- 138 Establishment of an organotypic model mimicking arsenic-induced Bowen's disease.** Hsin-Su Yu, Wei-Ting Liao, Jian-He Lu, Cheng-Che E Lan, Chih-Hung Lee and Chung-Shin Chang. Kaohsiung, Taiwan.
- 139 Identification of protein kinase C activating phorbol ester and ingenol derivatives as candidates for cutaneous P-glycoprotein absorptive transport across the epidermis.** Luowei Li, Megan Ansbro, Suneet Shukla, Suresh Ambudkar, Peter Blumberg and Stuart H Yuspa. Bethesda, MD.
- 140 Akt and keratin intermediate filaments collaborate to regulate autophagy and tumorigenesis.** Richard C Wang, Yongjie Wei, Zhongju Zou, Zhenyi An, Govind Bhagat, Michael White, Julia Reichelt and Beth Levine. Dallas, TX and New York, NY.
- 141 Ser727 phosphorylation in STAT3 plays a crucial role in cell survival and nuclear translocation of STAT3 in human melanocytes and melanoma cells.** Masahiro Oka, Masanobu Sakaguchi, Tetsushi Iwasaki, Yasuo Fukami and Chikako Nishigori. Kobe, Japan.
- 142* Elevated epidermal thymic stromal lymphopoietin levels prevent skin tumorigenesis.** Shadmehr Demehri, Ahu Turkoz, Laura J Yockey, Mustafa Turkoz and Raphael Kopan. St. Louis, MO.
- 143 Edar signaling promotes epithelial tumor growth via stimulation of Hedgehog pathway upon BMP inhibition in the skin.** Andrei N Mardaryev, Igor Malashchuk, Tatyana Y Sharova, Andrei A Sharov and Vladimir A Botchkarev. Bradford, United Kingdom and Boston, MA.
- 144 Receptor-type protein tyrosine phosphatase-beta (RPTP-β) regulation of Met function in squamous cell carcinoma.** Yiru Xu, Jin Zhou, Thomas E Carey, John J Voorhees and Gary J Fisher. Ann Arbor, MI.
- 145 Identification of cell cycle- and cancer-associated gene networks activated by Dsg2 using global cDNA microarray: Crosstalk between Dsg2 and cystatin A.** Abhilasha Gupta, Donna Brennan, Kathryn E Scott, Sankar Addya, James K Wahl, Natalia A Riobo and My Mahoney. Philadelphia, PA.
- 146 A topical PI3K/mTOR inhibitor induces regression of squamous cell carcinomas in K14-Fyn Y528F mice.** X Yang, C Marshall, T Dentchev, T Salah, F Stauffer, F Kalthoff and J Seykora. Philadelphia, PA; Basel, Switzerland and Vienna, Austria.
- 147 Induction of the p16Ink4a/Rb pathway by IFN-γ-mediated tumor immune responses.** Matthias Hahn, Thomas Wieder, Heidi Braumüller, Ellen Brenner, Karin Schilbach and Martin Röcken. Tübingen, Germany.
- 148 TOX, PLS3, and KIR3DL2 genes are differentially expressed in Sézary Syndrome.** Brittany L O'Neill, Ezra Mirvish, Rebecca Pomerantz, Louis D Falo and Larisa J Geskin. Pittsburgh, PA.
- 149 Successful treatment of human cutaneous T cell lymphoma xenografts by potassium antimonyl tartrate.** Adrian Tun-Kyi, Patrick A Oberholzer, Jian-Zhong Qin, Maria B Karpova, Alexander A Navarini, Udo Ungethüm, Reinhard Dummer and Udo Döbbeling. Boston, MA; Cambridge, MA; Bern, Switzerland; Maywood, IL and Zurich, Switzerland.
- 150 MiR-223 has altered expression and affects cell growth in mycosis fungoides/cutaneous t-cell lymphoma.** Laura Y McGirt, John A Zic and Christine M Eischen. Nashville, TN.
- 151 Investigating the capacity of two-photon confocal microscopy to monitor the uptake, localization, and efflux of polyaromatic hydrocarbons in Langerhans cells.** Julia Lewis, Peter Zhao, Renata Filler and Michael Girardi. New Haven, CT.
- 152 Immunological control of mouse papillomavirus (MusPV) infection.** John P Sundberg, Joongho Joh, Christopher S Potter, Kathleen A Silva, Victoria Kennedy, Arvind Ingle, Shin-je Ghim and Alfred B Jenson. Bar Harbor, ME; Louisville, KY and Khargahr, Navi Mumbai, India.
- 153 Regulation of UVB-induced skin cancer by Fyn and Srcasm.** X Yang, H Nishida, C Marshall, T Dentchev and J Seykora. Philadelphia, PA and Kyoto, Japan.
- 154 Evidence for a napdh oxidase-stat5 pathway in human melanoma.** Jack L Arbiser, Michael Y Bonner, Robert Cerulli, Suhu Liu and David A Frank. Atlanta, GA and Boston, MA.
- 155 Gene-gene interactions between nucleotide excision repair RPA3 with XPC and ERCC1 are associated with risk of nonmelanoma skin cancer.** Lee Wheless, Emily Kistner-Griffin, Timothy J Jorgensen, Yvette Berthier-Schaad, Bailey Kessing, Judith Hoffman-Bolton, Yin Y Shugart, WH Linda Kao, Paul T Strickland, Lesley Francis, Rhoda M Alani, Michael W Smith and Anthony J Alberg. Charleston, SC; Washington, DC; Baltimore, MD; Frederick, MD; Bethesda, MD and Boston, MA.
- 156 Characterization of a human Merkel cell carcinoma cell line.** Kai Liang, Lijian Shao, Shiqiao Ye, Catherine Gurley, Wei Feng, Brendan C Stack Jr, Daniel Davis and Ling Gao. Little Rock, AR.
- 157 Using a gene signature to predict metastases in melanoma patients.** Craig Carson, Bernard Omolo, Haitao Chu, Yingchun Zhou, Patrick Tompkins, Dennis Simpson, Cheng Fan, Alain Sarasini, Philippe Dessen, Joseph Ibrahim, William Kaufmann and Nancy Thomas. Minneapolis, MN; Chapel Hill, NC; Villejuif, France and Spartanburg, SC.
- 158 Exploiting deregulated apoptotic signaling as a therapeutic strategy for Merkel cell carcinoma.** Monique E Verhaegen, Chris K Bichakjian, Tracy Vozheiko, Jack Weick, Melissa Voutsalath, Timothy M Johnson and Andrzej A Dlugosz. Ann Arbor, MI.
- 159 Evidence suggesting that cosmetic therapies may prevent non-melanoma skin cancer.** Dan F Spandau, Davina A Lewis, Marc A Carozza, Ally-Khan Somani and Jeffrey B Travers. Indianapolis, IN.
- 160 HB-EGF directly promotes epithelial-mesenchymal transition and invasiveness in human keratinocytes.** Stefan W Stoll, Laure Rittié and James T Elder. Ann Arbor, MI.
- 161 Defective cell cycle arrest and DNA repair in Merkel cell carcinogenesis.** Stephanie K Demetriou, Katherine Ona-Vu, Erin M Sullivan, Tiffany K Dong, Shu-Wei Hsu and Dennis H Oh. San Francisco, CA.
- 162 Early Langerhans cell-specific responses to exogenous polyaromatic hydrocarbon exposure.** Renata Filler, Julia Lewis and Michael Girardi. New Haven, CT.
- 163 Forward genetic screen to identify genes that confer drug resistance to BRAF-inhibitors in melanoma.** Jaehyuk Choi, Nur-Taz Rahman, Sean Landrette and Tian Xu. New Haven, CT.
- 164* Interferon-γ renders myeloid-derived suppressor cells (MDSC) with the potent immunosuppressive activity via inducing expression of DC-HIL and inducible nitric oxide synthase (iNOS).** Jin Sung Chung, Kyoichi Tamura, Ponciano D Cruz and Kiyoshi Ariizumi. Dallas, TX.
- 165 Shh-mediated Akt1 activation promotes survival of Ptch1^{+/−} keratinocytes and drives growth of basal cell carcinomas (BCCs).** Arianna L Kim, Jung H Back, Yucui Zhu, Xiuwei Tang, Mohammad Athar and David R Bickers. New York, NY and Birmingham, AL.
- 166 Circadian clock controlled sensitivity to UVB-induced DNA damage in the epidermis.** Mikhail Geyfman, Vivek Kumar, Qiang Liu, Rolando Ruiz, William Gordon, Francisco Espitia, Eric Cam, Padhraic Smyth, Alexander Ihler, Joseph Takahashi and Bogi Andersen. Irvine, CA and Dallas, TX.
- 167* SMO inhibitor effectiveness in a patient with a SHH locus translocation causing holoprosencephaly and basal cell carcinomas.** Natalia Gomez-Ospina, Charles D Bangs, Kun Qu, Anne L Chang and Anthony E Oro. Stanford, CA.

- 168 **Novel L1 and Alu retrotransposon insertions in melanoma related gene loci in NCI-60 melanoma cell lines.** John Zampella and Kathleen H Burns. Baltimore, MD.
- 169 **Aldehyde dehydrogenase activity is cancer stem cell marker in human cutaneous squamous cell carcinoma.** Masahito Yasuda, Jiang Chen, Steven E Robinson, Mayumi Fujita and Dennis R Roop. Aurora, CO.
- 170 **Indian hedgehog protects from malignant progression of skin tumours.** Parisa Kakanj, Gilles Séquaris, Dagmar Fehrenbach, Peter Schettina, Christos C Zouboulis and Catherin Niemann. Cologne, Germany and Dessau, Germany.
- 171 **Topical application of the PAFR agonist carbamoyl PAF or oral administration of the PPAR γ agonist Rosiglitazone suppresses chemical carcinogenesis and chronic PMA-induced inflammation.** Raymond L Konger, Ravi P Sahu, Sonia DaSilva, Jeffrey B Travers and Samin Rezania. Indianapolis, IN.
- 172 **Transcriptome sequencing in squamous cell carcinoma identifies novel skin malignancy regulated transcripts.** Cari Lee, Alex Ungewickell, Aparna Bhaduri, Kun Qu, Dan Webster, Cody Aros, Angela Mah, Markus Kretz and Paul A Khavari. Stanford, CA.
- 173 **Transcriptome sequencing in Sézary Syndrome identifies novel Sézary cell-associated transcripts.** Cari Lee, Alex Ungewickell, Aparna Bhaduri, Kun Qu, Dan Webster, Randall Armstrong, Wen-Kai Weng, Cody Aros, Angela Mah, Markus Kretz, Youn H Kim and Paul A Khavari. Stanford, CA.
- 174 **Scaffold-Kinase interaction blockade selectively inhibits Ras-MAPK tumorigenesis.** Katherine L Jameson, Ashley Zehnder and Paul A Khavari. Stanford, CA.
- 175 **Detection of peripheral blood involvement in CTCL by multi-parametric flow cytometric analysis.** Kristina Liu, Kacie R Carlson, Michael Girardi and Jaeyuk Choi. New Haven, CT.
- 176 **Dysregulation of the IL-1 family in cutaneous squamous cell carcinoma.** Abhishek Aphale, Xianying Xing, Marybeth Rilett, Johann E Gudjonsson and Andrew Johnston. Ann Arbor, MI.
- 177** **GLI2* engages the mTOR pathway to drive development of malignant peripheral nerve sheath tumors (MPNSTs) in skin.** Alexandre N Ermilov, Elizabeth DeLassus, Jennifer Ferris, Deborah Hong, Joanna Pero, Jianhong Liu, Marina Grachtchouk, Simon J Conway, David R Lucas and Andrzej A Dlugosz. Ann Arbor, MI and Indianapolis, IN.
- 178 **Detection of non-melanoma skin cancer by *in vivo* fluorescence imaging with fluorocoxib probe.** Hyejun Ra, Emilio Gonzalez-Gonzalez, Jashim Uddin, Irfan Ali-Khan, Lawrence J Marnett, Jean Tang and Christopher H Contag. Stanford, CA and Nashville, TN.
- 179 **Characterizing tumor adaptations via *in vivo* imaging.** Bradley J Kubick and Dennis R Roop. Aurora, CO.
- 185 **Hypoxia-inducible factor-1alpha, a key factor in skin physiology and pathophysiology.** Hamid R Rezvani, Nsrein Ali, Alain Taieb, Hubert de Verneuil and Frederic Mazurier. Bordeaux, France.
- 186 **Disruption of adherens junctions by non-IgG factor(s) present in a PF serum.** Ning Li, Moonhee Park, Zhi Liu and Luis A Diaz. Chapel Hill, NC.
- 187 **Repression of psoriasisform skin inflammation reverses aortic root vascular lesion formation and prevents enhanced thrombosis.** Yunmei Wang, Huiyun Gao, Candace M Loyd, Wen Fu, Doina Diaconu, Shijian Liu, Kevin D Cooper, Thomas S McCormick, Daniell Simon and Nicole L Ward. Cleveland, OH.
- 188 **Bullous pemphigoid IgG induces BP180 internalization through clathrin- and caveolin-independent endocytic pathway.** Sho Hiroyasu, Toshiyuki Ozawa, Hiromi Kobayashi, Masamitsu Ishii, Teruchi Harada, Yumi Aoyama, Yasuo Kitajima, Takashi Hashimoto, Jonathan C Jones and Daisuke Tsuruta. Osaka, Japan; Minokamo, Japan; Kurume, Japan and Chicago, IL.
- 189 **Lower NF- κ B activities participate to skin resistance to aging in African dermal fibroblasts compared to Caucasians.** Nicolas Bigot, Tangni Gomez, Fanny Gallienne, Thierry Oddos, Magali Demoer and Philippe Galera. Caen, France and Val de Reuil, France.
- 190 **NF- κ B associated with COL1A1 transActivators defects repress Type I collagen expression during aging in human dermal skin fibroblasts.** Nicolas Bigot, Gallic Beauchef, Magalie Hervieu, Thierry Oddos, Magali Demoer, Karim Boumediene and Philippe Galera. Caen, France and Val de Reuil, France.
- 191* **Fueling the keratinocyte motor: Factor-inhibiting Hypoxia-inducible Factor 1 (FIH-1) is a positive regulator of epithelial migration.** Han Peng, Spiro Getsios and Robert M Lavker. Chicago, IL.
- 192 **A cosmetic formulation containing ingredients that promote the production of laminin *in vitro* stimulates the production of laminin in human skin tissue equivalents and human skin biopsies.** David Gan, Geetha Kalahasti, Tiffany Florence and Michelle Hines. Dallas, TX.
- 193* **Inhibition of MK2 signaling prevents blister formation in pemphigus *in vivo*.** Xuming Mao, Hong Li and Aimee S Payne. Philadelphia, PA.
- 194* **Membrane raft microdomains are platforms for desmosome regulation.** Sara N Stahley, Masataka Saito, Victor Faundez, Michael Koval and Andrew P Kowalczyk. Atlanta, GA.
- 195* **Collective galvanotaxis - together we move better.** Li Li, Robert Hartley, Bjoern Reiss, Yaohui Sun, Jin Pu, Trung Hoang, Soichiro Yamada, Jianxin Jiang and Min Zhao. Sacramento, CA; Chongqing, China; Aberdeen, United Kingdom and Davis, CA.
- 196 **Tuberous sclerosis skin tumor cells express high levels of cathepsins B, K, and L.** S Li, Y Liu, J Wang, J Moss and T N Darling. Bethesda, MD.
- 197 **Autophagy modulates hyaluronan turnover by controlling the expressions of hyaluronan-synthesizing and -degrading enzymes in dermal fibroblasts.** Kanae Tashiro, Mayumi Shishido, Kazuyuki Yo and Takamasa Gomi. Yokohama, Japan.
- 198* **Integrin-linked kinase is a key player for TGF β 1 homeostasis and myofibroblast differentiation.** Katrin Blumbach, Georg Brunner, Andreas S Peters, Jan-Niklas Schulz, Thomas Krieg and Beate Eckes. Cologne, Germany and Münster, Germany.
- 199* **Development of a vascularized skin equivalent with a physiological perfused vascular network.** Florian K Groeber, Jan Hansmann, Michaela Kaufmann and Heike Walles. Stuttgart, Germany and Würzburg, Germany.
- 200 **The role of the basement membrane in stem cell maintenance and epidermal homeostasis.** Supatra T Marsh, Vera Martins, Kristin Braun, Michael Donaldson and Edel A O'Toole. London, United Kingdom and Uxbridge, United Kingdom.
- 201 **Both low and high molecular weight hyaluronan potentiates migration of human dermal fibroblasts.** Lucie Vistekova, Kristina Nesporova, Tomas Muthny, Martina Hermannova, Vladimir Velebny and Lukas Kubala. Dolni Dobrouc, Czech Republic and Brno, Czech Republic.
- 202* **Distinct functions of α 6 β 4 and α 3 β 1 integrins in keratinocyte migration.** Kristina R Kligys, Susan B Hopkinson and Jonathan C Jones. Chicago, IL.

Cell Adhesion/Matrix and Vascular Biology

All orals [designated with an asterisk (*)] listed below are presented in the Cell Adhesion/Matrix and Vascular Biology Minisymposium on Thursday, May 10, 2012 from 2:00-5:30 p.m. in Raleigh Convention Center 302 B. Orals designated by two asterisks (**) will be presented during a Plenary Session.

- 180 **Magnesium reduces carotid intima-media thickness in a mouse model of pseudoxanthoma elasticum: A novel treatment biomarker.** Erine A Kupetsky-Rincon, Qiaoli Li and Jouni Uitto. Philadelphia, PA.
- 181* **Obligatory roles of filamin A in calcium-induced cell-cell adhesion and differentiation in epidermal keratinocytes.** Chia-Ling Tu, Wenhan Chang, Michael You and Daniel D Bikle. San Francisco, CA.
- 182* **P120-catenin inhibits cadherin endocytosis by binding to a conserved endocytic signal in the cytoplasmic domain of classical cadherins.** Benjamin A Nanes, Christine M Chiasson, Anthony M Lowery, Peter A Vincent and Andrew P Kowalczyk. Atlanta, GA and Albany, NY.
- 183 **Role of CX3C chemokine receptor 1 in tissue injury induced by immune complex deposition.** Sohshi Morimura, Makoto Sugaya and Shinichi Sato. Tokyo, Japan.
- 184 **Expression of MFG-E8 in murine and human skin.** Sei-ichiro Motegi, Osamu Ishikawa and Mark C Udey. Bethesda, MD and Maebashi, Japan.

- 203 **Increased expression of Gastrin-releasing peptide and its receptor in Pruritus-prone Rhesus Macaques.** Leigh Nattkemper, Zhong Qui Zhou, Zhou-Feng Chen, Anna Nichols, Alex Papoiu and Gil Yosipovitch. Winston Salem, NC; St. Louis, MO and Syracuse, NY.
- 204 **Expression of human epidermal "Glycogenes" in skin cells after UVB irradiation and their modulation with active ingredients.** Elena Fedorova, Jin Namkoong, Alexandra D'Arcangelis, Pinaki Bhattacharya and Christelle Lasserre. Piscataway, NJ.
- 205 **LaNt α31, a novel extracellular mediator of keratinocyte adhesion and motility.** Kevin J Hamill and Jonathan C Jones. Chicago, IL.
- 206 **The neurotrophic factors NGF, BDNF, NT-3 and GDNF contribute to the angiogenic balance in reconstructed human skin.** Mathieu Blais, Philippe Lévesque and François Berthod. Quebec, Canada.
- 207* **Actinin-4 regulates the directed migration of keratinocytes and modulates cell-matrix interactions.** Kevin J Hamill, Susan B Hopkinson, Omar Skalli and Jonathan C Jones. Chicago, IL and Memphis, TN.
- 208* **Plakoglobin as a regulator of desmocollin gene expression.** Etienne Tokonzaba, Xing Cheng, Radhika Ganeshan, Eliane J Müller and Peter J Koch. Aurora, CO and Bern, Switzerland.
- 209* **Intracellular collagen degradation mediates age-associated collagen deficit.** Yong Li, Wei Xia, Andrew Little, Toru Okubo, John J Voorhees and Gary J Fisher. Ann Arbor, MI.
- 210** **Extracellular Hsp90alpha promotes human dermal fibroblast migration and skin wound healing via the NPTY motif within LRP-1 receptor and three downstream Akt kinases: Direct evidence for a cross-membrane signal transduction mechanism.** F Tsen, C Cheng, M Chen, D Woodley and W Li. Los Angeles, CA.
- 211* **Characterization of CCN1 functional domains that stimulate MMP-1 through integrin αVβ3 in human dermal fibroblasts.** Zhaoping Qin, Patrick Robichaud, John J Voorhees, Gary J Fisher and Taihao Quan. Ann Arbor, MI.
- 212 **Proteolytic processing desmoglein 2 in epidermal keratinocytes—characterization, fate, and relevance to cell biology.** Donna Brennan, Abhilasha Gupta, Felicia Cooper, Natalia A Riobó and My G Mahoney. Philadelphia, PA.
- 213 **Reverse aging processes through the reduction of progerin production by a synthetic tripeptide.** Estelle Loing and Elisabeth Lamarque. Québec, Canada and Ramonville St Agne, France.
- 214 **Merkel cell carcinoma (MCC): Mitoses, lymphovascular invasion, expression of Ki67 and bcl2 correlate with disease progression.** Michael Marker, Klemens Rappersberger, Babak Monshi, Andreas Steiner and Daniela Mühlhner. Vienna, Austria.
- 215 **Elemental bi-mineral complex increases extracellular matrix production in vitro and in human skins.** Connie B Lin, Yaping Hu, Dianne Rossetti, Jie Zhang, Sidney Hornby, Ying Sun, Jeannette Chantalat, Elizabeth Bruning and Miri Seiberg. Skillman, NJ and Los Angeles, CA.
- 216 **Knockdown of paroxonase 1 expression influences the aging of human dermal microvascular endothelial cells.** Yun S Lee, Chang O Park, Ji Y Noh, Shan Jin, Na R Lee, Seongmin Noh and Kwang H Lee. Seoul, South Korea.
- 217 **Stratifin regulates plakophilin-3 incorporation into the desmosomal plaque.** James K Wahl and Brett Roberts. Lincoln, NE.
- 218* **Laminin alpha 5 regulates microvascular endothelial cell migration and tubule formation.** Tengjiao Cui, Ling Tang and Jie Li. Miami, FL.
- 219* **Uncovering functional differences between kindlin-1 and kindlin-2 in keratinocytes.** Aditi Bandopadhyay, Gerson Rothschild, Sean Kim, David Calderwood and Srikala Raghavan. New York, NY and New Haven, CT.
- 220 **Lysosomes are central regulators of collagenolysis.** Thomas M Rünger. Boston, MA.

Epidemiology and Health Services Research

All orals [designated with an asterisk (*)] listed below are presented in the Epidemiology and Health Services Research Minisymposium on Thursday, May 10, 2012 from 2:00-5:30 p.m. in Raleigh Convention Center 306 B. Orals designated by two asterisks (**) will be presented during a Plenary Session.

- 221 **Do patients with methicillin-resistant *Staphylococcus aureus* (MRSA) infections of the skin revert to methicillin-susceptible isolates?** Anisha Patel, Emma Hill, Eric Simpson and Jon Hanifin. Portland, OR.
- 222 **Associated comorbidities in patients with vitiligo and alopecia areata.** Erin X Wei-Passanese, Vineeta Sheth, Kathie P Huang and Abrar A Qureshi. Boston, MA.
- 223* **Treatment satisfaction with commonly used treatments for moderate to severe plaque psoriasis in clinical practice.** Howa Yeung, Kristina Callis Duffin, Joy Wan, Andrea B Troxel, Daniel B Shin and Joel M Gelfand. Philadelphia, PA and Salt Lake City, UT.
- 224 **Trends of *in situ* melanoma in U.S. men and women.** Erin X Wei-Passanese, Jiali Han, Jennifer Y Lin and Abrar A Qureshi. Boston, MA.
- 225 **Difficulty in dermatologists reporting melanoma to state cancer registries.** Lauren C Payne and Suephy Chen. Atlanta, GA.
- 226 **Risk of second primary malignancies after dermatofibrosarcoma protuberans.** David E Kurlander, Kathryn J Martires and Jeremy S Bordeaux. Cleveland, OH.
- 227 **Dramatically improved overall survival and predictors of disease in 17 metastatic basal cell carcinoma patients.** Christina Danial, Bharathi Lingala, Anthony E Oro and Anne Lynn S Chang. Redwood City, CA.
- 228* **Comparative effectiveness of commonly used systemic treatments or phototherapy for moderate to severe plaque psoriasis in clinical practice.** J M Gelfand, J Wan, G G Krueger, K Callis Duffin and A S Van Voorhees. Philadelphia, PA and Salt Lake City, UT.
- 229* **Limitations of psoriatic arthritis screening instruments in patients with psoriasis.** Jessica A Walsh, Kristina Callis Duffin, Gerald Krueger and Daniel O Clegg. Salt Lake City, UT.
- 230* **Factors related to the impact of pruritus on quality of life.** Christopher Carr, Emir Veledar and Suephy Chen. Atlanta, GA.
- 231 **Monkey see, monkey do: Contagious itch in nonhuman primates.** Ashley N Feneran, Russell O'Donnell, Ashley Press, Gil Yosipovitch, Mark Cline, Greg Dugan, Alexandru Papoiu, Leigh Nattkemper, Yong Huak Chan and Carol A Shively. Winston-Salem, NC and Singapore, Singapore.
- 232* **Validation of a large population-based basal cell carcinoma registry.** Maryam M Asgari, Melody Eide, Margaret Warton, Marianne Sadler and Suzanne Fletcher. Oakland, CA; Detroit, MI and Boston, MA.
- 233* **Melanoma screening can substantially reduce melanoma mortality: Evidence from the SCREEN project in Schleswig-Holstein.** A Katalinic, A Waldmann, M A Weinstock, A Geller, N Eisemann, R Greinert, B Volkmer and E Brietbart. Providence, RI; Luebeck, Germany; Boston, MA and Buxtehude, Germany.
- 234 **Smoking and risk of skin cancer: A prospective analysis and a meta-analysis.** Fengju Song, Abrar A Qureshi, Xiang Gao, Tricia Li and Jiali Han. Boston, MA.
- 235 **Dermatologists and popular media may influence the social acceptability of handheld umbrellas for sun protection.** Jennifer Ezirike, Josette McMichael, Jessica Rice, Emir Veledar and Suephy C Chen. Atlanta, GA.
- 236* **Aspirin is associated with lower melanoma risk in a cohort of postmenopausal women in the Women's Health Initiative (WHI).** Susan M Swetter, Christina A Gamba, Marcia L Stefanick, Katrina M Spaunhurst, Jessica Kubo, Manisha Desai, Maryam M Asgari, Animesh A Sinha and Jean Y Tang. Palo Alto, CA; Stanford, CA; Los Angeles, CA; Oakland, CA and Buffalo, NY.
- 237* **Improvement in performance of skin self-examinations after intervention with interactive computerized education and telecommunication reminders: A randomized controlled study.** Savina Aneja, Angela K Brimhall, Douglas R Kast, Sanjay Aneja, Diana Carlson, Kevin D Cooper and Jeremy S Bordeaux. Cleveland, OH and New Haven, CT.

- 238 Evaluation of aging around the eyes by spatial frequency analysis of digital images.** Akihiro Tada, Sakura Inoue Torii and Kazuhiro Yamazaki. Yokohama, Japan and Kobe, Japan.
- 239 HPV is associated with non-melanoma skin cancer in HIV.** Sacha I Goolamali, Nikol Mladkova, Karin J Purdie, Maurits N de Koning, Wim G Quint, Nick Francis, Nilesh Morar, Rhonda Meys, Catherine A Harwood and Christopher B Bunker. London, United Kingdom and Rijswijk, Netherlands.
- 240** Cardiovascular risk factors and risk for recurrent cardiovascular events among psoriasis patients undergoing cardiac catheterization.** Jason M Farrow, Ehrin J Armstrong, Kristopher Klem, David Anderson, Sameen Azizi, John C Rutledge, Jason H Rogers and April W Armstrong. Sacramento, CA.
- 241 Risk of atrial fibrillation among psoriasis patients undergoing cardiac catheterization.** Sameen Azizi, Jason Farrow, Kristopher Klem, David Anderson, Jason H Rogers, Ehrin J Armstrong and April W Armstrong. Sacramento, CA.
- 242 Increasing sustainability of teledermatology practices: A study of operational models and challenges in modern-day teledermatology.** April W Armstrong , Mei W Kwong , Lynda Ledo, Thomas S Nesbitt and Sandra L Shewry. Sacramento, CA.
- 243* Filaggrin mutations: Prognosis and response to therapy overtime.** David J Margolis, Nandita Mitra, Aileen Sandilands, Irwin McLean and Timothy Rebbeck. Philadelphia, PA and Dundee, United Kingdom.
- 244 Cutaneous findings predict the presence of systemic symptoms in pediatric urticaria pigmentosa.** Meredith Barnes, Livia Van, Laura Delong and Leslie Lawley. Atlanta, GA.
- 245 An online approach to melanoma education aimed at the Hispanic population improves knowledge and behaviors.** Carly J Roman and Jeremy S Bordeaux. Cleveland, OH.
- 246 Willingness-to-pay stated preferences in cutaneous lupus erythematosus: A pilot study.** Stephanie W Liu, Christina Lam, Abrar Qureshi and Ruth Ann Vleugels. Boston, MA.
- 247 Predictors of squamous cell carcinoma in a high-risk population: VA Topical Tretinoin Chemoprevention Trial (VATTC).** Amilcar E Rizzo, Robert K Dyer, Tobias Cohen and Martin A Weinstock. Providence, RI.
- 248 A comparison of the body mass index (BMI) profiles of patients seen in the academic dermatology and general medicine clinical settings.** Noah Smith, Heather Chubb and Yolanda Helfrich. Ann Arbor, MI.
- 249 Effect of a web-based curriculum on primary care practice: The basic skin cancer triage trial.** Alina Markova, Martin A Weinstock, Patricia Risica, Waqas Shaikh, Usree Kirtania and Hernando Ombao. Providence, RI.
- 250* Molecular epidemiology of non-syndromic ARCI in a Middle Eastern population.** Shirli Israeli, Dana Fuchs-Telem, Reuven Bergman, Margarita Indelman, Ora Bitterman-Deutsch, Avikam Harel, Yaakov Mashiah, Ofer Sarig and Eli Sprecher. Tel Aviv, Israel; Haifa, Israel and Nahariya, Israel.
- 251 DNA repair is critical in maintaining neurologic integrity and hearing function: A 40 yr longitudinal auditory analysis of patients with xeroderma pigmentosum and trichothiodystrophy.** Mariam B Totonchy, Deborah Tamura, Christopher Zalewski, Porcia T Bradford, John J DiGiovanna, Kenneth H Kraemer and Carmen C Brewer. Bethesda, MD.
- 252 Variation in dermatologist beliefs about the safety and effectiveness of treatments for moderate-to-severe psoriasis.** Katrina Abuabara, Joy Wan, Andrea B Troxel, Daniel B Shin, Abby S Van Voorhees, Bruce F Bebo, Gerald G Krueger, Kristina Callis Duffin and Joel M Gelfand. Philadelphia, PA; Portland, OR and Salt Lake City, UT.
- 253 High throughput screening for transcriptional inducers of IGFBP7 points to histone deacetylases as new therapeutic targets in psoriasis.** Nadav Sagiv, Janna Nousbeck, Varda Shoshan-Barmatz, Dana Fuchs-Telem, Ofer Sarig and Eli Sprecher. Tel Aviv, Israel and Beer Sheva, Israel.
- 254* Differences between invasive and *in situ* melanoma according to age of diagnosis, mortality, host risk factors and lifetime ambient UV exposure.** Andrew C Walls, Jiali Han, Tricia Li and Abrar A Qureshi. Boston, MA.
- 255 Topical immunomodulation with diphenylcyclopropenone for alopecia areata: The Lebanese experience.** Jinane El Khoury, Jasmin Abd-El-Baki, Farah Succariah and Mazen Kurban. Lebanon, Lebanon and Beirut, Lebanon.
- 256* Association of eyeglasses use with periocular keratinocyte carcinomas and actinic keratosis.** Kachiu C Lee and Martin A Weinstock. Providence, RI and Washington DC.
- 257 Desired improvement tool (DIT): A new tool to assess desire for additional treatment and minimal disease activity in psoriasis patients.** Daniel Zaghi, Jian Ying, Charlen Weir, Kristina Callis Duffin and Gerald Krueger. Salt Lake City, UT.
- 258* Low-fat dietary pattern and skin cancer risk: The Women's Health Initiative (WHI) randomized controlled dietary modification trial.** Christina A Gamba, Marcia L Stefanick, James M Shikany, Joseph Larson, Eleni Linos, Stacy T Sims, James Marshall, Linda Van Horn, Nathalie Zeitouni and Jean Y Tang. Stanford, CA; Birmingham, AL; Seattle, WA; San Francisco, CA; Buffalo, NY and Chicago, IL.
- 259 Predictors of pediatric eczema severity in the United States: A population-based study.** Jonathan I Silverberg and Eric L Simpson. New York, NY and Portland, OR.
- 260 Eczema severity is associated with multiple comorbid conditions and increased healthcare utilization.** Jonathan I Silverberg and Eric L Simpson. New York, NY and Portland, OR.
- 261* Relative humidity, dew point, indoor heating and ultraviolet index are associated with the prevalence of eczema.** Jonathan I Silverberg, Jon M Hanifin and Eric L Simpson. Portland, OR and New York, NY.
- 262 Do we know the cost of dermatologic specialty care? A survey of dermatology providers, residents and patients.** Julianne A Mann, Valerie M Carlberg, Alexa B Kimball, Frances J Storrs, Andrew Blauvelt and Eric L Simpson. Portland, OR and Boston, MA.
- 263 The availability of free samples of acne medications increases the prescription of more expensive, branded drugs in lieu of generic alternatives.** M Hurley, R Stafford and A Lane. Stanford, CA.
- 264 Progression from cutaneous to systemic lupus erythematosus by ACR criteria usually occurs with mild disease and few systemic symptoms.** Isabela T Wieczorek, Kathleen J Propert, Joyce Okawa and Victoria P Werth. Philadelphia, PA.
- 265 Internet crowdsourcing as a venue for collection of dermatologic quality of life data.** Andrew Ostrowski, Suephy Chen, Emir Veledar, Adam Sperduto and Robert Swerlick. Augusta, GA and Atlanta, GA.
- 266 Characterization of SEER-reported unknown melanoma thickness cases.** Waqas Shaikh, Steven Dusza, Alan Geller, Allan Halpern and Martin Weinstock. New York, NY; Boston, MA and Providence, RI.
- 267 Obesity and melanoma risk: The Skin Health Study.** Rehana L Ahmed, Rachel I Vogel and DeAnn Lazovich. Minneapolis, MN.
- 268 Natural product use in sunscreens and their annual economic burden.** B Ma, R Johal, T Ma, R R Isseroff, H I Maibach and R K Sivamani. Sacramento, CA; Mather, CA and San Francisco, CA.
- 269 The relationship between emotional stress and beliefs about facial skin aging.** Jeremy M Schultz. Suffern, NY.
- 270 Prevalence of comorbidities is lower among HLA-Cw6-positive psoriasis patients.** Trilokraj Tejasvi, Philip E Stuart, Rajan P Nair, John J Voorhees and James T Elder. Ann Arbor, MI.
- 271 The impact of patient and physician gender on awareness of visit's goals.** Anna Rogers, Laura K DeLong, Suephy C Chen, Robert A Swerlick and Kimberly Neyman. Atlanta, GA and Chicago, IL.
- 272 Pre-diagnostic plasma 25-hydroxyvitamin D and risk of non-melanoma skin cancer in women.** Geyu Liang, Hongmei Nan, Abrar A Qureshi and Jiali Han. Boston, MA.
- 273 Atopic dermatitis prevalence and co-morbidities in US women.** Longde Lin, Jiali Han, Carlos Camargo and Abrar A Qureshi . Boston, MA and Nanning, China.
- 274 Increasing incidence of invasive squamous cell carcinoma in US women and men.** Khang Nguyen, Jiali Han, Tricia Li and Abrar Qureshi. Boston, MA.

- 275 Web-based curriculum improves primary care providers' skin cancer detection skills.** Melody J Eide, M Asgari, W Shaikh, L L Li, S W Fletcher, A Halpern, A Geller, G Alexander, A Altschuler, S Dusza, A Marghoob, E Quigley and M A Weinstock. Detroit, MI; Oakland, CA; Providence, RI; Boston, MA and New York, NY.
- 276 Implementing a system to collect outcome measures for psoriasis.** Peter L Mattei, Kevin R Donahue, Kristen C Corey and Alexa B Kimball. Boston, MA.
- 277 The prevalence of stump dermatoses remains high 40 years after amputation.** Nicole B Yang, Luis A Garza, Sewon Kang, Carrie E Foote and Jon H Meyerle. Baltimore, MD; Singapore, Singapore; Indianapolis, IN and Bethesda, MD.
- 278 Racial disparities in the degree of dyspigmentation and scarring in patients with cutaneous lupus.** S M Verma, J Okawa, V P Werth and K Propert. Philadelphia, PA.
- 279 A comprehensive systematic review and meta-analysis of treatments for lichen planus.** Parastoo Davari, Farzam Gorouhi, Hui-Hua Hsiao and Nasim Fazel. Sacramento, CA.
- 280 Visualizing the human dermatologic phenotype: Implications for diagnostic error, medical education, and scientific inquiry with the other "omics."** Lauren Rimoin, Adriana Cruz, Victor M Blanco, Nancy G Saravia, Art Papier and Noah Craft. Los Angeles, CA; Cali, Colombia; Rochester, NY and Torrance, CA.
- 281 Internet survey of tattoo skin care.** Jamira T Jones, Emilee K Sandmark, Monica Salazar, Barbara J Walkosz and Robert P Dellavalle. Aurora, CO; Golden, CO and Denver, CO.
- 282 Gender is an age-specific effect modifier for ulcerated malignant melanomas.** Blakely S Richardson, William F Anderson, Jill S Barnholtz-Sloan, Margaret A Tucker and Meg R Gerstenblith. Cleveland, OH and Bethesda, MD.
- 283 1-year mortality rate in bullous pemphigoid—significant correlation with autoantibody levels against BP180 at time of diagnosis.** Babak Monshi, Bettina Piringer, Martina Schmidt and Clemens Rappersberger. Vienna, Austria.
- 284 An analysis of terminology used by primary care physicians to describe concerning lesions referred to an urgent dermatology clinic.** Kristen Corey, Marisa Kardos, Ellen Roh and Alexa Kimball. Boston, MA and Worcester, MA.
- 285 Race and eosinophilia in mycosis fungoïdes: Retrospective study of eosinophilia and race.** John Zampella and Ginette A Hinds. Baltimore, MD.
- 286 Type 1 Diabetes associated auto-antibodies are present in 19% of alopecia areata sera.** Lynn Petukhova, M Duvic, M Hordinsky, D Norris, V Price, A DeJong, L Bian, D L Pittman, W E Winter, J Mackay-Wiggan, R Clynes and A M Christiano. New York, NY; Houston, TX; Minneapolis, MN; Denver, CO; San Francisco, CA and Gainesville, FL.
- 287 Interactions between adiposity and genetic polymorphisms on the risk of psoriasis.** Wenqing Li, Jiali Han, Mingfeng Zhang and Abrar A Qureshi. Boston, MA.
- 288* Psoriasis and risk of inflammatory bowel disease in US women.** Wenqing Li, Jiali Han, Andrew T Chan and Abrar A Qureshi. Boston, MA.
- 289 Arbitration of diagnoses for quality assurance in pathology is reproducible for major discrepancies.** Jonhan Ho. Pittsburgh, PA.
- 290 Bartonella bacteremia detected in non-lesional skin with laser scanning confocal microscopy.** P Velho, E Breitschwerdt, L Henke, S Nye, J Nugent, S Kavand and M Ericson. Minneapolis, MN and Raleigh, NC.
- 291 Physician survey of dermatology quality reporting system in Colorado.** Jeffrey H Dunn, Bryan T Alvarez, Ryan G Gamble, Robert P Dellavalle and Cory A Dunnick. Aurora, CO and Denver, CO.
- 292 High prevalence of psoriasis among patients presenting with inflammatory bowel disease.** Eva Mihalis, Jiali Han, Sonia Friedman, Peter A Banks, Matthew Hamilton, Frederick Makrauer, Jonathan Levine and Abrar A Qureshi. Boston, MA.
- 293 Juvenile Localized Scleroderma (jLS) is associated with a high degree of morbidity: Description of the jLS subgroup of the CARRAnet Registry.** Eveline Wu, Eglia Rabinovich, Kathryn Torok, Suzanne Li and Robert Fuhlbrigge. Boston, MA; Durham, NC; Pittsburgh, PA and Hackensack, NJ.
- 294 National utilization patterns of Mohs Micrographic Surgery for malignant melanoma and melanoma *in situ*.** Kate V Viola, Lou Gonsalves, Cary Gross and Ryan Turner. Bronx, NY; Hartford, CT and New Haven, CT.
- 295 Undergraduate student knowledge about sexually transmitted disease in Brazil.** E Lazzarini, T A Caldas, E M Pereira and P E Velho. Campinas, Brazil and Minneapolis, MN.
- 296 Clinical characteristics and outcomes of Merkel cell carcinomas in the Kaiser Permanente Northern California population.** Maryam M Asgari, E Margaret Warton, Monica M Sokil, Jayasri Iyer, Kelly G Paulson and Paul Nghiem. Oakland, CA and Seattle, WA.

Epidermal Structure and Function

All orals [designated with an asterisk (*)] listed below are presented in the Epidermal Structure and Function Minisymposium on Friday, May 11, 2012 from 2:00-5:30 p.m. in Raleigh Convention Center 306 B. Orals designated by two asterisks (**) will be presented during a Plenary Session.

- 297 Caffeic acid improves skin barrier function as Peroxisome proliferator-activated receptor (PPAR)- α agonist.** Myoung Jin Oh, Jin Eun Kim, Su Min Lee, Bora Kim, Hyuk Kim, Sun Young Kim, Byung-Ha Chang and Joo Dong Lee. Incheon, South Korea and Seoul, South Korea.
- 298** PDK1 regulates keratinocyte differentiation.** Teruki Dainichi, Matthew S Hayden and Sankar Ghosh. New York, NY.
- 299 Detoxifying and skin redensification effects of avocado.** Stephanie Bredif, Caroline Baudouin, Sophie Leclerc-Bienfait, Sébastien Garnier, Nadège Lachmann and Philippe Msika. Epernon, France.
- 300 Analysis of profilaggrin N-terminal fragment function in keratinocyte terminal differentiation.** Teruhiko Makino, Mami Yamamoto, Takako Yamakoshi, Mati U Rehman, Toshihiko Hibino and Tadamichi Shimizu. Toyama, Japan; Yokohama, Japan and Tokyo, Japan.
- 301 Tight junctions form multilayered networks and secretion of lamellar granules does not depend on the establishment of paracellular tracer barrier in mammalian epidermis.** Akemi Ishida-Yamamoto, Mari Kishibe and Hajime Izuka. Asahikawa, Japan.
- 302 Reduced expression of occludin, epidermal growth factor receptor, filaggrin, loricrin and SIRT1 in the skin of *klotho* gene deficient mice.** Kozo Nakai, Shigeaki Inoue, Kozo Yoneda and Yasuo Kubota. Kita-gun, Japan and Hiratsuka, Japan.
- 303 Anti-proliferative role of PKD1 and PKD2 in human epidermis.** Trivikram Gaddapara, Kamil Alzayady and Soosan Ghazizadeh. Stony Brook, NY.
- 304 E-FABP induces differentiation in normal and psoriatic keratinocytes.** Katiuscia Dallaglio, Alessandra Marconi, Francesca Truzzi, Roberta Lotti, Elisabetta Palazzo, Tiziana Petrachi, Annalisa Saltari and Carlo Pincelli. Modena, Italy.
- 305 Creation of differentiation-specific genomic maps of human epidermis and identification of novel transcription factors implicated in skin differentiation through laser capture microdissection (LCM).** Nicholas Gulati, James G Krueger, Mayte Suárez-Fariñas and Hiroshi Mitsui. New York, NY.
- 306 Effects of eight nanoparticles of different sizes and shapes on human epidermal keratinocytes.** Nancy A Monteiro-Riviere, Alfred O Inman, Sanjay Mathur, Mamoun Muhammed, Bengt Fadeel and Jim E Riviere. Raleigh, NC; Cologne, Germany and Stockholm, Sweden.
- 307 Connexin-26 is upregulated in atopic dermatitis epidermis.** Anna De Benedetto, Takeshi Yoshida, I-Hsin Kuo, Nicholas Rafaelis, Mark Boguniewicz, Tissa Hata, Lynda Schneider, Jon Hanifin, Richard Gallo, Donald Leung, Kathleen Barnes and Lisa Beck. Rochester, NY; Baltimore, MD; Denver, CO; San Diego, CA; Boston, MA and Portland, OR.
- 308 Delphinidin, a dietary anthocyanidin promotes epidermal differentiation through activation of caspase-14 and filaggrin: Studies in submerged and 3D organotypic cultures.** Jean Christopher Chamcheu, Deeba N Syed, Imtiaz A Siddiqui, Vaqar M Adhami and Hasan Mukhtar. Madison, WI.

- 309 **Erysipelas at uncommon sites.** Martin Glatz, Daniela Degen, Werner Aberer, Lars E French and Robert R Muellegger. Zurich, Switzerland; Wiener Neustadt, Austria and Graz, Austria.
- 310* **A novel human psoriatic skin reconstruct: The role of transit amplifying keratinocytes and of p75 neurotrophin receptor.** Francesca Truzzi, Alessandra Marconi, Roberta Lotti, Katiuscia Dallaglio, Elisabetta Palazzo, Tiziana Petrachi, Annalisa Saltari and Carlo Pincelli. Modena, Italy.
- 311 **Microtubule nucleation rates are similar in proliferating and differentiating keratinocytes.** Lindsey N Seldin and Terry Lechler. Durham, NC.
- 312* **Apoptosis of proliferating keratinocytes by targeted delivery of tumor necrosis factor-related apoptosis-inducing ligand (TRAIL) with an anti-desmoglein monoclonal antibody.** Michiyoshi Kouno, Xiaoping Yang, Norman Schechter, John Seykora and John Stanley. Philadelphia, PA.
- 313* **Increased retinoic acid levels through ablation of Cyp26b1 determine the processes of embryonic skin barrier formation and peridermal development.** Junko Okano, Ulrike Lichti, Satoru Mamiya, Maria Aronova, Guofeng Zhang, Stuart H Yuspa, Hiroshi Hamada, Yasuo Sakai and Marial Morasso. Bethesda, MD and Osaka, Japan.
- 314 **Enhancing barrier repair response in compromised skin by influencing caspase-14 and hyaluronic acid production.** Smitha Rao and James V Gruber. South Plainfield, NJ.
- 315 **Regulating the localization of two distinct pools of NuMA.** Nicholas D Poulson and Terry Lechler. Durham, NC.
- 316* **CXCR4 regulates lymphangiogenesis and keratinocyte proliferation in contact and IL23-mediated dermatitis.** Tomonori Takekoshi, Xuesong Wu, Michael B Dwinell and Sam T Hwang. Milwaukee, WI.
- 317* **Imaging mass spectrometry visualizes epidermal barrier ceramides and their immediate precursors.** Naoko Goto-Inoue, Takahiro Hayasaka, Nobuhiro Zaima, Kimiko Nakajima, Walter M Holleran, Shigetoshi Sano, Mitsutoshi Setou and Yoshikazu Uchida. San Francisco, CA; Hamamatsu, Japan; Nara, Japan and Kochi, Japan.
- 318 **Natural product extracts differentially modulate keratinocyte and fibroblast motility.** D S Chahal, R K Sivamani, B Rehal, R Zackria and R R Isseroff. Sacramento, CA.
- 319 **The inhibition of PAR-2 downstream signaling can prevent melanosome uptake of human keratinocytes.** Chieko Makino-Oakura, Seiji Takeuchi, Yoko Niki, Lieve Declercq, Daniel B Yarosh, Chikako Nishigori and Naoaki Saito. Kobe, Japan; Oevel, Belgium and New York, NY.
- 320* **GPHR-dependent functions of the Golgi apparatus are essential for formation of lamellar granules and the skin barrier.** Masahito Tarutani, Kimiko Nakajima, Yoshikazu Uchida, Mikiro Takaishi, Naoko Goto-Inoue, Masahito Ikawa, Mitsutoshi Setou, Peter M Elias, Taroh Kinoshita, Yusuke Maeda and Shigetoshi Sano. Nankoku, Japan; San Francisco, CA; Minamiosawa, Japan; Suita, Japan and Handayama, Japan.
- 321 **Filaggrin buffering capacity participates in the stratum corneum acid mantle.** Truus Roelandt, Tom Hillary, Christina Giddelo, Caroline Baudouin, Philippe Msika, Debby Mangelings, Yvan Vander Heyden, Joachim Fluhr, Matthias Schmutz and Jean-Pierre Hachem. Brussels, Belgium; Epernon, France; Berlin, Germany and Innsbruck, Austria.
- 322 **The calcium channel Orai1 is required for the development of human epidermis.** Matthieu Vandenberghe, V Lehen'kyi, Dimitri Gordienko, Maylis Raphaël, Roman Skryma, Thierry Oddos and Natalia Prevarskaya. Villeneuve d'Ascq, France; London, United Kingdom and Val de Reuil, France.
- 323 **Preservation of antimicrobial neuropeptide Cathestatin secretion from neuronal cells may improve innate immunity in aged skin.** Pascale Prouheze, Jean-Francois Nicolay and Mathilde Frechet. Monaco, Monaco.
- 324 **Atopic eczema: Deviation in ceramide composition correlates with an aberrant lipid organization.** Michelle Janssens, Jeroen van Smeden, Gert S Gooris, Peter J Caspers, Rob J Vreeken, Sanja Kezic, Adriana P Lavrijsen and Joke A Bouwstra. Leiden, Netherlands; Rotterdam, Netherlands and Amsterdam, Netherlands.
- 325* **Mandatory role of kallikrein 5 in profilaggrin maturation and possible association of its impairment with atopic dermatitis.** Jun-ichi Sakabe, Mami Yamamoto, Akira Motoyama, Satoshi Hirakawa, Miwa Kobayashi, Motonobu Nakamura, Toshihiko Hibino and Yoshiki Tokura. Hamamatsu, Japan; Yokohama, Japan; Tokyo, Japan and Kitakyushu, Japan.
- 326 **Zebrafish K5 promoter driven GFP expression as a transgenic system for epidermal research.** Hao Chen, Bo Hu, Ju-Ahng Lee and Xiaoxin Chen. Durham, NC and Chapel Hill, NC.
- 327 **Secosteroids with a long side chain interact more strongly with the vitamin D receptor (VDR) than those with a shorter side chain.** T Kim, J Wang, Z Janjetovic, J Chen, R Tuckey, M Nguyen, E Tang, D Miller, W Li and A Slominski. Memphis, TN and Crawley, Australia.
- 328 **Different roles of Rho-kinase inhibitor (Y-27632) on human skin cells.** Imane Garcia, Catherine Serre, Marianne Arcioni, Cedric Pouzet, Marie Brulas, Eric Bauza, Jean Marie Botto and Nouha Domloge. Sophia Antipolis, France.
- 329 **Interest of pentyl-rhamnoside in keratinocyte differentiation and cell junction for atopic dermatitis treatment.** Helene Hernandez-Pigeon, Jérôme Besse, Marie-Françoise Aries, Sandrine Bessou-Touya and Nathalie Castex-Rizzi. Toulouse, France.
- 330 **Interest of pentyl-rhamnoside, the active ingredient of Trixera+ balm, in atopic dermatitis by strengthening lipid barrier of the skin.** Hélène Hernandez-Pigeon, Marie-Florence Galliano, Marie-Françoise Aries, Jérôme Besse, Sandrine Bessou-Touya, Hélène Duplan and Nathalie Castex-Rizzi. Toulouse, France.
- 331 **Topical antihistamines enhance permeability barrier homeostasis and demonstrate efficacy in inflammatory dermatosis models.** Tzu-Kai Lin, Mao-Qiang Man, Juan-Luis Santiago, Kyungho Park, Truus Roelandt, Yuko Oda, Melanie Hupe, Debra Crumrine, Maria Gschwandtner, Carles Trullas, Erwin Tschauder, Ken Feingold and Peter Elias. San Francisco, CA; Tainan, Taiwan; Cuidad Real, Spain; Vienna, Austria and Barcelona, Spain.
- 332** **Structural insight into the organization and function of keratin filaments.** Chang-Hun Lee, Min-Sung Kim, Byung Min Chung, Daniel Leahy and Pierre A Coulombe. Baltimore, MD.
- 333* **Beta-catenin is essential for complete epidermal barrier formation.** Samriddha Ray and Terry Lechler. Durham, NC.
- 334 **Systems biology investigation of dynamic relationships between epidermal biology, barrier function and external perturbation.** Nandou Lu, Patrick B Warren, Jian-Ming Lee, Clive Harding, Jorge L Cardenas, Jean Adamus, Li Feng, Janet Jones and Carol Bosko. Trumbull, CT and Bebington, United Kingdom.
- 335 **Bioinformatic identification of Survivin as an effective target of miR-203: Involvement in keratinocytes differentiation process.** Catherine Serre, Florian Labarrade, Alexia Lableu, Jean Marie Botto and Nouha Domloge. Sophia Antipolis, France.
- 336 **miR-203 and epidermal differentiation: Repression of keratinocytes "stemness" by targeting survivin.** Florian Labarrade, Catherine Serre, Jean Marie Botto and Nouha Domloge. Sophia Antipolis, France.
- 337 **Impact of the reduction in oxygen and nutrient supplies to skin cells and ex vivo skin.** Ludivine Mur, Christelle Plaza, Jean Marie Botto and Nouha Domloge. Sophia Antipolis, France.
- 338 **Protection of telomeres integrity and prevention from DNA breaks limited senescence process.** Laurine Bergeron, Alexia Lebleu, Emilie Court, Jean Marie Botto and Nouha Domloge. Sophia Antipolis, France.
- 339 **Histamine suppresses epidermal keratinocyte differentiation and impairs the inside-out barrier function of the epidermis—a new role for mast cells in inflammatory skin diseases.** Maria Gschwandtner, Michael Mildner, Veronika Mlitz, Leopold Eckhart, Thomas Werfel, Ralf Gutzmer, Peter M Elias and Erwin Tschauder. Vienna, Austria; Hannover, Germany; San Francisco, CA and Neuilly, France.
- 340 **Antimicrobial peptide pheromone Plantaricin A increases the cellular antioxidant defenses of human keratinocytes and modulates the synthesis of filaggrin, involucrin, β -defensin 2, and tumor necrosis factor alpha.** Barbara Marzani, Daniela Pinto, Maria De Angelis, Marco Gobbetti, Anna Benedusi and Giammaria Giuliani. Milan, Italy and Bari, Italy.
- 341* **KLK7 participates in the maturation of caspase-14 during keratinocyte terminal differentiation - Role of an intermediate form.** Mami Yamamoto, Yuuko Matsumoto, Masashi Miyai, Ryoji Tsuboi and Toshihiko Hibino. Yokohama, Japan and Tokyo, Japan.

- 342 Differential effects of common moisturizer polyols on normal human epidermal keratinocytes.** Judit Szabó-Papp, Katalin Sós, Attila Oláh, Attila G Szöllösi, Balázs Tóth, Gabriella Czifra and Tamás Bíró. Debrecen, Hungary.
- 343 In vitro investigation of ethnic metabolic skin variations.** Galina Yarova, John Bajor and Carol Bosko. Trumbull, CT.
- 344* Neural recruitment and dynamism in the pathogenesis of atopic dermatitis.** Sarina B Elmariah, Vemuri B Reddy and Ethan A Lerner. Charlestown, MA.
- 345 EGFR regulation of epidermal barrier function.** Thomas R Sutter, Quynh Tran, Lawrence H Kennedy, Sandra Carrion, Sridevi Bodreddigari, Shirleen Goodwin and Carrie H Sutter. Memphis, TN.
- 346 Correlation of *in vivo* and *in vitro* skin penetration and metabolism of a polar and of a moderately lipophilic molecule.** Martha A Brown, Galina Yarova, Allan Burger, John Bajor and Carol Bosko. Trumbull, CT.
- 347 A proteasome inhibitor-stimulated Nrf1-dependent compensatory increase in proteasome subunit gene expression reduces polycomb group protein level.** Sivaprakasam Balasubramanian, Santosh Kanade, Bingshe Han and Richard L Eckert. Baltimore, MD.
- 348 Modulation of CPT-1 expression in primary human subcutaneous adipocytes with starfruit (*Averrhoa carambola*) leaf extract.** Jolanta Idkowiak-Baldys, Cheng Hwang, Sunghan Yim, John Lyga and Uma Santhanam. Suffern, NY.
- 349 The p63 target gene Calml4 is involved in epidermal terminal differentiation.** Merlin W Ariefdjohan and Marankel Koster. Aurora, CO.
- 350 The mechanism of monomethyl fumarate (MMF) as an anti-psoriatic agent.** Inas A Helwa and Wendy B Bollag. Augusta, GA.
- 351 Suppression of AP1 transcription factor function in cultured keratinocytes and murine epidermis alters gene expression.** Bingshe Han, Ellen A Rorke, Gautam Adhikary, Yap Ching Chew, Wen Xu and Richard L Eckert. Baltimore, MD.
- 352 The effect of intracellular energy on transepithelial electric potential (TEEP) in human skin.** Vasile Ionita-Manzatu, Michael Ingrassia, Jack Lombardi and Thomas Mammone. Melville, NY.
- 353 A purified Feverfew extract induces DNA Repair in skin via a PI3-kinase-dependent Nrf2-ARE pathway.** Karen Rodriguez, Simarna Kaur, Thierry Oddos, Helene Wong and Michael D Southall. Skillman, NJ and Val de Reuil, France.
- 354* The Trithorax complex promotes epidermal keratinocyte differentiation in part through GRHL3/GET1-mediated recruitment.** Amelia Hopkin, William Gordon, Rachel Klein, Francisco Espitia, Kenneth Daily, Michael Zeller, Pierre Baldi and Bogi Andersen. Irvine, CA.
- 355 Topical apigenin up-regulates epidermal filaggrin expression and inhibits cutaneous inflammation in murine models.** Mao-Qiang Man, Maihua Hou, Richard Sun, Melanie Hupe, Peggy Kim, Kyungho Park, Debra Crumrine, Theodora M Mauro and Peter M Elias. San Francisco, CA and Nanjing, China.
- 356* Desmosomal cadherins crosstalk to the nucleus via a novel potent transcriptional regulator of the Wnt pathway: Plakoglobin (PG, JUP, γ -catenin).** Arnaud Galichet, Christian Strauss, Beyza S Sayar, Denise Howald and Eliane J Mueller. Bern, Switzerland.
- 357 Infrared microscopy of human corneocytes from different anatomical sites measures differences in protein secondary structure and chemical composition.** Samuel Gourion-Arsiquaud and David J Moore. Princeton, NJ.
- 358 Topical hesperidin improves epidermal permeability barrier function and epidermal differentiation in normal murine skin.** Maihua Hou, Mona Man, Wenyuan Man, Wenyuan Zhu, Melanie Hupe, Kyungho Park, Debra Crumrine, Peter M Elias and Mao-Qiang Man. Nanjing, China and San Francisco, CA.
- 359 Clock gene activity in keratinocytes measured with a per1-promoter construct.** Edward Pelle, James McCarthy, Kelly Dong, Dawn Layman, Radu Zamfir, Daniel B Yarosh and Nadine Pernodet. Melville, NY and New York, NY.
- 360 Selective alterations in the permeability barrier function and cytokine response to *in vivo* tandem repeated irritation in aged skin.** Irena Angelova-Fischer, Verena Becker, Anne-Karin Hoek, Sanja Kezic, Tobias W Fischer and Detlef Zillikens. Lübeck, Germany and Amsterdam, Netherlands.
- 361 Hydroxydecine® (10-hydroxy-2-decanoic acid) improves skin barrier function *in vitro* and is clinically efficient in the treatment of xerosis.** Helene Duplan, Emmanuel Questel, Helene Hernandez-Pigeon, Florence Galliano, Antony Caruana, Isabelle Ceruti, Marco Ambonati, Carine Mejean, Odile Damour, Nathalie Castex-Rizzi, Sandrine Bessou-Touya and Anne-Marie Schmitt. Toulouse, France; Lavaur, France and Lyon, France.
- 362 Allergic march model is developed by Dermatofagoïdes pteronyssinus application on oxazolone induced atopic dermatitis hairless mice and interrupted by acidic cream application.** Hae-Jin Lee, Noo Ri Lee, Na Young Yoon, Minyoung Jung, Dong Hye Kim, Seong-Jin Kim and Eung Ho Choi. Wonju, South Korea and Gwangju, South Korea.
- 363* Redundant roles of Ovo1 and Ovo2 transcription factors in epidermal morphogenesis.** Briana Lee and Xing Dai. Irvine, CA.
- 364 Oleic acid permeates into skin epidermis and decreases ceramide conformational order.** Guangru Mao, Dina VanWyck, Carol R Flach, Richard Mendelsohn and Russel M Walters. Skillman, NJ and Newark, NJ.
- 365 Exposure to basic pH reduces the amount of orthorhombically packed lipid lamellae in stratum corneum.** David J Moore, Peter Saad and Carol R Flach. Princeton, NJ and Newark, NJ.
- 366 Apolipoprotein E is associated with epidermal lamellar bodies.** Gyorgy Paragh, Peter Ugocsai, Evelyn Orsó, Thomas Vogt, Alfred Boettcher, Gerhard Liebisch and Gerd Schmitz. Milwaukee, WI and Regensburg, Germany.
- 367 Multiple over-expression of kallikrein related peptidases contributes to the inflammatory hyperkeratotic change with abnormal desquamation in lesions of palmoplantar pustulosis.** Masamoto Murakami, Takanori Kaneko, Mari Kishibe, Maria Brattsand, Vera Morhenn, Akemi Ishida-Yamamoto, Hajime Iizuka, Yuji Shirakata and Koji Sayama. Toon, Japan; Asahikawa, Japan; Umea, Sweden and San Diego, CA.
- 368 Development and characterization 3D psoriatic tissue model.** Seyoum Ayehunie, Cristy Hedin, Tim Landry, Annie Cataldo Cataldo, Maureen Spratt, Rachael Clark, Thomas Kupper Kupper and Mitchell Klausner. Ashland, MA and Boston, MA.
- 369 Ictyane® body lotion: A new concept for extreme protection and hydration based on the “Trehalose-Sorbitol-Glycerol complex” as a thermo-protector.** Marie Florence F Galliano, Marie Josée J Haure, Laure Duprat, Hélène Hernandez Pigeon, Marisa Meloni, Nathalie Castex Rizzi, Sandrine Bessou Touya and Helene Duplan. Toulouse, France and Milano, Italy.
- 370 STIM1 and Orai1-mediated store-operated Ca^{2+} entry is critical for Ca^{2+} -switch-induced keratinocyte differentiation.** Takuro Tomita and James W Putney. Research Triangle Park, NC.
- 371 Ceramide stimulate SULT2B1b gene expression via a NF-kappaB pathway in human keratinocytes.** Yan J Jiang, Peggy Kim, Peter M Elias, Daniel Bikle, Carl Grunfeld and Kenneth R Feingold. San Francisco, CA.
- 372* A novel therapeutic strategy for correcting the desquamation defects in Harlequin Ichthyosis.** Lei Zhang and Dennis R Roop. Aurora, CO.
- 373* BAF53A enforces the epidermal progenitor state by re-targeting the SWI/SNF/BAF chromatin remodeling complex away from differentiation gene promoters.** Xiaomin Bao, Jiong Tang, Shiyiing Tao, Kun Qu, Gerald R Crabtree and Paul A Khavari. Stanford, CA.
- 374 Free D-glutamic acid in the skin as a candidate for a repairing factor of cutaneous barrier homeostasis.** Yosuke Tojo, Chieko Okamura, Shigeyoshi Fuziwara, Yumiko Hioki, Yutaka Ashida, Kenji Hamase and Jiro Kishimoto. Yokohama, Japan and Fukuoka, Japan.
- 375 Glucocorticoids induce epidermal atrophy via activation of REDD1 and inhibition of m-TOR activity.** Gleb Baida, Pankaj Bhalla and Irina Budunova. Chicago, IL.
- 376 The retinoid-related orphan receptor ROR α functions as a determinant of keratinocyte differentiation.** Jun Dai, Yang Brooks and Gian P Dotto. Charlestown, MA.

- 377 Factors predictive of recurrence and death from invasive squamous cell carcinoma.** Chrysalyne Schmults, Pritesh Karia, George Murphy, Joi Carter, Jiali Han and Abrar Qureshi. Boston, MA.
- 378 Superior barrier function of a novel elastic, skin compatible film resulting from activation of a flowable, polymer emulsion system.** Soo-Young Kang, Fernanda H Sakamoto, Mandy Su, Joseph Lomakin, Ariya Akthakul, R Rox Anderson and Betty Yu. Cambridge, MA and Boston, MA.
- 379 Uniaxial stretch orients cell division in the epidermis.** Henry Foote and Terry Lechler. Durham, NC.
- 393 Functional analysis of candidate genes identified by genomewide association study (GWAS) of infantile hemangiomas (IH).** Eun-Kyung M Kwon, Dawn H Siegel, Ulrich Broeckel, Paula E North, Elizabeth Worthey, Yvonne E Chiu and Beth A Drolet. Milwaukee, WI.
- 394 Progressive ectodermal phenotype of costello syndrome.** Eun-Kyung M Kwon, Ariel H Rosen, Amy S Paller and Dawn H Siegel. Milwaukee, WI and Chicago, IL.
- 395 A missense mutation within the helix initiation motif of the keratin 71 (KRT71) gene underlies autosomal dominant woolly hair/hypotrichosis.** Atsushi Fujimoto, Asuka Inoue, Manabu Ohyama, Hiroki Fujikawa, Muhammad Farooq, Ritsuko Ehama, Jotaro Nakanishi, Motofumi Hagibara, Tokuro Iwabuchi, Junken Aoki, Masaaki Ito and Yutaka Shimomura. Niigata, Japan; Sendai, Japan; Tokyo, Japan and Yokohama, Japan.
- 396 *In vitro* models: A new approach on development of cellular models.** Juliana C Lago, Ramon Vidal and Marcio Lorencini. Cajamar, Brazil and Campinas, Brazil.
- 397 The vascular genetics translational research and gene discovery program.** Dawn H Siegel, Elizabeth Worthey, Eun-Kyung M Kwon, Yvonne E Chiu, Ulrich Broeckel and Beth A Drolet. Milwaukee, WI.
- 398 Dissection of Dlx3 function in ectodermal appendage development: Impacts of mesenchymal and epithelial-specific deletions on tooth development.** Olivier Duverger, Angela Zah, Juliane Isaac, Hong-wei Sun, Jane B Lian, Ariane Berdal, Joonsung Hwang and Marial Morasso. Bethesda, MD; Worcester, MA and Paris, France.
- 399 Therapies for dystrophic epidermolysis bullosa require close evaluation for development of antibodies to type VII collagen.** Emily S Gorell, Ngon Nguyen, Zurab Siprashvili, Peter Marinkovich and Alfred Lane. Stanford, CA.
- 400 Digenic inheritance in epidermolysis bullosa simplex.** Gilly Padalon-Brauch, Dani Ben Amitai, Ofer Sarig, Eli Sprecher and Yaakov Mashiah. Tel Aviv, Israel and Petach Tikvah, Israel.
- 401 Studies of a photosensitive form trichothiodystrophy case with fourth novel homozygous mutation in rare TTDA gene suggested a role of TTDA in development of atopic diathesis.** Mitsuhiro Matsuda, Takahiro Hamada, Sachiko Sakaguchi, Norito Ishii, Minao Furumura and Takashi Hashimoto. Fukuoka, Japan.
- 402 Arylhydrocarbon receptor repressor (AhRR) function revisited: Repression of CYP1 activity in human skin fibroblasts is not related to AhRR expression.** Ellen Fritzsche, Julia Tigges, Heike Weighardt, Sandra Wolff, Christine Goetz, Irmgard Foerster, Zippora Kohne, Ulrike Huebenthal, Hans F Merk, Josef Abel, Thomas Haarmann-Stemmann and Jean Krutmann. Duesseldorf, Germany and Aachen, Germany.
- 403 Novel and recurrent mutations in Japanese patients with focal dermal hypoplasia.** Gen Nakanishi, Kosei Hasegawa, Takashi Oono, Shigeki Koshida, Keiji Iwatsuki and Toshihiro Tanaka. Otsu, Japan; Okayama, Japan and Kurashiki, Japan.
- 404* Germline mutation in ATR underlying a new autosomal dominant oropharyngeal cancer syndrome.** Akio Tanaka, Sarah Weinel, Nikoletta Nagy, Mark O'Driscoll, Joey E Lai-Cheong, Carol L Kulp-Shorten, Alfred Knable, Michihiro Hide, Jeffrey Callen and John A McGrath. London, United Kingdom; Hiroshima, Japan; Louisville, KY and Brighton, United Kingdom.
- 405* Elucidation of the molecular basis of a novel osteocutaneous disease.** Ofer Sarig, Sagi Nahum, Debora Rapaport, Akemi Ishida-Yamamoto, Dana Fuchs, Li Qiaoli, Ksenya Cohen, Ronen Spiegel, Janna Nousbeck, Shirli Israeli, Zvi Borochowitz, Gilly Padalon, Jouni Uitto, Mia Horowitz, Stavit Shalev and Eli Sprecher. Tel Aviv, Israel; Haifa, Israel; Asahikawa, Japan; Philadelphia, PA and Afula, Israel.
- 406 Sirtuins and Nampt in human skin cells.** Ying Chen, Sarah Carpenter, Gerald Heenan, John Lyga and Russell Wyborski. Suffern, NY and Pine Brook, NJ.
- 407* HDAC inhibition prevents loss of subcutaneous fat in CSB-deficient mice.** Marc Majora, Christine Goetz, Christine Schumacher, Maren Schneider and Jean Krutmann. Duesseldorf, Germany.

- 408 **Evidence for interplay between hypoxia and epigenetic dysregulation in the pathogenesis of cerebellar neurodegeneration in CSB deficient mice.** Christine Schumacher, Marc Majora, Timm Schreiber, Ellen Fritzsche and Jean Krutmann. Duesseldorf, Germany.
- 409 **Discovery of regulatory-element risk variants in an ethnic-specific atopic dermatitis cohort using pooled targeted deep sequencing.** Kara J Gulewicz, Danielle Albea, Inez Oh, Anne Bowcock, Avner Shemer, James G Krueger, Emma Guttman-Yassky and Cristina de Guzman Strong. St. Louis, MO; New York, NY and Tel-Aviv, Israel.
- 410* **A photoaging-like phenotype in dermal equivalents: Evidence for proteasomal dysregulation in KSS fibroblasts.** Christine Goetz, Bianca Schuermann, Marc Majora, Susanne Franke, Maren Schneider, Françoise Bernerd and Jean Krutmann. Duesseldorf, Germany and Clichy, France.
- 411 **Restoration of XPC protein and induction of DNA repair in homozygous and heterozygous xeroderma pigmentosum group C cells by readthrough of stop codons using aminoglycoside compounds.** Christiane Kuschal, John J DiGiovanna, Sikandar G Khan and Kenneth H Kraemer. Bethesda, MD.
- 412 **Patients with the rare DNA repair disease overlap syndrome xeroderma pigmentosum and trichothiodystrophy (XP/TTD) are at high risk for skin and internal cancers.** Sikandar G Khan, Deborah Tamura, Taro Rao, Wadih M Zein, Brian P Brooks, Jennifer Boyle, Takahiro Ueda, John J DiGiovanna and Kenneth H Kraemer. Bethesda, MD.
- 413 **Expanding the differential diagnosis for pachyonychia congenita.** Neil J Wilson, C D Hansen, Dilek Azkur, Can N Kocabas, Ayse Metin, Zeynep Coskun, Mary E Schwartz, Peter R Hull, W H McLean and Frances J Smith. Dundee, United Kingdom; Salt Lake City, UT; Ankara, Turkey and Saskatoon, Canada.
- 414 **The pseudoxanthoma elasticum phenotype in the *Abcc6*^{-/-} mice is modified by different genetic backgrounds.** Qiaoli Li, Adele Donahue and Jouni Uitto. Philadelphia, PA.
- 415 **Aged fibroblast gene array-looking for new affected transcripts.** Tomas Muthny, Rastislav Slavkovsky and Vladimir Velebny. Dolni Dobrouc, Czech Republic.
- 416 ***Samd9L*, a mouse paralog of *Samd9*, does not modify the mineralization process in *Abcc6*^{-/-} mice, a model for pseudoxanthoma elasticum.** Qiaoli Li, Haitao Guo, Hirotaka Matsui, Hiroaki Honda, Toshiya Inaba, Eli Sprecher and Jouni Uitto. Philadelphia, PA; Hiroshima, Japan and Tel Aviv, Israel.
- 417 **MotifMap: Integrative genome-wide maps of regulatory motif sites for model species.** Kenneth Daily, Vishal R Patel, Paul Rigor, Xiaohui Xie and Pierre Baldi. Bethesda, MD and Irvine, CA.
- 418* **Cutaneous features of pseudoxanthoma elasticum in generalized arterial calcification of infancy due to *ENPP1* gene mutations.** Qiaoli Li, Wendy Schumacher, Dawn Siegel and Jouni Uitto. Philadelphia, PA and Milwaukee, WI.
- 419* **Intravenously injected recombinant human type VII collagen restores collagen function in dystrophic epidermolysis bullosa.** Xinyi Wang, Mahsa Amir, Brian Hwang, Douglas Keene, Yingping Hou, Aditi Bauskar, David Woodley and Mei Chen. Los Angeles, CA and Portland, OR.
- 420* **AP-1 proteins are induced by irritant and field injury through purinoceptor and EGFR activation.** Kellie J White, Vincent J Maffei and Robert A Swerlick. Atlanta, GA and Decatur, GA.
- 421 **Re-expression of murine *Abcc6* in the liver counteracts ectopic mineralization in a mouse model of pseudoxanthoma elasticum (*Abcc6*^{-/-}).** Qiuqie Jiang, Shunsuke Takahagi, Dian Wang and Jouni Uitto. Philadelphia, PA.
- 422* **Coactivator MED1 regulates epidermal and hair follicular keratinocyte proliferation and differentiation.** Lizhi Hu, Vadim Bul, Daniel D Bikle and Yuko Oda. San Francisco, CA.
- 423 **An epidermal-specific cis-regulatory enhancer in the EDC with spatial and temporal sensitivity.** Inez Oh, Danielle Albea, Breeana Baker, Grace Kroner and Cristina de Guzman Strong. St. Louis, MO.
- 424 **Genetic and environmental factors influence the severity and tissue susceptibility of mineralization in PXE mouse models.** Qiuqie Jiang, Dian Wang and Jouni Uitto. Philadelphia, PA.
- 425* **mtDNA mutations seen in UV-induced mouse models of skin cancer induce *CCL20* overexpression promoting tumorigenic phenotypes.** Jana Jandova, Jaroslav Janda and James E Sligh. Tucson, AZ.
- 426* **Whole-exome sequencing in a single proband reveals a mutation in the *CHST8* gene in autosomal recessive peeling skin syndrome.** Mazen Kurban, Rita Cabral, Muhammad Wajid, Yutaka Shimomura, Lynn Pethukova and Angela M Christiano. New York, NY.
- 427 **Use of an Er: YAG laser to facilitate nucleic acid delivery to skin.** Robyn P Hickerson, Cheryl Deguara, Christopher H Contag, Leonard M Milstone and Roger L Kaspar. Santa Cruz, CA; Palo Alto, CA; Stanford, CA and New Haven, CT.
- 428* ***TRIM32* regulates Th1/17 vs Th2 response to TLR activation, leading to psoriasis-like vs atopic dermatitis-like inflammatory diseases in mice.** Yun Wang, Emily Swaney, James Lagowski, Yuangang Liu and Molly Kulesz-Martin. Portland, OR.
- 429 **Gene correction of Spanish recessive dystrophic epidermolysis bullosa patient-specific induced pluripotent stem cells.** Noriko Umegaki, Munenari Itoh, Rodolfo Murillas, Marcela Del Rio, Angela M Christiano and Fernando Larcher. New York, NY and Madrid, Spain.
- 430 **Long-term follow-up after cultured epidermal autograft in a recessive dystrophic epidermolysis bullosa patient.** Satoru Shinkuma, Daisuke Sawamura, Hiroyuki Kawasaki, Hiroyuki Nakamura, Masukazu Inoie, Wataru Nishie and Hiroshi Shimizu. Sapporo, Japan; Hiroasaki, Japan and Gamagori, Japan.
- 431 **Residual genomic signature of atopic dermatitis despite clinical resolution with narrow band UVB.** Julia K Gittler, Mayte Suarez-Farinés, Avner Shemer, Irma Cardinale, James G Krueger and Emma Guttman-Yassky. New York, NY and Tel Aviv, Israel.
- 432 **Alopecia Areata genome-wide association study.** L Petukhova, S Ripke, T Becker, M Duvic, M Hordinsky, D Norris, V Price, J Mackay-Wiggan, S Redler, W V Chen, C I Amos, A Lee, P K Gregersen, B Blaumeiser, D Altshuler, M J Daly, M Nöthen, R Betz and A M Christiano. New York, NY; Boston, MA; Cambridge, MA; Bonn, Germany; Houston, TX; Minneapolis, MN; Denver, CO; San Francisco, CA; Manhasset, NY and Antwerp, Belgium.
- 433 **RNA profiling of gene expression in pachyonychia congenita skin lesions reveals dramatic changes in microRNA and mRNA expression patterns.** Roger L Kaspar, Leonard M Milstone, Jean Tang, Annaleen Vermeulen, Kevin G Sullivan, Marc Bessette, Devin Leake, Mary Schwartz and Robyn Hickerson. Santa Cruz, CA; Stanford, CA; New Haven, CT; Lafayette, CO and Salt Lake City, UT.
- 434* **Developing a stem cell-based therapy for epidermolysis bullosa simplex by promoting an allele-specific knockout of mutant keratin 14 in induced pluripotent stem cells.** Ganna Bilousova, Jiang Chen, Masahito Yasuda and Dennis R Roop. Aurora, CO.
- 435 **Real-time non-invasive imaging of siRNA delivery to skin by soluble microneedles.** Tycho J Speaker, Robyn H Hickerson, Manuel A Flores and Roger L Kaspar. Santa Cruz, CA.
- 436 **Data regarding nails from 101 patients with pachyonychia congenita.** Phillip Holler, Christopher Urban and Adam Rubin. Philadelphia, PA and Salt Lake City, UT.
- 437 **Cross-cell-type analysis of expression profiles towards the understanding of cutaneous immunity.** Babu Singh, Seema Plaisier, Peter Sieling, Robert L Modlin and Delphine J Lee. Santa Monica, CA; Boston, MA and Los Angeles, CA.
- 438* **ZNF750 is a p63 target that induces KLF4 to drive epidermal differentiation.** George L Sen, Lisa Boxer, Dan Webster, Rose Bussat, Kun Qu, Brian Zarnegar, Danielle Johnston, Zurab Siprashvili and Paul A Khavari. Stanford, CA and San Diego, CA.

Hair and Cutaneous Development

All orals [designated with an asterisk (*)] listed below are presented in the Hair and Cutaneous Development Minisymposium on Thursday, May 10, 2012 from 2:00-5:30 p.m. in Raleigh Convention Center 305 A. Orals designated by

- 439* **Two-photon microscopy to capture live cell behavior in the hair follicle stem cell niche.** Panteleimon Rompolas and Valentina Greco. New Haven, CT.
- 440* **Requirement of TACE/ADAM17 for the maintenance of hair follicle stem cell niche.** Tetsuro Kobayashi, Keisuke Horiuchi, Manabu Ohyama, Haruhiko Akiyama, Masayuki Amagai and Keisuke Nagao. Tokyo, Japan and Kyoto, Japan.
- 441 **Somatostatin is expressed in hair follicles and may play a role in immune privilege.** Trisia Breitkopf, Blanche K Lo, Gigi Leung, Mei Yu, Jerry Shapiro and Kevin J McElwee. Vancouver, Canada.
- 442* **Conditional knock-in expression of a CYLD mutant leads to the abnormal growth of sebaceous glands.** Jane Jin, Sally Wang, George Mosiolas and Jennifer Zhang. Durham, NC and Thessaloniki, Greece.
- 443 **P-cadherin regulates human hair follicle growth and pigmentation through canonical wnt signaling.** Liat Samuelov, Jennifer E Kloepper, Daisuke Tsuruta, Tamás Bíró, Suman K Singh, Desmond J Tobin, Eli Sprecher and Ralf Paus. Luebeck, Germany; Tel Aviv, Israel; Kurume, Japan; Debrecen, Hungary; Bradford, United Kingdom; Ramat Aviv, Israel and Manchester, United Kingdom.
- 444 **Novel genes relevant for hair aging identified in human female hair follicles of different age.** Konrad Kleszczynski, Remo Gräub, Nathalie Kruse, Detlef Zillikens and Tobias W Fischer. Lübeck, Germany and Basel, Switzerland.
- 445 **Characterization of the human hair keratin-associated protein 2 (KRTAP2) gene family.** Hiroki Fujikawa, Atsushi Fujimoto, Muhammad Farooq, Masaaki Ito and Yutaka Shimomura. Niigata, Japan.
- 446 **Human induced pluripotent stem cell-derived keratinocyte precursors contribute to hair follicle regeneration in vivo.** Ophelia K Veraitch, Tetsuro Kobayashi, Yoichi Imaizumi, Wado Akamatsu, Masayuki Amagai, Hideyuki Okano and Manabu Ohyama. Tokyo, Japan.
- 447 **Treatment of alopecia in mice with a novel parathyroid hormone fusion protein.** Robert Gensure, Ranjitha Katikaneni, Joshua Sakon, Osamu Matsushita and Tulasi Ponnapakkam. Bronx, NY; Tokyo, Japan and Fayetteville, AR.
- 448 **Complex pigment patterning and topology of melanocyte stem cell niche in feathers.** Sung-Jan Lin, John Foley and Cheng-Ming Chuong. Los Angeles, CA; Taipei, Taiwan and Bloomington, IN.
- 449 **Dlx3 is a critical regulator on hair follicle differentiation and development.** Jin-Chul Kim, Joon Sung Hwang and Marial Morasso. Bethesda, MD and Cheongwon-gun, South Korea.
- 450* **A position effect on FGF13 underlies X-linked hypertrichosis.** Gina M DeStefano, Katherine Fantauzzo, Mazen Kurban, Lynn Petukhova, Marija Tadin-Strapps, Brynn Levy, Dorothy Warburton, Courtney Luke, Carolina Cela, Elizabeth T Cirulli, Yujun Han, David B Goldstein, Julio Salas-Alanis and Angela M Christiano. New York, NY; Durham, NC and Monterrey, Mexico.
- 451 **Human fetal skin cells as a cell source for skin reconstruction.** Kenneth Tan, Jerry Chan and Ellen B Lane. Singapore, Singapore.
- 452* **Dkk family members pattern the development of multiple types of ectodermal appendage.** Mingang Xu, Yuhang Zhang and Sarah E Millar. Philadelphia, PA.
- 453* **Wnt signaling in embryonic dermal papilla precursor cells is required for hair follicle morphogenesis.** Su-Yi Tsai, Rachel Sennett, Laura Grisanti, Roland Zemla, Sara Najam and Michael Rendl. New York, NY.
- 454 **Inhibition of Rho-associated protein kinase (ROCK) allows for indefinite expansion of cultured human sebocytes.** Melanie Dispensa, Amanda Nelson, Zhaoyuan Cong, Matthew Moll, Kathryn Gilliland and Diane Thiboutot. Hershey, PA and Baltimore, MD.
- 455 **Role of hair follicle stem cells in the modulation of hair and eyelash growth by the combination of 2 specific ingredients.** Estelle Loing, Elisabeth Lamarque and Michel Hocquaux. Québec, Canada and Ramonville St Agne, France.
- 456* **Disruption of Tsc2 in dermal mesenchymal cells of mice results in skin defects observed in tuberous sclerosis complex.** P Klover, R Thangapazham, S Li, A Devine, J Wang and T N Darling. Bethesda, MD.
- 457 **The concentration of red blood cells (RBC) is increased in the affected scalp of alopecia areata (AA) patients.** Ronda Farah, Rina Farah, Ana Carina Junquiera Burton, Marna Ericson, Cathleen Boeck, Nathan Gallus and Maria Hordinsky. Iowa City, IA and Minneapolis, MN.
- 458 **Laminin-511 modulation helps promote communication between keratinocytes and dermal papilla cells.** Catherine Gondran, Armelle Perrin, Celine Meyrignac, Sandrine Ratz, Jean Marie Botto, Valérie Lequoy, Corinne Coquet-Morel and Nouha Domloge. Sophia Antipolis, France.
- 459 **Expression of specific hair keratins in a stably transfected cell line.** Florian Labarrade, Armelle Perrin, Coralie Segalen, Catherine Gondran, Jean Marie Botto and Nouha Domloge. Sophia Antipolis, France.
- 460 **Enhancing transglutaminase isoform expression in the hair follicle for reinforcement of hair inner structure.** Celine Meyrignac, Armelle Perrin, Sandrine Ratz, Nicolas Esselin, Frédérique Portolan, Catherine Gondran, Jean Marie Botto and Nouha Domloge. Sophia Antipolis, France.
- 461* **p63 transcription factor controls the establishment of nuclear architecture and higher-order chromatin remodelling during development of the epidermis.** Michael Y Fessing, Valentina Rapisarda, Andrei N Mardaryev, Michal R Gdula, Andrei A Sharov, Iakovos Karakesisoglou, Chris J Hutchison and Vladimir A Botchkarev. Bradford, United Kingdom; Boston, MA and Durham, United Kingdom.
- 462 **Lipolytic activity of a *cecropia obtusa* extract: Effect on Adipose Triglyceride Lipase.** Julie Severine, Francoise Belaubre, Nathalie Castex-Rizzi and Sandrine Bessou-Touya. Toulouse, France.
- 463 **Global genome analysis of Lhx2 target genes in keratinocytes reveals their non-random distribution and topological associations with functionally related genes in distinct genomic loci.** Krzysztof Poterlowicz, Andrei N Mardaryev, Michael Y Fessing, Tatyana Y Sharova, Andrei A Sharov, Yonhong Peng and Vladimir A Botchkarev. Bradford, United Kingdom and Boston, MA.
- 464 **The 55kDa protein phosphatase 2A regulatory subunit B alpha protein is required for Claudin-1 plasma membrane localization and epidermal barrier.** Gehad Youssef, Aishath Naeem, Oliver Ralph, Masahiro Ono, Catherine O'Neill and Ryan O'Shaughnessy. London, United Kingdom.
- 465 **Effect of vitamin D on the expression of bioactive markers in cultured sebocytes.** Weon Ju Lee, Kyung Hea Park, Hyun Wuk Cha, Han Jin Jung, Hyun Jung Lim, Seok-Jong Lee and Do Won Kim. Daegu, South Korea.
- 466** **The role of the microRNA miR-17~92 cluster in hair follicle biology.** Thomas Andl and Liming Luan. Nashville, TN.
- 467 **A perivascular stem cell niche in the hair follicle.** Ying Xiao, Wei-Meng Woo, Atsushi Terunuma, Anthony E Oro, Jonathan C Vogel and Isaac Brownell. Bethesda, MD and Stanford, CA.
- 468 **Novel caffeine target genes identified in male and female human hair follicles.** Tobias W Fischer, Tamas Biro, Nathalie Kruse, Detlef Zillikens and Ralf Paus. Lübeck, Germany; Debrecen, Hungary and Manchester, United Kingdom.
- 469* **The polarity protein aPKCα regulates epidermal cell fate decisions.** Michaela Niessen, Jeanie Scott, Susanne Vorhagen, Panagiota Sotiropoulou, Cedric Blanpain, Michael Leitges and Carien M Niessen. Cologne, Germany; Brussels, Belgium and Oslo, Norway.
- 470 **A novel mouse model for pseudoxanthoma elasticum, KK/HIJ: Comparison with the *Abcc6^{tm1/Jk}* null mouse.** Qiaoli Li, Annerose Berndt, Haitao Guo, John P Sundberg and Jouni Uitto. Philadelphia, PA; Pittsburgh, PA and Bar Harbor, ME.
- 471 **The role of a novel immunoglobulin-like protein in hair and sebaceous development.** Carmen Perez, Angel G Leiva, Joaquin J Jimenez and Tongyu C Wikramanayake. Miami, FL.
- 472* **Forkhead transcription factor FoxA1 regulates sweat secretion through Best2 and Nkcc1 ion transporters.** Chang-Yi Cui, Victoria Childress, Yulan Piao, Marc Michel, Adiv A Johnson, Makoto Kunisada, Minoru S Ko, Klaus H Kaestner, Alan D Marmorstein and David Schlessinger. Baltimore, MD; Tucson, AZ; Kobe, Japan and Philadelphia, PA.
- 473 **Defining the role of p63 in hair follicle stem cells.** Velmurugan Balaiya, Merlin Ariefdjohan, Peter J Koch and Marankel Koster. Aurora, CO.

- 474* **Medium and long chain fatty acids elicit oxidative stress and stem cell death in human and animal models of cicatricial alopecia.** Mary C Consolo, Sreejith P Panicker and Pratima Karnik. Cleveland, OH.
- 475 **Epidermal differentiation factor 1 is a critical regulator of the epidermal switch between proliferation and differentiation.** Sunjin Lee and Scott D Weatherbee. New Haven, CT.
- 476 **Hairless is a histone demethylase involved in hair follicle cycling and epidermal homeostasis.** Liang Liu, Hyunmi Kim, Claire A Higgins and Angela M Christiano. New York, NY.
- 477 **The local immune environment regulates hair follicle cycling.** Sivan Harel, Raphael Clynes and Angela M Christiano. New York, NY.
- 478 **Hair follicle development depends on mitochondrial respiration: Insights from keratin14 promotor-targeted Tfam knockout mice.** Jennifer E Kloepper, Olivier R Baris, Daniela Weiland, Catherin Niemann, Karen Reuter, Ken Kobayashi, Silvia Vidali, Desmond J Tobin, Rudolf J Wiesner and Ralf Paus. Luebeck, Germany; Cologne, Germany; Sapporo, Japan; Bradford, United Kingdom and Manchester, United Kingdom.
- 479 **The versatility of a novel Δ Np63 knock-in mouse model system to study epidermal development and differentiation.** Rose-Anne Romano and Satrajit Sinha. Buffalo, NY.
- 480 **Effects of low-level laser treatment on hair regrowth in a rat model for chemotherapy-induced alopecia.** Tongyu C Wikramanayake, Alexandra C Villasante, Lucia M Mauro, Keyvan Nouri, Lawrence A Schachner, Carmen I Perez and Joaquin J Jimenez. Miami, FL.
- 481 **Disruption of the cholesterol biosynthesis pathway contributes to hair follicle cycling deficiency and stem cell apoptosis in a mouse model.** Sreejith P Panicker, Mary C Consolo, Kord Honda and Pratima Karnik. Cleveland, OH.
- 482* **Dermal β -catenin activity in response to epidermal Wnt ligands is required for hair follicle initiation.** Demeng Chen, Andrew Jarrell, Richard Lang and Radhika Atit. Cleveland, OH and Cincinnati, OH.
- 483 **RNA-binding Pumilio proteins are expressed in mammalian epidermis and regulate the balance between keratinocyte proliferation and apoptosis.** Sean R Christensen and Haifan Lin. New Haven, CT.
- 484* **The regulation of dermal papilla cell number to specify hair size.** Bruce A Morgan. Boston, MA.
- 485 **Neurogenic inflammation: Evidence for a causal role in lichen planopilaris.** Margarette Pierre-Louis, Isabella Doche, Marna Ericson, Sima Kavand, Rebecca Speltz-Paiz, George L Wilcox and Maria K Hordinsky. Minneapolis, MN and São Paulo, Brazil.
- 486* **Critical role of endothelin receptor signaling in follicular melanocyte stem cells in adult skin.** Makoto Takeo, Piul Rabbani and Mayumi Ito. New York, NY.
- 487 **Human scalp hair follicles express the enzymes to synthesise *de novo* prostaglandins and prostamides from phospholipids.** Karzan G Khidhir, Nilofer P Farjo, Bessam K Farjo, David F Woodward, Steven M Picksley, Jenny W Wang and Valerie A Randall. Bradford, United Kingdom; Manchester, United Kingdom and Irvine, CA.
- 488 **Tolbutamide, an ATP-sensitive potassium (K_{ATP}) channel blocker, inhibits hair growth, promotes catagen and stimulates TNF/TNFRSF1A signalling in human hair follicles in organ culture.** Heero Rahman, Nilofer Farjo, Bassam Farjo and Valerie Randall. Bradford, United Kingdom and Manchester, United Kingdom.
- 489 **DP-specific Sox2 ablation impairs hair follicle growth.** Carlos Clavel, Laura Grisanti, Roland Zemla, Amelie Rezza, Rita Barros and Michael Rendl. New York, New YorkNY and Porto, Portugal.
- 490 **Targeting the stem cell niche during embryonic hair follicle induction.** Laura Grisanti, Carlos Clavel, Amelie Rezza, Xiaoqiang Cai, Su-Yi Tsai, Chenleng Cai and Michael Rendl. New York, NY.
- 491 **Spatially mapping changes in protein secondary structure and lipid distribution in human hair with FTIR imaging microscopy.** David J Moore and Samuel Gourion-Arsiquaud. Princeton, NJ.
- 492 **Absence of adrenal cortical suppression and improvement in the severity of alopecia totalis (SALT) score in alopecia areata (AA) patients treated with intralesional (IL) triamcinolone acetonide (TMC) 10mg/cc .** Maria K Hordinsky, Joanna Quast, Cathleen Boeck, Stephanie Aamodt St. Pierre, Rina S Farah and Ronda S Farah. Minneapolis, MN.
- 493 **Inhibition of Wnt signaling initiates a stratification program in the uterus through induction of Δ Np63 α .** Daisy Dai, Masahito Yasuda, Jiang Chen, Heather L Franco, Jaewook Jeong, John P Lydon, Francesco J DeMayo and Dennis R Roop. Aurora, CO and Houston, TX.
- 494* **Plasticity and cellular memory during epidermal differentiation in response to BRAF activation and inhibition.** Suguna R Krishnaswami, Shantanu Kumar, Christopher Cowing-Zitron and Benjamin D Yu. La Jolla, CA.
- 495 **Generation of a small RNA library from normal human nails reveals nail-selective expression of genes implicated in psoriasis.** Goran Bozinovic, Gloria K Lefkowitz, Christopher Cowing-Zitron and Benjamin D Yu. La Jolla, CA.
- 496 **Amniotic fluid signals the developing epidermis to repair a barrier defect *in utero*.** Aaron J Huebner, Daisy Dai, Edward E Schmidt, Matthias Schafer, Sabine Werner and Dennis R Roop. Aurora, CO; Bozeman, MT and Zurich, Switzerland.

Human Clinical Research and Therapeutics

All orals [designated with an asterisk (*)] listed below are presented in the Human Clinical Research and Therapeutics Minisymposium on Friday, May 11, 2012 from 2:00-5:30 p.m. in Raleigh Convention Center 306 C. Orals designated by two asterisks (**) will be presented during a Plenary Session.

- 497* **Adalimumab treatment for moderate to severe psoriasis substantially improves PASI scores as analyzed by body region and individual PASI component: Sub-analysis from the CHAMPION study.** Alexander A Navarini, Yves Poulin, Yihua Gu and Henrique D Teixeira. Zurich, Switzerland; Quebec, Canada and Abbott Park, IL.
- 498** **Neutralization of IL-17A with LY2439821 compared to TNF with etanercept: effects on inflammatory gene expression underlying psoriasis pathogenesis.** James Krueger, Scott Fretzin, Mayte Suárez-Fariñas, Patrick Haslett, Krista Phipps, Gregory Cameron, Juliet McColm, Artemis Katchelian, Inna Cueto, Traci White, Subhashis Banerjee and Robert Hoffman. New York, NY and Indianapolis, IN.
- 499 **Sequential therapy with oral tacrolimus and topical tacrolimus as an effective and safe treatment for generalized atopic dermatitis: A pilot study.** Terrence Keaney, Jillian W Wong and John Koo. San Francisco, CA.
- 500 **Modulating vascular inflammation and immune immunity: A new generation of anti-redness skin care.** Caroline Baudouin, Nadege Lachmann, Johan Rocheteau, Marjorie Biassette, Stephanie Bredif, Franck Menu, Philippe Msika and Gerard Lorette. Epernon, France and Tours, France.
- 501 **Natural modulation of PAR-2 and TLR2: Application to clinical acne skin care.** Nadege Lachmann, Caroline Baudouin, Marjorie Biassette, Stephanie Bredif, Franck Menu, Bernard Chadoutaud, Philippe Msika and Bernard Cribier. Epernon, France; Toulouse, France and Strasbourg, France.
- 502 **The efficacy of acyclovir 5% / hydrocortisone 1% cream by age: Post hoc analysis.** Christopher M Hull, Rachel Gordon, Jason T Olin and Stephan K Tyring. Salt Lake City, UT; Houston, TX and Bridgewater, NJ.
- 503 **Stimulation of procollagen production by cosmeceuticals is dependent on low initial level of procollagen in photoaged human skin.** Dana Sachs, Laure Rittle, Heather Chubb, Jeffrey Orringer, Gary Fisher and John Voorhees. Ann Arbor, MI.
- 504 **The pleasurable scratching an Itch: A psychophysical and topographical assessment.** Shawn G Kwatra, Ghada A bin Saif , Alexandru D Papouli , Francis McGlone, Yiong-Huak Chan and Gil Yosipovitch. Winston-Salem, NC; Ryadh, Saudi Arabia; Liverpool, United Kingdom and Kent Ridge, Singapore.
- 505 **BRAF inhibitors suppress apoptosis through off-target inhibition of JNK signaling.** Harina Vin, Marco L Leung, Vida Chitsazzadeh, Sandra Ojeda, David W Dwyer, Kristen N Richards, Larissa R Stewart, Jonathan L Curry, Kevin Kim, Ana M Ciurea, Madeleine Duvic, Victor G Prieto, Stephen E Ullrich, Elsa R Flores and Kenneth Y Tsai. Houston, TX.

- 506 **Disease activity and quality of life in refractory cutaneous lupus erythematosus patients.** Aileen Y Chang, Elizabeth Ghazi, Joyce Okawa and Victoria P Werth. Philadelphia, PA and Piscataway, NJ.
- 507 **Healthy scalp has a reduced sensory thresholds to temperature, pain, itch and neurogenic inflammation response.** Ghada A Bin Saif, Abdulmalik Alajroush, Amy McMichael and Gil Yosipovitch. Riyadh, Saudi Arabia; Winston-Salem, NC.
- 508* **Double-blind, randomized, bilateral comparison of skin irritancy following application of the combination acne products clindamycin/tretinoin and benzoyl peroxide/adapalene.** Renato Goreshi, Aman Samrao and Benjamin D Ebst. Portland, OR and Torrance, CA.
- 509 **Phase I/II clinical trial of O⁶-benzylguanine (O⁶BG)-potentiated topical carbustine (BCNU) in the treatment of cutaneous T-cell lymphoma (CTCL).** Joselin D Tacastacas, Derek V Chan, Afshin Dowlati, Stanton L Gerson, Kord Honda, Kurt Lu, Pingfu Fu and Kevin D Cooper. Cleveland, OH.
- 510 **Autoantibody profiling alludes to a protective role for discoid lesions in human lupus.** Benjamin F Chong, Lin-chiang Tseng, Thomas Lee, Rebecca Vasquez, Quan Li, Song Zhang, David Karp, Nancy Olsen and Chandra Mohan. Dallas, TX and Hershey, PA.
- 511 **Developing a novel personalized interactive health care education system (MyPACE) for acne patients.** Audrey S Wang, Julie Wu, Negar Foolad and April W Armstrong. Sacramento, CA.
- 512 **Two photon polymerization-micromolding of microscale barbs for medical applications.** Adnan Nasir, Ryan D Boehm, B Chen, S D Gittard, B C Chichkov, Nancy Monteiro-Riveire and Roger Narayan. Chapel Hill, NC.
- 513 **The safety and efficacy of tongue piercing in people quadriplegia for use with assistive neuro-technologies.** Jaimee S Holbrook, Julia S Minocha, Diane Rowles, Beatrice Nardone, Victoria Godinez-Puig, Dennis P West, Elliot Roth, Maysam Ghovanloo and Anne E Laumann. Chicago, IL and Atlanta, GA.
- 514 **Oral plethysmography: A novel method to clinically assess tongue swelling.** Julia S Minocha, Jaimee S Holbrook, Jeonghee Kim, Erica Sutton, Joy Bruce, Dennis R West, Maysam Ghovanloo and Anne E Laumann. Chicago, IL and Atlanta, GA.
- 515 **ARG0542-01: A new cosmetic functional ingredient to improve redness and blemishes.** Eduardo Perez, Jose R Fernandez, Karl Rouzard, Michael Voronkov, Michael Christensen, Xuyan Feng, Maxwell Stock, Jeffry B Stock, Joel S Gordon and Braham Shroot. Monmouth Junction, New Jersey; Monmouth Junction, NJ and Merion, PA.
- 516 **Oral supplementation with a pine bark extract containing nutritional supplement: Molecular evidence for beneficial effects on skin elasticity and hydration.** Susanne Grether-Beck, Alessandra Marini, Thomas Jaenicke, Monika Weber, Carolina Burki, Pia Formann, Heidi Brenden, Frank Schönlau and Jean Krutmann. Duesseldorf, Germany and Cointrin/Geneva, Switzerland.
- 517 **High-sensitivity c-reactive protein response to adalimumab in hidradenitis suppurativa patients.** Christos C Zouboulis, David A Adams, Yihua Gu and Orin M Goldblum. Dessau, Germany; Hershey, PA and Abbott Park, IL.
- 518* **Imatinib mesylate for the treatment of sclerotic skin chronic graft-versus-host disease.** Kristin Baird, Susan Booher, Leora Comis, Galen Joe, Seth M Steinberg, William D Figg, Shawn D Spencer, Naoko Takebe, Steven Pavletic and Edward W Cowen. Bethesda, MD.
- 519 **Stimulation of hair growth in humans by cell-secreted proteins.** Gail K Naughton, Craig Ziering, Neil Sadick, David Perez-Meza, Mark Hubka, Danielle Ehrlich and Jonathan Mansbridge. San Diego, CA; Los Angeles, CA; New York, NY and Maitland, FL.
- 520 **Stratum Corneum hydration and barrier function in podocniosis patients.** John S Ferguson, Gail Davey, Paul Matts, Peter Mortimer, Wendermegen Enbiale and Claire Fuller. London, United Kingdom.
- 521 **Peptides involved in neurogenic inflammation induced by histamine and capsaicin-A non invasive study using Raman spectroscopy.** Rodrigo Valdes-Rodriguez, Francisco J Gonzalez, Claudio Castillo-Martinez, Benjamin Moncada, Diana Hernández-Blanco and Gil Yosipovitch. San Luis Potosi.
- 522 **Low skin thinning potential of pimecrolimus cream versus triamcinolone cream on otherwise normal forehead target area skin in adults with a history of atopic dermatitis.** H I Katz, Cathleen Boeck, Tina Lin, Ken Abrams and Jason T Olin. Minneapolis, MN; Bridgewater, NJ and East Hanover, NJ.
- 523 **Use of expert modeling to assess the best compound for transdermal development.** Virginia Schmitt, Jon Lenn, Hans Hofland, Phil Turnbull and Huybert Groenendaal. Research Triangle Park, NC and Boulder, CO.
- 524 **High probability that plasma calcipotriene concentrations are nonquantifiable in pediatric subjects.** Virginia Schmitt, Melody R Wyres, Jon Lenn, Eunhye Kang and Mary Mills. Research Triangle Park, NC.
- 525* **Treatment of pemphigus vulgaris(PV) patients with infliximab and prednisone is associated with decreased autoantibodies and an increase in immature B cells.** Russell Hall, Janet Fairley, David Woodley and Victoria Werth. Durham, NC; Iowa City, IA; Los Angeles, CA and Philadelphia, PA.
- 526 **Double-blind placebo-controlled clinical study of a nutritional supplement containing Lactobacillus rhamnosus T12 for enhancement in dermatological conditions characterized by sebum production alteration.** Giammaria Giuliani, Barbara Marzani, Anna Benedusi, Beatrice Tenconi and Adele Sparavigna. Milan, Italy and Monza, Italy.
- 527* **Effect of extracorporeal photopheresis on Th1/Th2/Th17/Treg cytokines in cutaneous T-cell lymphoma patients.** Hua Zhong, Lisa Shiue, Yasmin Mekhail, Meghali Goswami, Madeleine Duvic and Xiao Ni. Houston, TX.
- 528 **Extent of variability in doses of foam products following typical application directions.** Eunhye G Kang, Elizabeth K Hussey, Mary Mills, Melody Wyres and Virginia D Schmitt. Research Triangle Park, NC and Chapel Hill, NC.
- 529* **Barrier enhancement for eczema prevention- the BEEP feasibility study.** Eric L Simpson, Joanne R Chalmers, Jon M Hanifin, Matthew E French, Troy Lubianski, Aman Samrao, YiYi Chen, Zunqiu Chen and Hywel C Williams. Portland, OR and Nottingham, United Kingdom.
- 530 **The missing chromophores in the analysis of human skin color: Comparison of tristimulus colorimetric measurements and chromophore analysis from diffuse reflectance spectroscopy.** In Seok Seo, Paulo R Bargo, Gregory Payonk, Yang Liu and Nikiforos Kollias. Skillman, NJ.
- 531 **Gadolinium in the skin of those with nephrogenic systemic fibrosis (NSF) compared to those without NSF-A 5 cohort analysis.** Beatrice Nardone, Cassandra E Holzem, David Mai, Pedram Gerami, Keith MacRenaris, Dennis P West and Anne E Laumann. Chicago, IL.
- 532 **Safety and efficacy of AN2728 and AN2898 ointments in a phase 2a bilateral study of mild-to-moderate atopic dermatitis.** Lee T Zane, Tatiana Gogoleva, Frederic A Heerinckx and John A Jermano. Palo Alto, CA.
- 533 **Immunologic rationale and therapeutic efficacy of a novel single-dose radiation therapy approach for Merkel cell carcinoma metastatic lesions.** Jayasri Iyer, Kotaro Nagase, Olga Afanasiev, Aaron Seo, Kaushik Parvathaneni, Kelly Paulson, Upendra Parvathaneni and Paul Nghiem. Seattle, WA.
- 534* **Hematopoietic and mesenchymal cell transplantation after myeloablative and non-myeloablative conditioning for recessive dystrophic and junctional epidermolysis bullosa (RDEB, JEB).** Jakub Tolar, John A McGrath, Douglas R Keene, Kristen Hook, Mark J Osborn, Megan J Riddle, Sima Kavand, Maria Hordinsky, David Woodley, Mei Chen, Alain Hovnanian, Katsuto Tamai, Bruce R Blazier and John E Wagner. Minneapolis, MN; London, United Kingdom; Portland, OR; Los Angeles, CA; Paris, France and Osaka, Japan.
- 535 **Replumping effect on lips, and anti aging effects by specifically targeting ECM components. In vivo study.** Gilles Oberto, Yolene Guerif-Ferreira, Arlette Berghi, Karine Cucumel and Nouha Domloge. Sophia Antipolis, France.
- 536 **Dermatopontin plays an essential role in skin aging. In vivo study.** Yolene Guerif-Ferreira, Gilles Oberto, Ludivine Mur, Christelle Plaza, Arlette Berghi, Frederique Portolan, Gopinathan Menon, Karine Cucumel, Jean Marie Botto and Nouha Domloge. Sophia Antipolis, France and Wayne, NJ.

- 537 DNA telomere protection exhibits anti aging effects. *In vivo* study.** Karine Cucumel, Yolene Guerif-Ferreira, Arlette Berghi, Gilles Oberto, Sabrina Darly and Nouha Domloge. Sophia Antipolis, France.
- 538 Clinical characteristics correlates with impaired barrier in filaggrin gene related Korean atopic dermatitis patients.** Seong Jun Seo, Mi Kyung Park, Mi Sook Jeong, Ji-Yun Kim, In Su Kim and Kapsok Li. Seoul, South Korea.
- 539 Topical mousse in the treatment of acne vulgaris: A randomized double-blind placebo-controlled clinical trial.** Giammaria Giuliani, Barbara Marzani, Anna Benedusi, Adriana Bonfigli and Luigi Rigano. Milan, Italy.
- 540* Cross-sectional evaluation of biological markers of cardiovascular disease risk in children and adolescents with psoriasis.** Wynnis L Tom, Pristine W Lee and Lawrence F Eichenfield. San Diego, CA.
- 541* Punch incision with removal of cyst contents leaves a smaller scar yet has a similar rate of recurrence compared to elliptical excision of truncal epidermal inclusion cysts.** Justin T Cheeley, Laura K DeLong, Suephy C Chen, Michelle M Pennie, Seema P Kini and Shannon Setzer. Atlanta, GA.
- 542 Cw6 but not allele LCE3C_LCE3B deletion confers sensitivity to ustekinumab treatment in psoriasis.** Elisabetta Botti, Marina Talamonti, Giulia Spallone, Marco Galluzzo, Mauro Bavetta, Miriam Teoli, Valentina Pinetti and Antonio Costanzo. Rome, Italy.
- 543* Preliminary results of a Phase 2 trial evaluating efficacy and safety of vismodegib (GDC-0449) in operable basal cell carcinoma.** Kenneth G Gross, Howard Sofen, Leonard H Goldberg, Harry Sharata, Tiffani K Hamilton, Kenneth Zerivitz, Huibin Yue, Ron Firestein and Ivor Caro. San Diego, CA; Los Angeles, CA; Houston, TX; Madison, WI; Atlanta, GA and South San Francisco, CA.
- 544 Thymic stromal lymphopoietin expression in keratinocytes are suppressed by clinical treatments in atopic dermatitis.** Kazuko Ikeda, Shin Morizane, Yumi Aoyama and Keiji Iwatsuki. Okayama, Japan.
- 545* Long-term treatment with ustekinumab does not compromise the immune response to T-cell dependent or T-cell independent vaccines in patients with moderate-to-severe psoriasis: A comparison of ustekinumab-treated versus untreated psoriasis patients.** C Brodmerkel, R Langley, K Papp, M Bourcier, Y Poulin, V Ho, L Guenther, M C Hsu and P O Szapary. Spring House, PA; Halifax, Canada; Waterloo, Canada; Moncton, Canada; Quebec, Canada; Vancouver, Canada and London, Canada.
- 546* Efficacy and safety of vismodegib in advanced basal cell carcinoma.** Anne Chang, Aleksandar Sekulic, Michael R Migden, Axel Hauschild, Karl Lewis, John D Hainsworth, Simon Yoo, Luc Dirix, Jeannie Hou, Howard Mackey and Anthony E Oro. Stanford, CA; Scottsdale, AZ; Houston, TX; Kiel, Germany; Denver, CA; Nashville, TN; Evanston, IL; Antwerp, Belgium and South San Francisco, CA.
- 547* Investigator-initiated, open-label trial of ustekinumab for the treatment of moderate to severe palmoplantar psoriasis showed higher doses may be required.** Shiu-chung Au, Ari M Goldminz, Noori Kim, Nicole Dumont, Melissa Michelon, Eva Volf, Meghan Hession, Paul F Lizzul, Israel Andrews, Todd Kerensky, Andrew Wang, Shimrat Yaniv and Alice B Gottlieb. Boston, MA.
- 548 Pilot study of cardiovascular event risk biomarkers in psoriasis patients treated with ustekinumab.** S E Churton, TS McCormick, K D Cooper and N J Korman. Cleveland, OH.
- 549 Pimecrolimus cream 1% rapidly reduces the extent and severity of atopic dermatitis in infants and children, including head-and-neck involvement: post hoc analysis of a 6-month, randomized, vehicle-controlled trial.** Elaine C Siegfried and Jason T Olin. St Louis, MO and Bridgewater, NJ.
- 550 Topical retinol, a precursor to tretinoin, can deliver comparable efficacy to tretinoin in treatment of photoaging.** Anna Chien, Nancy Cheng, Jeonghyun Shin, Manisha Patel, Ginette Hinds, Julie Zang, Ho Seok Suh, Sherry Leung, Barbara Summerer, N Daya, Sharon Ghazarian and Sewon Kang. Baltimore, MD.
- 551 Visualizing the brain processing of the itch-scratch cycle by functional MRI.** Alexandru D Papoiu, Leigh Nattkemper, Robert Coghill and Gil Yosipovitch. Winston-Salem, NC.
- 552 Denosumab is associated with dermatologic toxicity in the FDA-AERS database.** Victoria Godinez-Puig, Beatrice Nardone, Dennis P West, Xian Shen, Dennis W Raisch, Jaimee S Holbrook, Steve Belknap, Nazila Barahmani and Beatrice J Edwards. Chicago, IL and Albuquerque, NM.
- 553 The comorbidities associated with serum vitamin D deficiency in veteran psoriasis and effect of antioxidant therapy.** Chen N Young, Benjamin Workman, Sara Herman, Suzanne Smith, Christofer Hatzis and L B Savoy. Detroit, MI.
- 554 Local burn injury modulates global cutaneous barrier function.** Jennifer K Plichta, Ryan P Plichta, Richard L Gamelli and Katherine A Radek. Maywood, IL.
- 555 Immunohistochemical study on axillary hyperpigmentation and its response to topical treatment with 4% niacinamide vs 0.05% desonide.** Gabyela N Larraga-P, Bertha Torres-Alvarez, Rodrigo Valdes-Rodriguez and Juan P Castanedo-Cazares. San Luis Potosi, Mexico.
- 556 Use of brentuximab vedotin for recalcitrant CD30+ cutaneous T cell lymphoma.** Esther E Freeman, Marianne Tawa, Andrew A Dorosario, Thomas S Kupper and David C Fisher. Boston, MA.
- 557 Control of blood glucose level in type 2 diabetes mellitus patients affects stratum corneum hydration, which is remarkably improved by a novel moisturizer containing physiologic lipid granules.** Na Young Yoon, Dong Hye Kim, Noo Ri Lee, Sang Yeon Park, Choon Hee Chung, Young Goo Shin, Mi Young Lee, Yeon Su Jeong, Chang Geun Yi and Eung Ho Choi. Wonju, South Korea and Yongin, South Korea.
- 558 Photosensitivity phenotypes in CLE.** Kristen Foering, Aileen Chang, Evan Piette and Victoria Werth. Philadelphia, PA.
- 559 Application of novel imaging tools and analysis methods to quantify and compare efficacy of various semi-invasive cosmetic treatments.** Di Qu, Sarah Whitehead, Lianne Straathof, Robin Fleser, Gopa Majmudar, G P Seehra and Gary Fisher. Ada, MI and Ann Arbor, MI.
- 560 Exploratory study of brentuximab vedotin (SGN-35), a novel monoclonal antibody-drug-conjugate against CD30, in mycosis fungoides (MF) and Sézary syndrome (SS) demonstrates clinical responses regardless of CD30 expression levels.** Sameer Bashey, Michael Krathon, Katherine Sutherland, Uma Sundram, Bharathi Lingala, Steven Horwitz, Richard Hoppe, Melissa Pulitzer, Ranjana Advani and Youn Kim. Stanford, CA and New York, NY.
- 561* Graft-versus-lymphoma effect after non-myeloablative allogeneic transplant induces molecular remission assessed by high-throughput sequencing of T cell receptor in patients with advanced stage mycosis fungoides (MF) and Sézary syndrome (SS).** Wen-Kai K Weng, Randall Armstrong, Sally Arai, Katherine Sutherland, Richard T Hoppe and Youn H Kim. Stanford, CA.
- 562 Long term outcomes of 1244 patients with mycosis fungoides and Sézary syndrome from 1982 to 2009.** Rakhshanda Talpur, Lotika Singh, Seema Daulat, Ping Liu, Sarah Seyfer, Tanya Trynosky, Wei Wei and Madeleine Duvic. Houston, TX.
- 563* Merkel cell carcinoma therapy with viral oncoprotein-specific T cells in combination with immunostimulatory adjuvants.** Olga Afanasiev, Aude Chapuis, Jayasri Iyer, Kotaro Nagase, Kelly Paulson, Aaron Seo, Ivy Lai, Ilana Roberts, Erik Farrar, Chris McClurkan, Josh Marshak, Lichun Dong, Joo Ha Hwang, David Koelle, Cassian Yee and Paul Nghiem. Seattle, WA.
- 564 Withdrawn.**
- 565 Development of an automatic lesion counting program with digital image processing: An objective and reproducible method for the evaluation of acne severity.** Dae Hun Suh, Seong Uk Min, Hyoun-joong Kong, Chiyul Yoon and Hee Chan Kim. Seoul, South Korea.
- 566 Aquabeautine XL, a novel, marine-derived, self-limiting enzyme providing effective, gentle exfoliation and clinically demonstrated anti-aging benefits.** Michael Anthonavage, Sarah Jindal, Arvid Lindberg and Fanny Coste. Somerset, NJ and Bergen, Norway.
- 567 Breast implant associated ALCL — a unique entity in the spectrum of CD30+ LPD.** Sara Story and Larisa J Geskin. Pittsburgh, PA.

Immunology I: Adaptive Immunity

All orals [designated with an asterisk (*)] listed below are presented in the Immunology 1: Adaptive Immunity Minisymposium on Saturday, May 12, 2012 from 12:30-4:00 p.m. in Raleigh Convention Center 305 A. Orals designated by two asterisks (**) will be presented during a Plenary Session.

- 568 **IL-22, but not IL-17, dominant environment in cutaneous T-cell lymphoma.** Tomomitsu Miyagaki, Makoto Sugaya, Hiraku Suga, Masahiro Kamata, Hanako Ohmatsu, Hideki Fujita, Yoshihide Asano, Yayoi Tada, Takafumi Kadono and Shinichi Sato. Tokyo, Japan.
- 569 **Cancer exome analysis reveals a T cell dependent mechanism of cancer immunoediting.** Matthew D Vesely, Hirokazu Matsushita, Daniel C Koboldt, Charles G Rickert, Elaine R Mardis and Robert D Schreiber. Saint Louis, MO.
- 570 **Primary cutaneous B cell lymphomas: A review of clinicopathological presentation, characterization of prognostic markers, treatment, and outcome.** Francisca Kartono, Henry K Wong and Pierluigi Porcu. Columbus, OH.
- 571 **Enhanced NGFR signal in melanoma cells suppresses the tumor recognition by melanoma specific T cells.** Takashi Inozume, Junpei Furuta, Ken-ichi Hanada and Shinji Shimada. Yamanashi, Japan and Bethesda, MD.
- 572 **IRF8 controls activation-induced cell death on CD8 T cells by regulating Bcl2.** Fumi Miyagawa, Yutaka Tagaya, Keiko Ozato and Stephen Katz. Bethesda, MD.
- 573 **Noncalcemic natural vitamin D analog, 20(OH)D3, enhances immunosuppressive properties of an altered peptide ligand.** Linda K Myers, Arnold E Postlethwaite, Wei Li, Duane D Miller, Robert C Tuckey and Andrzej Slominski. Memphis, TN and Crawley, Australia.
- 574 **Proteomic analysis of psoriatic skin tissue for identification of differentially expressed proteins: Up-regulation of GSTP1, SFN, and PRDX2 in psoriatic skins.** Jae Cho, Jun Kweon and Kyu Lee. Daegu, South Korea.
- 575* **Modulation of lymph node cell cytokine production by intradermal administration of calcitonin gene-related peptide (CGRP).** Wanhong Ding, Michela Manni, Jason Lee, John A Wagner and Richard D Granstein. New York, NY.
- 576 **Exposure of Langerhans cells to calcitonin gene-related peptide (CGRP) biases antigen presentation away from an interleukin (IL)-9 response.** Wanhong Ding, Lori L Stohl, Michela Manni, John A Wagner and Richard D Granstein. New York, NY.
- 577 **bEnd.3 endothelial cells (ECs) pre-exposed to calcitonin gene-related peptide (CGRP) bias Langerhans cell (LC) antigen presentation to T cells toward an IL-17A response.** Richard D Granstein, Lori L Stohl, Michela Manni, John A Wagner and Wanhong Ding. New York, NY.
- 578* **EpCAM (CD326) enables epidermal Langerhans cell motility and migration.** Maria R Gaiser, Tim Lämmermann, Xu Feng, Botond Z Iggyarto, Daniel H Kaplan, Lino Tessarollo, Ronald N Germain and Mark C Udey. Bethesda, MD; Heidelberg, Germany; Minneapolis, MN and Frederick, MD.
- 579 **Physiologic induction of monocyte-to-dendritic cell maturation: Delivery of required second signal via internalization of biodegradable PLGA nanoparticles.** S Saluja, D Hanlon, D Khalil, F Sharp, T Fadel, E Robinson, T Fahmy, R Tigelaar and R Edelson. New Haven, CT.
- 580 **Identification of genes to reliably differentiate mycosis fungoides from psoriasis.** Derek V Chan, Timothy S Hake, Francisca Kartono, Pierluigi Porcu and Henry K Wong. Columbus, OH.
- 581* **Botulinum neurotoxin A decreases infiltrating cutaneous lymphocytes and improves acanthosis in psoriasisform KC-Tie2 mice.** Nicole L Ward, Kevin D Kavlick, Doina Diaconu, Kellie A Michaels, Sean M Dawes and Erin Gilbert. Cleveland, OH and Brooklyn, NY.
- 582 **IL-17C and TNF α synergize to produce a psoriasis-like gene signature in human keratinocytes and an inflammatory skin phenotype in K5-IL-17C transgenic mice.** Andrew Johnston, Sean M Dawes, Doina Diaconu, Wen Fu, MaryBeth Riblett, James T Elder, Johann E Gudjonsson, Thomas S McCormick and Nicole L Ward. Cleveland, OH and Ann Arbor, MI.
- 583 **CCR6 is required for epidermal trafficking of (and IL22 production by) $\gamma\delta$ -low T cells in an IL23-induced model of psoriasisform dermatitis.** Tomotaka Mabuchi, Tej Singh, Tomonori Takekoshi, Joshua Farber and Sam Hwang. Milwaukee, WI and Bethesda, MD.
- 584 **Circulating central memory T cells are increased and have different cytokine production properties in patients with psoriasis.** Mai Hayashi, Takuya Furuhashi, Emi Nishida, Chiyo Saito, Kan Torii and Akimichi Morita. Nagoya, Japan.
- 585 **Dendritic cell trafficking in skin is regulated by hair follicles via chemokine production.** Keisuke Nagao, Tetsuro Kobayashi, Kazuyoshi Moro, Kenji Kabashima, Manabu Ohyama, Young-hun Cho, Björn E Clausen, Mark C Udey and Masayuki Amagai. Tokyo, Japan; Kyoto, Japan; Rotterdam, Netherlands and Bethesda, MD.
- 586 **Therapeutic effect of protein transduction domain-conjugated methotrexate in imiquimod-induced psoriasisform dermatitis model.** Dashlkhumble Byamba, Do-Young Kim, Wen Hao Wu, Tae-Gyun Kim, Hyunjoong Jee, Sang-Kyou Lee and Min-Geol Lee. Seoul, South Korea.
- 587 **Phenotypic analysis of dendritic cell polarization in the skin-draining lymph nodes of cutaneous T-cell lymphoma.** Toshihisa Hamada, Kotaro Tada, Kenji Asagoe, Hiroshi Umemura, Masaki Otsuka, Osamu Yamasaki, Yumi Aoyama, Kazuyasu Fujii and Keiji Iwatsuki. Okayama, Japan.
- 588 **Induction of IL-21-producing CD4+ T cells by human resident cutaneous dendritic cells.** Hideki Fujita, John A Carucci and James G Krueger. New York, NY.
- 589* **Th9 lymphocytes contribute to human allergic contact dermatitis.** Julia Liu, Antonella Tammaro, Nick Girardi, Ayako Nakazono, Rita Fishelevich and Anthony A Gaspari. Baltimore, MD; Rome, Italy; Philadelphia, PA and Fukuoka, Japan.
- 590 **Selective interaction between DC and Treg relies on the chemotactic activity of adenosine.** Sabine Ring, Alexander Enk and Karsten Mahnke. Heidelberg, Germany.
- 591 **Alcohol consumption inhibits Th1-skewed CHS responses independent of hapten strength.** Rhonda Brand, J Mark Stottlemeyer and Louis D Falo, Jr. Pittsburgh, PA.
- 592 **Broad spectrum anti-inflammation activity of a novel benzoxaborole compound, AN4161.** Chen Dong, Holly Sexton, Chiao-Wen Chen, Xiaoqin Fan, Charlotte Virtucio, Jacob Plattner, Wei Bu, Anne Wu, Liang Liu, Kurt Jarnagin and Yvonne Freund. Palo Alto, CA.
- 593 **Galectin-1 can bind human melanoma-specific CD8+ T cells and trigger immunosuppression.** Jenna E Geddes, Filiberto Cedeno-Laurent, Marcus O Butler and Charles J Dimitroff. Boston, MA.
- 594 **Flt3L expands skin and skin draining LN resident DC and improves subcutaneous protein immunization to HIV gag with microbial mimics.** Niroshana Anandasabapathy, Rachel Feder, Maria P Longhi, Saurabh Mehandru, Cheolho Cheong, Darren Ruane, Luke Brane, Angela Teixeira and Ralph M Steinman. New York, NY.
- 595 **Conversion of monocytes to dendritic cells by platelet signaling.** David Khalil, Eve Robinson, Sandeep Saluja, Jeffrey Futterlein, Douglas Hanlon, Robert Tigelaar and Richard Edelson. New Haven, CT.
- 596* **Clarification of the roles of cutaneous dendritic cell subsets in the elicitation phase of contact hypersensitivity response.** Yohei Natsuaki, Gyohei Egawa, Satoshi Nakamizo, Hideaki Tanizaki, Takashi Hashimoto, Yoshiki Miyachi and Kenji Kabashima. Kyoto, Japan and Kurume, Japan.
- 597 **Macrophages bias Langerhans cell antigen presentation to CD4+ T cells toward an IL-17A response.** Jason Lee, Michela Manni, Wanhong Ding and Richard D Granstein. New York, NY.
- 598 **Th2 cytokines from malignant T cells suppress benign Th1 responses in patients with L-CTCL.** Emmanuela Guenova, Rei Watanabe, Christoph Schlapbach, Jennifer Desimone, Andrew Dorosario, Natalie Adams, David C Fisher, Marianne Tawa, Thomas S Kupper and Rachael A Clark. Boston, MA.
- 599 **Cigarette smoke exposure inhibits murine contact hypersensitivity reactions via the generation of Platelet-activating factor agonists.** Ravi Sahu, Matthew J Turner, Raymond L Konger and Jeffrey B Travers. Indianapolis, IN.

- 600* **Galectin-3 modulates Th17 responses by regulating dendritic cell cytokine expression.** Agnes Fermin, Daniel K Hsu, Huan-Yuan Chen, Shang-Yang Wu, Jhang-Sian Yu, Lei Wan, Betty Wu-Hsieh and Fu-Tong Liu. Sacramento, CA; Taipei, Taiwan and Taichung, Taiwan.
- 601 **Effects of simultaneous exposure to formaldehyde and house dust mite on atopic dermatitis *in vivo*.** Ji-Yun Kim, Mi Sook Jeong, Mi-Kyung Lee and Seong Jun Seo. Seoul, South Korea.
- 602 **Roles of thermosensitive transient receptor potential vanilloid (TRPV) ion channels in heat shock induced cellular functions of human dendritic cells.** Attila G Szöllösi, Attila Oláh, Balázs Tóth, Ferenc Papp, Gabriella Czifra, György Panyi and Tamás Bíró. Debrecen, Hungary.
- 603 **The molecular signature of cutaneous graft-versus-host disease: IL-22 and Th2 cytokines predominate in the acute disease stage.** Charlotte M Brueggen, Irene Klein, Hildegard T Greinix, Wolfgang Bauer, Zoya Kuzmina, Werner Rabitsch, Robert Knobler, Georg Stingl and Georg Stary. Vienna, Austria.
- 604 **Induction of human epidermotropic T-cell lymphoma in immunodeficient transgenic mice after injection of CD34+ stem cells.** Chelsea A Peterson, Chao Sun, Paul Rennert, Gerry Majeau, Aimee Landry and Robert W Dunstan. Cambridge, MA and East Lansing, MI.
- 605* **CD4⁺ T cells regulate skin resident memory CD8⁺ T cells (T_{RM}).** Xiaodong Jiang, Rachael A Clark, Luzheng Liu, Julien Seneschal, Rahul Purar, Tian Tian, Robert C Fuhlbrigge and Thomas S Kupper. Boston, MA and Bordeaux, France.
- 606 **Generation of tumor-specific CD4⁺ T helper lymphocytes for immunotherapy against malignant melanoma.** Cristina N Boss, Simone Kayser, Tobias Feuchtinger and Martin Röcken. Tübingen, Germany.
- 607 **Phenotypic characterization of "signature T subsets" in the peripheral blood of psoriatic patients.** Jiang Zhou, Frieder Koszik, Patrik Brunner and Georg Stingl. Vienna, Austria.
- 608 **CD4⁺ T cell tolerance to melanocyte differentiation antigen TRP1.** Matthew P Rausch and Karen T Hastings. Phoenix, AZ and Tucson, AZ.
- 609** **Overexpression of TGF β 1 in murine epidermis alters skin dendritic cell homeostasis and enhances adaptive immunity.** Javed Mohammed, Andrew Gunderson, Lina Khong, Richard Koubek, Mark Udey and Adam Glick. University Park, PA and Bethesda, MD.
- 610 **Targeting of JAK3 prevents onset of murine alopecia areata.** Ali Jabbari, Zhenpeng Dai, Luzhou Xing, Annemieke de Jong, Angela M Christiano and Raphael Clynes. New York, NY.
- 611* **Migratory properties of skin-resident $\gamma\delta$ T cell populations.** Xiaodong Jiang, Min Jae Yoo and Thomas S Kupper. Boston, MA.
- 612 **Combined vaccine + axitinib therapy yields superior anti-tumor efficacy in a murine melanoma model.** Devin B Lowe, Anamika Bose and Walter J Storkus. Pittsburgh, PA.
- 613 **S100A8/A9 inhibition by genetic depletion or antibody inhibition results in opposite effects on psoriasisiform skin disease in a murine model.** Sean M Dawes, Doina Diaconu, Julie A Wolfram, Philippe A Tessier, Thomas S McCormick and Nicole L Ward. Cleveland, OH and Quebec, Canada.
- 614* **Tissue specific homing and antigen specificity: The majority of human peripheral blood Th9 cells are tropic for the skin.** Christoph Schlapbach, Emmanuela Guenova, Ahmed Gehad, Rei Watanabe, Jessica Teague, Thomas S Kupper and Rachael A Clark. Boston, MA.
- 615 **Stage I primary cutaneous SCCs from solid organ transplant recipients show increased IL-22 producing CD8⁺ T-cells.** Shali Zhang, Hideki Fujita, Julia S Pettersen, Mark J Bluth, Hiroshi Mitsui, James G Krueger, Diane Felsen and John A Carucci. New York, NY.
- 616* **Resident memory T cells are much more effective than central memory T cells in protection against viral skin infection.** Xiaodong Jiang, Rachael A Clark, Luzheng Liu, Amy J Wagers, Robert C Fuhlbrigge and Thomas S Kupper. Boston, MA.
- 617* **Global T_{RM} mediated immune protection in skin after single or multiple skin infections.** Xiaodong Jiang, Luzheng Liu, Rachael A Clark and Thomas S Kupper. Boston, MA.
- 618 **Interleukin 9 exerts its tumor inhibitory effects via mast cell activation.** Rahul Purwar, C Schlapbach, S Xiao, H S Kang, A M Jetten, R Fuhlbrigge, V Kuchroo, R A Clark and T S Kupper. Boston, MA.
- 619 ***In situ* activation of human skin resident T regulatory cells by autologous langerhans cells.** Julien Seneschal, Rachael A Clark and Thomas S Kupper. Boston, MA.
- 620 **Dissolvable microneedle arrays enable delivery of live adenovectors to the skin for cutaneous transduction and genetic immunization.** Geza Erdos, Cara Donahue, Jiying Zhang, Andrea Gambotto, Burak O Ozdoganlar and Louis D Falo. Pittsburgh, PA.
- 621 **Flt3L-dependent Langerin(-) CD11b(-) DC are efficient skin-resident antigen presenting cells.** Joseph S Dobrin, Rachel Feder, Cheolho Cheong, Angela Teixeira, Ralph M Steinman and Niroshana Anandasabapathy. New York, NY.
- 622 **Poly(dG) particulate vaccines target and activate skin antigen presenting cells to induce potent immunity *in vivo*.** Hélène Toussaint, Jo Erika T Narciso, Geza Erdos, Adriana T Larregina, Cara Donahue and Louis D Falo. Pittsburgh, PA.
- 623 **Identification of soluble immunophilin FKBP52 as a potent macrophage (M ϕ) activating factor.** Michelle Pedler, Christopher C Striebich, Elan Z Eisenmesser, Lyle M Moldawer, Mayumi Fujita, David A Norris and Carl K Edwards. Denver, CO and Gainesville, FL.
- 624 **Clues for Epstein-Barr virus reactivation with the subsequent outbreak of immune responses in skin lesions of hypersensitivity to mosquito bites.** Keiji Iwatsuki, Takenobu Yamamoto, Yoji Hirai, Tomoko Miyake, Kazuhide Tsuji, Daisuke Suzuki, Toshihisa Hamada and Shin Morizane. Okayama, Japan.
- 625 **Reduced myeloid-derived suppressor cell function is associated with interferon therapy of cutaneous T-cell lymphoma.** Michael K Schowalter, Oleg E Akilov, Louis D Falo and Larisa J Geskin. Pittsburgh, PA.
- 626* **Treatment with Ruxolitinib, an orally bioavailable JAK1/2 inhibitor, prevents the onset of alopecia areata in C3H/HeJ mice.** Zhenpeng Dai, Luzhou Xing, Ali Jabbari, Annemieke de Jong, Angela M Christiano and Raphael Clynes. New York, NY.
- 627* **Lipids from human epidermis can function as antigens for CD1a-restricted T cells.** Annemieke de Jong, Tan-Yun Cheng, Shouxiang Huang, Anne G Kasmar, Victor Pena-Cruz, John Altman and D Branch Moody. New York, NY; Boston, MA and Atlanta, GA.
- 628* **microRNAs regulate epidermal Langerhans cell cross-presentation.** Qing-Sheng Mi, Ying-Ping Xu, Rui-Qun Qi and Li Zhou. Detroit, MI.
- 629 **The discovery of the importance of skin resident memory T cells (TRM) in contact hypersensitivity suggests that current molecular/mouse models may not be informative of human disease.** Olivier F Gaide and Tom S Kupper. Boston, MA.
- 630 **Assessment of the number of T cells responding to a given hapten using deep TCR sequencing.** Olivier F Gaide, Virginie Philippe and Thomas S Kupper. Boston, MA and Geneva, Switzerland.
- 631* **Effective immunoprevention against chemical carcinogenesis is induced by genetic immunization vectors that selectively expand mutant H-ras-specific CD8 T cells.** Tahseen Nasti, Kyle Rudemiller, George Twitty, Hee Kyung Kim, Yuko Tsuruta, Mohammad Athar, Craig Elmets and Laura Timares. Birmingham, AL.
- 632 **Subcutaneous protein antigen immunization with epicutaneous Toll-like receptor 9 agonist induces protective immune responses against influenza A viral infection.** Wing-Ki Cheng, Adam Plumb, Ninan Abraham and Jan P Dutz. Vancouver, Canada.
- 633 **IL-17A is involved in *P. acnes*-induced inflammation.** George W Agak, Min Qin, Jennifer Nobe, Myung-Hwa Kim and Jenny Kim. Los Angeles, CA and Cheonan, South Korea.

Immunology II: Innate Immunity and Microbiology

All orals [designated with an asterisk (*)] listed below are presented in the Immunology 2: Innate Immunity and Microbiology Minisymposium on Friday, May 11, 2012 from 2:00-5:30 p.m. in Raleigh Convention Center 305 B. Orals designated by two asterisks (**) will be presented during a Plenary Session.

- 634 The antibacterial properties of acid anhydride copolymer microneedles.** Ryan D Boehm, Philip R Miller, Ritika Singh, Akash Shah, Shane Stafslien, Justin Daniels and Roger J Narayan. Raleigh, NC; Cary, NC and Fargo, ND.
- 635 Autophagy is an innate immune system of epidermal keratinocytes.** Hidenori Okazaki, Xiuju Dai, Yasushi Hanakawa, Yuji Shirakata, Mikiko Tohyama and Koji Sayama. Toon, Japan.
- 636 Effects of common skin microbial species on epidermal differentiation and proliferation.** Patrick Duckney, Heng Kuan Wong, José Serrano, Diaraf Yaradou, Thierry Oddos and Georgios N Stamatas. Issy-les-Moulineaux, France and Durham, United Kingdom.
- 637* Epidermal Toll-like receptor 2 (TLR2) enhances skin barrier recovery and its expression is decreased in atopic dermatitis.** I-Hsin Kuo, Anna De Benedetto, Takeshi Yoshida, Donald Y Leung and Lisa A Beck. Rochester, NY and Denver, CO.
- 638** Epigenetic regulation of cathelicidin expression by PTH/PTHrP controls skin infection.** Beda Muehleisen, George Sen, Douglas W Burton, Leonard J Deftos and Richard L Gallo. San Diego, CA.
- 639* Epidermal dendritic cell function is controlled by the hyaluronan microenvironment.** Jun Muto, Aaron F Carlin, Margaret Kim, Andrea Garcia, Ajit Varki and Richard L Gallo. San Diego, CA.
- 640* Langerhans cells and dendritic cells require AhR for constitutive expression of the immunosuppressive enzyme IDO.** Stephanie Kadow, Bettina Jux, Rebecca Scholz, Heike Weighardt and Charlotte Esser. Duesseldorf, Germany and Bonn, Germany.
- 641 Arsenic mobilizes Langerhans cell migration and induces Th1 response in epicutaneous protein sensitization via CCL21: A plausible cause of decreased Langerhans cells in arsenic-induced intraepithelial carcinoma.** Chih-Hung Lee, Chien-Hui Hong, Chia-Li Yu, Li-Fang Wang, Bjorn E Clausen, Wei-Ting Liao, Shau-Ku Huang, Gwo-Shin Chen and Hsin-Su Yu. Kaohsiung, Taiwan; Taipei, Taiwan and Rotterdam, Netherlands.
- 642* Skin commensal bacteria acts as antimicrobial shield: Identification of firmocidin, a novel small-molecule antibiotic produced by *Staphylococcus epidermidis*.** Teruaki Nakatsuji, Sang-Jip Nam, William Fenical and Richard L Gallo. San Diego, CA.
- 643 Cathelicidin antimicrobial peptide induces IL-36s in keratinocytes; Possible mechanism of IL-36s induction in psoriasis skin.** Na Li, Kenshi Yamasaki, Ryoko Shimada, Rumiko Saito and Setsuya Aliba. Sendai, Japan.
- 644 Effect of N-acetyl-S-farnesyl-L-cysteine (AFC) on ATP γ S- and TNF α -induced CCL2, CXCL1 and CXCL8 mRNA levels and stability by a human dermal microvascular endothelial cell line (HMEC-1).** Lori L Stohl, Jason Lee, WanHong Ding, Joel S Gordon, Eduardo Perez, Max Stock and Richard D Granstein. New York, NY and Monmouth, NJ.
- 645 Superoxide dismutase 3 suppresses Hyaluronic acid fragments mediated skin inflammation by inhibition of Toll like receptor 4 signaling pathway: Superoxide dismutase 3 inhibits ROS induced trafficking of Toll like receptor 4 to lipid rafts.** Myung-Ja Kwon, Ji Hye Han, Byung Hak Kim, Yun Sang Lee and Tae-Yoon Kim. Seoul, South Korea.
- 646* Analysis of bacterial communities in hidradenitis suppurativa lesions.** Natalia Vlassova, Omolara Olowoyeye and Ginette Hinds. Baltimore, MD.
- 647* Deficiency in mouse beta-defensin 14 leads to a delay in skin permeability barrier repair.** Nina Graumann, Claudia Neumann, Harder Jürgen, Catherine Walker, Werner Müller and Ehrhardt Proksch. Kiel, Germany and Manchester, United Kingdom.
- 648* Neutrophil-derived IL-1 β is required for abscess formation in immunity against *Staphylococcus aureus*.** John Cho, Yi Guo, Frank Hebron, Romel Ramos, Seema Plasier, Hironori Matsushima, Yoichiro Iwakura, Akira Takashima, Delphine Lee, Scott Simon and Lloyd Miller. Los Angeles, CA; Santa Monica, CA; Toledo, OH; Tokyo, Japan and Davis, CA.
- 649 IL-17+ neutrophil extracellular traps form characteristic structures in pyoderma gangrenosum and Sweet's syndrome.** Ritika Khandpur, Lin M Andrew, Steve H Olsen, Rajiv M Patel, Mariana J Kaplan and Allen T Bruce. Ann Arbor, MI.
- 650 Lipoteichoic acid induces mast cells recruitment in the skin by up-regulation of Kit Ligand.** Zhenping Wang and Anna Di Nardo. La Jolla, CA.
- 651* Interleukin-36 γ is released through pyroptosis by polyinosinic-polycytidylic acid activated keratinocytes.** Katelynn A Milora, Li-Hua Lian, Katherine K Manupipatpong and Liselotte E Jensen. Philadelphia, PA.
- 652 Stimulation of cathelicidin antimicrobial peptide production by ER stress-induced sphingosine-1-phosphate signaling.** Kyungho Park, Peter M Elias, Andrew W Borkowski, Richard L Gallo, Yong-Moon Lee, Walter M Holleran and Yoshikazu Uchida. San Francisco, CA; San Diego, CA and Cheongju, South Korea.
- 653 Induction of hyper-inflammation in *Mycobacterium tuberculosis*-infected macrophages enhances phagolysosome formation.** Julie Rosenjack, Bryan W Doreian, Kerstin A Wolff, Liam Nguyen and KurtQ Lu. Cleveland, OH.
- 654 A novel Benzoxaborole, AN3485, inhibits Toll-like receptor-mediated inflammation in *in vitro* and *in vivo* inflammatory models.** Chen Dong, Holly Sexton, Charlotte Virtucio, Tsutomu Akama, Shamra Martin, Yvonne Freund and Kurt Jarnagin. Palo Alto, CA.
- 655 *Staphylococcus aureus* colonization in acute and chronic skin lesions of patients with atopic dermatitis.** Hae-Young Park, Cho-Rok Kim, Mi-Young Jung, Ji-Hye Park, Dong-Youn Lee and Jun-Mo Yang. Seoul, South Korea.
- 656* Intracellular dsRNA activates inflammasome in the keratinocytes resulting in the release of IL-1 β and IL-18.** Xiuju Dai, Yuji Shirakata, Mikiko Tohyama, Yasushi Hanakawa, Hidenori Okazaki and Koji Sayama. Toon, Japan.
- 657 Widespread chronic skin ulcers in epidermolysis bullosa patients trigger Castleman's disease-like condition through Toll-like receptors.** Shin Morizane, Tetsuya Takiguchi, Kazuko Ikeda, Daisuke Suzuki, Yoji Hirai, Yumi Aoyama and Keiji Iwatsuki. Okayama, Japan.
- 658 Optimization of the murine secondarily infected traumatic lesion model, and application for the discovery and evaluation of topical antibiotics and novel formulations.** John L Pace, Harold Thibodeaux, Steve Frey, Stacy Adams, Dawn Danielson-Borrero, Leandro Santos, Jon Lenn and Hans Hofland. Research Triangle Park, NC.
- 659 CpG-oligonucleotides modulate sphingosine-1-phosphate metabolism in normal human keratinocytes.** Maja Natek, Anja Lüth, Burkhard Kleuser, Monika Schäfer-Korting and Günther Weindl. Berlin, Germany and Nuthetal, Germany.
- 660* Distinct immune responses induced by lipoteichoic acid from *S. aureus* or *S. epidermidis* despite common pattern recognition pathways.** Thomas Volz, Susanne Kaesler, Christian Draing, Friedrich Götz, Thomas Hartung, Martin Röcken and Tilo Biedermann. Tübingen, Germany; Konstanz, Germany and Baltimore, MD.
- 661 Vitamin D suppresses Th17-induced proinflammatory alarmins psoriasin (S100A7) and koebnerisin (S100A15) in psoriasis.** Zuzana Hegyi, Stephanie Zwicker, Daniela Bureik, Mark Peric, Sarah Koglin, Aleksandra Batycka-Baran, Jörg Prinz, Thomas Ruzicka, Jürgen Schauben and Ronald Wolf. Munich, Germany.
- 662* Interleukin-33 mediates antibacterial defense against skin infections.** Changwei Li, Ziwei Jiang, Zhiheng Li and Yuping Lai. Shanghai, China.
- 663 Mast cells secrete hemokinin-1 that signals via neurokinin-1 receptor to increase their proinflammatory function.** Tina L Sumpter, Chin H Ho, Olga A Tkacheva and Adriana T Larregina. Pittsburgh, PA.
- 664* Cutaneous TLR2-6 ligands limit T cell mediated skin inflammation by IL-6 dependent induction of myeloid derived suppressor cells.** Yuliya Skabytska, Ko-Ming Chen, Susanne Kaesler and Tilo Biedermann. Tübingen, Germany.
- 665* Temporal shifts in the skin microbiome associated with atopic dermatitis disease flares and treatment.** Heidi H Kong, Julia Oh, Sean Conlan, Clay Deming, Elizabeth A Grice, Maria L Turner and Julia A Segre. Bethesda, MD.
- 666 3D modeling of dermal macrophages-containing dermis equivalent.** Nicolas Bechettoile, Pierre Séroul, Aurélie Boher, Solène Charpy, Matthieu Jomier and Valérie André-Frei. Lyon, France.
- 667* The role of NOD-like receptor (NLR) signaling pathways in *P. acnes*' induction of innate immune response.** Min Qin, Aslan Pirouz, George Agak and Jenny Kim. Los Angeles, CA.

- 668* **Dysregulation of the NKG2D axis in human and mouse AA.** Zhenpeng Dai, Lisa Rothman, Raphael Clynes, Angela M Christiano and Matthew S Hayden. New York, NY.
- 669 **Atypical mycobacterium in an HIV positive man: A rare case of mycobacterium gordoneae infection.** Esther F Freeman, Taraneh Farsani, William Tsiaras, Christine G Lian, Travis Hollmann, Manisha Thakuria and Joseph F Merola. Boston, MA.
- 670 **Keratinocyte derived S100 proteins A8 and A9 alter monocyte differentiation and psoriasis inflammatory signals.** Andrew Y Young, Thomas S McCormick, Myriam Rodriguez and Kevin D Cooper. Cleveland, OH.
- 671 **Nanoparticles increase the probability of leishmaniasis and staphylococcal infection.** Yury Yakubchyk, Chien-Hsiu Lin, Stephen Walker, Brian Lei, Alexander Lee, Adil Allahverdyev, Marcia Simon and Miriam H Rafailovich. Stony Brook, NY; LaGrangeville, NY; Hauppauge, NY and Istanbul, Turkey.
- Photobiology**
All orals [designated with an asterisk (*)] listed below are presented in the Photobiology Minisymposium on Thursday, May 10, 2012 from 2:00-5:30 p.m. in Raleigh Convention Center 305 B. Orals designated by two asterisks (**) will be presented during a Plenary Session.
- 672 **Histological characterization of human photoaged skin by degree of alteration of elastic and collagenic fibers and localization of decorin.** Keigo Kawabata, Masaki Kobayashi, Ayumi Kusaka-Kikushima, Emiko Akasaka, Tomoki Mabuchi, Tsuyoshi Fukui, Yoshinori Sugiyama, Susumu Takekoshi, Muneo Miyasaka, Akira Ozawa and Shingo Sakai. Odawara, Japan and Isehara, Japan.
- 673 **Development of cell-based *in vitro* models for infrared radiation A (IRA) and thermal exposure.** Julia Menegola, Kelen Arroteia, Virginie Brumenil and Michel Salmon. Cajamar, Brazil and Gembloux, Belgium.
- 674 **Differential gene expression by simulated solar UV can control epidermal keratinocyte homeostasis.** Jay Gao, Alice Shih and Marcia Simon. Stony Brook, NY.
- 675 **UVB irradiation with a monochromatic wavelength of 300-310 nm increases filaggrin expression in a three dimensional human skin model.** Kan Torii and Akimichi Morita. Nagoya, Japan.
- 676** **Toll-like receptor 2 signaling protects against ultraviolet-induced inflammation *in vivo*.** Dong-Hun H Lee, Youngae Lee, Changyup Y Shin, Serah Lee, Kyounghwan H Kong, Jieun E Kim, Kyuhan H Kim and Jinho H Chung. Seoul, South Korea.
- 677 **Green tea catechins reactivate silenced tumor suppressor genes, p16INK4a and Cip1/p21, in UV-irradiated mouse skin and skin tumors by reducing DNA methylation and increasing histone acetylation.** Santosh K Katiyar, Virginia Jones and Vijayalakshmi Nandakumar. Birmingham, AL.
- 678 **Proanthocyanidins inhibit UV-induced immunosuppression through DNA repair-dependent functional activation of dendritic cells.** Mudit Vaid, Ram Prasad, Tripti Singh, Qian Sun, Craig Elmets, Hui Xu and Santosh K Katiyar. Birmingham, AL.
- 679* **The acute response to UVB in human skin includes infiltration of multiple dendritic cell subtypes and activation of innate defense molecules.** Milene K Crispin, Judilyn Fuentes-Duculan, Nicholas Gulati, Leanne M Johnson-Huang, Tim Lentini, Mary Sullivan-Whalen, Patricia Gilleadeau, Mayte Suárez-Fariñas, Michelle A Lowes and James G Krueger. New York, NY.
- 680* **AMPK activation prevents UVB-induced skin tumorigenesis through promoting DNA repair and growth control.** Chunli Wu, Lei Qiang, Weinong Han, Mei Ming, Benoit Viollet and Yu-Ying He. Chicago, IL; Shenyang, China and Paris, France.
- 681* **Diclofenac decreases tumor burden in male and female mice in two models of UVB-induced SCC.** Erin M Burns, Kathleen L Tober, Judith A Riggenbach and Tatiana M Oberyszyn. Columbus, OH.
- 682 **Induction of immature pigment cell development is significantly affected by the irradiance of UVB therapy.** Cheng-Che Lan, Hsin-Su Yu and Ching-Shuang Wu. Kaohsiung, Taiwan.
- 683 **UVR regulates local cortisol production and GR expression in a wavelength dependent manner.** Cezary Skobowiat and Andrzej Slominski. Memphis, TN.
- 684 **Cartilage oligomeric matrix protein increases in photodamaged skin.** Masaki Kobayashi, Keigo Kawabata, Ayumi Kusaka-Kikushima, Yoshinori Sugiyama, Tomotaka Mabuchi, Susumu Takekoshi, Muneo Miyasaka, Akira Ozawa and Shingo Sakai. Odawara, Japan and Isehara, Japan.
- 685 **DNA lesions and apoptosis induction in a new human epidermis model exposed to solar radiation.** Daniel Bacqueville, Laure Duprat, Chloé Belles, Béatrice Guiraud, Sandy Mas, Sandrine Bessou-Touya and Hélène Duplan. Toulouse, France.
- 686 **The gene expression profile of betaine- and UVB-treated organotypic keratinocyte cultures.** Lasse Hämäläinen, Leena Rauhala, Thomas Dunlop, Maarit Kokkonen, Petri Pehkonen, Genevieve Bart, Raija Tammi and Sanna Pasonen-Seppänen. Kuopio, Finland and Helsinki, Finland.
- 687 **A method for analyzing the protective effect against UVB stress in a human epidermal 3D culture model.** Kenji Hattori, Tomoko Kawamata, Ryohei Aoyagi and Hiroomi Tamura. Tokyo, Japan.
- 688* **Photo(chemo)therapy reduces circulating Th17 cells and restores dysfunctional regulatory T cells in psoriasis.** Takuya Furuhashi, Chiyo Saito, Kan Torii, Emi Nishida and Akimichi Morita. Nagoya, Japan.
- 689* **Photodynamic therapy with pc 4 induces cell death of *trichophyton rubrum*.** Minh Lam, Sara Lin, Mauricio A Retuerto, Pranab K Mukherjee, Mahmoud A Ghannoum, Kevin D Cooper and Elma D Baron. Cleveland, OH.
- 690* **20-Hydroxyvitamin D3 possesses high efficacy against proliferation of cancer cells while being non-toxic.** Jin Wang, Andrzej Slominski, Robert Tuckey, Zorica Janjetovic, Anand Kulkarni, Jianjun Chen, Arnold Postlethwaite, Duane Miller and Wei Li. Memphis, TN and Crawley, Australia.
- 691 **Cosmetic formulations that contain botanicals with natural antioxidant activities quench free radicals as measured by the Briggs-Rauscher reaction method.** Tiffany C Florence, David Gan, Geetha Kalahasti and Michelle D Hines. Dallas, TX.
- 692 **A cosmetic formulation containing ingredients that stimulate the production of matrix proteins *in vitro* improves skin texture, laxity, sagging, and overall appearance *in vivo*.** Tiffany C Florence, David Gan, Geetha Kalahasti and Michelle D Hines. Dallas, TX.
- 693* **Vitamin D3 activates DNA repair pathways in UV-irradiated human melanocytes.** Joshua Jameson, Viki Swope, Renny Starner and Zalfa A Abdel-Malek. Cincinnati, OH.
- 694 **Proteomic identification of biomarkers of photoprotection in *in vivo* human skin.** Patricia A Oyetakin White, Giridharan Gokulrangan, Jean-Eudes Dazard, Elizabeth Yohannes, Mary S Matsui, Mark Chance, Kevin D Cooper and Elma D Baron. Cleveland, OH and New York, NY.
- 695* **Toll-like receptor-4 augments ultraviolet radiation induced cutaneous tumor development by DNA damage mechanism.** Israr Ahmad, Purushotham Guroji, Eva Simanyi, Craig A Elmets and Nabiba Yusuf. Birmingham, AL.
- 696 **LED generated low level light therapy inhibits human skin fibroblast proliferation while maintaining cellular viability.** Hadar Lev-Tov, Daniel Siegel, Neil Brody and Jared Jagdeo. Sacramento, CA; Mather, CA and Brooklyn, NY.
- 697 **Human dermal fibroblasts protect against UVB-induced keratinocyte damage in a human skin equivalent model.** Tara L Fernandez, Derek Van Lonkhuyzen, David Leavesley, Rebecca Dawson, Kimlin Michael and Upton Zee. Brisbane, Australia.
- 698 **Regulatory T cells induced by the AhR ligand nonylphenol express GARP.** Agatha Schwarz, Fatemeh Navid and Thomas Schwarz. Kiel, Germany.
- 699 **TRPV1 inhibitory peptide prevents UV-induced skin responses.** So Min M Kang, Young M Lee, Yeon Kyung K Kim, Chang Yup Y Shin and Jin Ho H Chung. Seoul, South Korea.

- 700 Expression of catalytically active Matrix Metalloproteinase-1 in transgenic mice induces dermal extracellular matrix degradation and fibroblast alterations that resemble photoaged human skin.** Wei Xia, Taihao Quan, Craig Hammerberg, Andrew Little, John J Voorhees and Gary J Fisher. Ann Arbor, MI.
- 701* UVA-1 and UVA-1 oxidized phospholipids elicit an autophagic stress response in primary keratinocytes.** Yi Zhao, Chengfeng Zhang, Heidemarie Rossiter, Ulrich König, Leopold Eckhart, Susanne Karner, Erwin Tschachler and Florian Gruber. Vienna, Austria and Neuilly, France.
- 702* The combination of 5-fluorouracil and aminolevulinate-photodynamic therapy enhances tumor cell death by targeting p53-MDM2 pathway in murine squamous cell carcinoma tumors.** Sanjay Anand, Nikoleta Brankov, Kishore Rollakanti, Tayyaba Hasan and Edward V Maytin. Cleveland, OH and Boston, MA.
- 703 Semi-targeted tandem mass spectrometry-based lipidomic analysis of oxidized phosphatidylcholines induced by UVA irradiation in dermal fibroblasts.** Florian Gruber, Olga V Oskolkova, Erwin Tschachler, Wolfgang Bicker and Valery N Bochkov. Vienna, Austria and Neuilly, France.
- 704* Induction of microRNA miR-21 by UV irradiation down-regulates TGF- β type II receptor and type I procollagen in human skin fibroblasts.** Tianyuan He, Taihao Quan, Zhaoping Qin, John J Voorhees and Gary J Fisher. Ann Arbor, MI.
- 705 Matrix metalloproteinase expression and nano-scale quantitative surface morphometric analysis of photodamaged human dermis.** Taihao Quan, Emily Little, Hehui Quan, Zhaoping Qin, John J Voorhees and Gary J Fisher. Ann Arbor, MI.
- 706* IL-11, IL-1 α , IL-6, and TNF α are induced by solar radiation and involved in the facial subcutaneous fat loss.** Wen-Hwa Li, Li Zhang and Apostolos Pappas. Skillman, NJ.
- 707* Cyclophilin D alters UVA-induced apoptosis in keratinocytes through a mechanism involving mitochondrial ROS generation.** Jaroslav Janda, Jana Jandova and James Sligh. Tucson, AZ.
- 708 Upregulation of Srcasm in aged, sun-damaged skin.** H Nishida and J Seykora. Philadelphia, PA and Osaka, Japan.
- 709 Advances in the protection and reparation of epidermal cells from UV-induced DNA damages.** Estelle Loing and Thierry Suere. Québec, Canada and Ramonville St Agne, France.
- 710 The influence of extracorporeal photochemotherapy on global gene expression profiles in lymphocyte subsets.** Ulrike Just, Gabriele Klosner, Florian Klingmueller, Martin Bilban, Robert Knobler, Zoya Kuzmina, Hildegard Greinix and Franz Trautinger. Vienna, Austria and St. Poelten, Austria.
- 711* The role of α -melanocyte stimulating hormone in the DNA damage response of human melanocytes.** Viki B Swope, Christina Alexander, Renny Starner, George Babcock and Zalfa A Abdel-Malek. Cincinnati, OH.
- 712 Longwave ultraviolet light (UVA) accelerates intrinsic aging by inducing progerin and by impairing shape and function of nuclear membranes.** Hirotaka Takeuchi and Thomas M Rünger. Boston, MA and Yokohama, Japan.
- 713 Immunohistochemical characterization of chronic ultraviolet damage in human skin.** Natalia Fiadorchanka, Lauren Adams, Melissa Serravallo, Daniel Siegel, Neil Brody and Jared Jagdeo. Brooklyn, NY and Mather, CA.
- 714* A topical NF- κ B inhibitor protects skin cells from photodamage and enhances DNA repair.** Simarna Kaur, Thierry Oddos, Helene Wong and Michael D Southall. Skillman, NJ and Val de Reuil, France.
- 715 Photoprotection against UV damage by a stabilized silicone gel matrix antioxidant formulation.** Sujatha Sonti, Elizabeth Makino, John Garruto and Rahul Mehta. Carlsbad, CA.
- Pigmentation and Melanoma**
All orals [designated with an asterisk (*)] listed below are presented in the Pigmentation and Melanoma Minisymposium on Saturday, May 12, 2012 from 12:30-4:00 p.m. in Raleigh Convention Center 306 B. Orals designated by two asterisks (**) will be presented during a Plenary Session.
- 716 Familial melanoma-associated mutations in p16 uncouple its tumor suppressor functions.** Noah Jenkins, Jae Jung and Doug Grossman. Salt Lake City, UT.
- 717 A mixture of *Schinus terebinthifolius* Raddi extract and linoleic acid from *Passiflora alata* oil synergically decreases the level of melanin synthesis in human reconstituted epidermis.** Adriano Jorge, Kelen Arroteia, Ícaro Santos, Eric Andres, Sandra Medina, Cintia Ferrari, Carolina Lourenço, Rosa Biaggio and Patricia Moreira. Cajamar, Brazil and Paris, France.
- 718 Plexin C1, a neural guidance receptor, suppresses melanoma progression.** Yulin Chen, Joanne Soong, Lei Xu, Sonali Mohanty and Glynis Scott. Rochester, NY.
- 719* Characterization of the effects of BRAF inhibitors on melanoma metabolism *in vivo* and *in vitro*.** Alexander Marzuka and Marcus Bosenberg. New Haven, CT.
- 720* Melanosome biogenesis protein complexes interact with the endosomal WASH complex.** P V Ryder, A Gokhale, M N Seaman and V Faundez. Atlanta, GA and Cambridge, United Kingdom.
- 721 The association of PTPN22 promoter variation and altered T cell cytokine production with vitiligo in Chinese Han population.** Kai Li, Xia Li, Qiang Li, Ling Liu, Gang Wang, Qingsheng Mi, Chunying Li and Tianwen Gao. Xi'an, China.
- 722 Epidermal growth factor facilitates melanoma lymph node metastasis by influencing tumor lymphangiogenesis.** Andreas Bracher, Stefanie Tauber, Ana Soler, Astrid M Fink, Andreas Steiner, Hubert Pehamberger, Peter Petzelbauer, Marion Gröger and Robert Loewe. Vienna, Austria.
- 723 A counter-intuitive role for apoptotic caspase 3 in treatment of melanoma and other cancers.** Qian Huang, Fang Li, Xinjian Liu, Wenrong Li, Fei-Fei Liu, Brian O'Sullivan, Xiao-Jing Wang and Chuan-Yuan Li. Durham, NC; Toronto, Canada and Denver, CO.
- 724* MITF-driven subcompartment-specific distribution of differentially cycling tumor cells in melanoma.** Nikolas K Haass, Andrea Anfosso, Kimberley A Beaumont, David S Hill, Paulus Mrass, Ichiko Kinjyo, Osami Kanagawa and Wolfgang Weninger. Newtown, Australia; Sydney, Australia; Camperdown, Australia and Yokohama, Japan.
- 725 Intratumoral vaccination of *Propionibacterium acnes* induces Th1 immune responses and suppresses the growth of malignant melanoma.** Kenshiro Tsuda, Keiichi Yamanaka, Tomoko Akeda, Takehisa Nakanishi, Hiroshi Kitagawa, Masato Kakeda, Ichiro Kurokawa and Hitoshi Mizutani. Tsu, Japan.
- 726 The effect of 2-hexyldecanol on reducing hyperpigmentation and suppressing melanin synthesis via activation of ubiquitin-proteasome system.** Tomohiro Hakozaki, Timothy Laughlin, Steven Zhao, Jiazhen Wang, Denny Deng, Beth Jewellmotz and Laurie Elstun. Cincinnati, OH.
- 727 Oxidative stress induces translocation of calreticulin in cultured human melanocytes cells.** Gabriella Brum, Fuquan Lin, Jerry Wan, Regis Chang, Ari Nalbandian, Kimberly Falzone, David Calianese, Kevin Szulak, Charles Best, Michael McCauley, Katelyn Higgins, Nicola Kouttab, Aie Xu and Yinsheng Wan. Providence, RI and Hangzhou, China.
- 728 Application of dopamine and L-Dopa-loaded chitosan nanoparticles to enhance melanin production in cultured human skin melanocytes.** Jerry Wan, Fuquan Lin, Regis Chang, Nicola Kouttab, Wenjun Wang, Aie Xu and Yinsheng Wan. Providence, RI and Hangzhou, China.
- 729 Human melanoma cells resist to oxidative stress due to active EGFR/AKT and overproduction of melanin.** Kevin Szulak, David Calianese, Gabriella Brum, Charles Best, Nicola Kouttab, Wenjun Wang, Aie Xu and Yinsheng Wan. Providence, RI and Hangzhou, China.
- 730 Reversal of the melanoma malignant phenotype by an endogenous cyclic peptide which mediates contact inhibition of growth.** George Lipkin and Martin Rosenberg. New York, NY.

- 731 Immunohistochemical evaluation of molecules that mediate the basement membrane adhesion for normal and abnormal melanocytes.** Hiroshi Mitsui, Nicholas Gulati, Hanako Ohmatsu, Hideki Fujita, Mayte Suárez-Fariñas, Neil S McNutt, Felix Kiecker and James G Krueger. New York, NY and Berlin, Germany.
- 732 Mutation analysis of pre-malignant and malignant pigmented lesions in xeroderma pigmentosum: The role of UV damage in melanoma induction.** Taro Masaki, John J DiGiovanna, Yun Wang, Sikandar G Khan, Thomas Hornyak, Chyi-Chia Lee and Kenneth H Kraemer. Bethesda, MD.
- 733* A locked, dimeric CXCL12 variant effectively inhibits pulmonary metastasis of CXCR4-expressing melanoma cells due to enhanced serum stability.** Tomonori Takekoshi, Joshua J Ziarek, Brian F Volkman and Sam T Hwang. Milwaukee, WI.
- 734 Novel gene expression changes in the microenvironment of vitiligo lesional skin.** Mingwan Su, Richard Yu, Ruanshen Huang, Xuejun Zhang and Youwen Zhou. Vancouver, Canada and Hefei, China.
- 735 A unique three-compound association to improve melasma and solar lentigo hyperpigmentation.** Francoise Belaubre, Stephane Poigny, Severine Julie, Emmanuel Questel, Nathalie Castex-Rizzi and Sandrine Bessou-Touya. Toulouse, France.
- 736 Site-specific heterogeneity of melanocytes during late fetal periods.** Motoki Nakamura, Mizuho Fukunaga-Kalabis, Yuji Yamaguchi, Takuya Furuhashi, Emi Nishida, Hiroshi Kato, Toshihiko Mizuno, Mayumi Sugiura and Akimichi Morita. Nagoya, Japan and Philadelphia, PA.
- 737 Melanoma simulation model: Promoting opportunistic melanoma screening and appropriate patient counseling through education.** M Anderson, N Jain, J Bierman, J A Vozenilek, M J Kwasny and J K Robinson. Chicago, IL.
- 738 Chronic downregulation of the Sema4D receptor, Plexin B1, results in c-Met activation in melanocytes.** Joanne Soong, Yulin Chen and Glynis Scott. Rochester, NY.
- 739* MC1R determines melanocyte viability upon UV irradiation by protecting PTEN activity.** Juxiang Cao, Fang Liu, James Shen, Stefania Lenna, Stefania Celia Jimenez-Cervantes, Nick Leslie, George X Xu, Yongjun Wang and Ruitao Cui. Boston, MA; Murcia, Spain; Shanghai, China; Dundee, United Kingdom and Philadelphia, PA.
- 740 Differential roles of IL-1 α and IL-1 β in tumor progression.** Tian Tian, Qiushuang Jin, Robert C Fuhlbrigge and Thomas S Kupper. Boston, MA and Palo Alto, CA.
- 741 Chimeric 9p-22q transcript in a patient with melanoma and DNA repair deficiency acts as a negative regulator of p14ARF.** Xiaohui Tan, Sarah Anzick, Sikandar G Khan, Takahiro Ueda, Gary Stone, John J DiGiovanna, Deborah Tamura, Daniel Wattendorf, Robert Walker, Paul Meltzer and Kenneth H Kraemer. Bethesda, MD and Washington, DC.
- 742 A cosmetic treatment that contains ingredients that target melanogenesis evens skin tone and reduces both discrete and mottled pigmentation *in vivo*.** David Gan, Geetha Kalahasti, Tiffany Florence and Michelle Hines. Dallas, TX.
- 743 Vitiligo inducing phenols increase production of IL6 and IL8 from melanocytes via the unfolded protein response.** Siavash Toosi, Seth J Orlow and Prashila Manga. New York, NY.
- 744 DC-HIL $^+$ myeloid-derived suppressor cells (MDSC) are a new prognostic marker for melanoma and promising target for immunotherapy.** Kaveh Nezafati, Jin-Sung Chung, Kyoichi Tamura, Rohit Sharma, Amy Harker-Murray, James Huth, Ponciano Cruz and Kiyoshi Ariizumi. Dallas, TX.
- 745 BI 6727, a second generation small molecule inhibitor of polo-like kinase 1 (Plk1), causes significant melanoma growth delay and regression *in vivo*.** Brian D Cholewa, Joshua A Desotelle and Nihal Ahmad. Madison, WI.
- 746* A genome-wide shRNA screen identified the WNT pathway as a potential target for combination treatments with BRAF inhibitors in melanoma.** Adam R Almeida, Katie A Partyka, Aik Choon Tan, Jihye Kim, Chris Porter, Matias Casas, Mark Gregory, Shilo Smith, Mayumi Fujita, James DeGregori, David A Norris and Yiqun G Shellman. Aurora, CO.
- 747 Strong down-regulation of miR-26a in melanoma and therapeutic potential.** Steven N Reuland, Shilo Smith, Nathaniel B Goldstein, Adam Almeida, Lynne Bemis, Yiqun G Shellman and David A Norris. Aurora, CO.
- 748 Kinetics and computational docking studies on the inhibition of tyrosinase induced by oxymatrine.** Xiao-Xia Liu, Yong-Doo Park and Jun-Mo Yang. Jiaxing, China and Seoul, South Korea.
- 749 Soluble adenylyl cyclase is a novel regulator of melanosomes in human melanocytes.** Adam Widman and Jonathan H Zippin. New York, NY.
- 750 Soluble adenylyl cyclase is essential for stem cell factor induced proliferation and Ras signaling in melanocytes.** Archana Vishwanath, Lonny Levin, Jochen Buck and Jonathan H Zippin. New York, NY.
- 751 Soluble adenylyl cyclase is a novel regulator of Ras signaling in melanoma.** Jonathan H Zippin, Lonny Levin and Jochen Buck. New York, NY.
- 752 Live imaging analysis of melanosome transfer using lipophilic tracer.** Seiji Takeuchi, Chieko Okamura, Yoko Niki, Chikako Nishigori, Lieve Declercq, Daniel B Yarosh and Naoaki Saito. Kobe, Japan; Oevel, Belgium and Melville, NY.
- 753* Targeting protein trafficking pathways synergizes melanoma sensitivity to inhibition of the PI3K pathway and cytotoxic agents.** Zhi-ming Huang, Glenn Millhauser and Maria L Wei. San Francisco, CA and Santa Cruz, CA.
- 754 Insights into the etiology of Solar Lentigines through its MicroRNA and mRNA profile.** Sheila Rocha, Nicole Pauloski, Jennifer Huertas, Brian Potter, William Lathrop, Kristopher Kalleberg, Carol Bosko and Helen Meldrum. Trumbull, CT.
- 755* Melanoma differs from other cancers in generating a subset of DC-HIL $^+$ myeloid-derived suppressor cells (MDSC) that cause potent T cell suppression.** JinSung Chung, Kyoichi Tamura, Ponciano D Cruz and Kiyoshi Ariizumi. Dallas, TX.
- 756 Single-cell analysis of mechanical properties of melanoma using deformability cytometry.** Rajan P Kulkarni, Henry Tse, Daniel Gossett and Dino Di Carlo. Los Angeles, CA.
- 757* Fisetin inhibits human melanoma cell invasion through promotion of mesenchymal to epithelial transition and by targeting MAPK and NF- κ B signaling pathways.** Harish C Pal, Samruti Sharma, Craig A Elmets and Farrukh Afaq. Birmingham, AL.
- 758 CD74 expression on human melanoma serves as a marker of progression and a target for apoptosis induction.** Keiji Tanese, Elizabeth A Grimm and Suhendan Ekmekcioglu. Houston, TX and Tokyo, Japan.
- 759 In vivo mutation analysis and treatment of Gq mutated uveal melanoma.** Christian Posch, Alvaro Somoza, Michelle B Crosby, Homayoun Moslehi, Gary Green and Susana Ortiz-Urda. San Francisco, CA; Vienna, Austria; Madrid, Spain and San Diego, CA.
- 760 Modulation of human skin pigmentation by various inhibitors of human tyrosinase.** Tobias Mann, Wolfram Gerwat, Jan Batzer, Sabrina Ahlheit, Cathrin Scherner, Horst Wenck, Franz Stäb and Ludger Kolbe. Hamburg, Germany.
- 761 Proline-rich tyrosine kinase 2 (Pyk2), a focal adhesion kinase (FAK) homologue, induces apoptosis in human malignant metastatic melanoma.** Stephanie K Chang, Anna Hindes, Lynn A Cornelius and Tatiana Efimova. St. Louis, MO.
- 762 Tenovin-1, a small-molecule inhibitor of SIRT1, imparts anti-proliferative response in human melanoma cells via p53 activation.** Chandra K Singh, Melissa J Wilking, Minakshi Nihal, Gary S Wood and Nihal Ahmad. Madison, WI.
- 763 BRAF mutation and FISH in the prognosis of cutaneous melanoma.** Beatrice Nardone, Nazila Barahmani, Pedram Pouryazdanparast, Mary Martini, Alfred Rademaker, Dennis P West and Pedram Gerami. Chicago, IL.
- 764 Inhibition of melanosome transfer by targeting d-dopachrome tautomerase.** L Shore, S Rocha, J Nip, I Santana, D Drennan, W Lathrop, D Marrero, J Bajor and C Bosko. Trumbull, CT.
- 765 Dermoscopic patterns serve to identify underlying growth promoting mutations in melanoma.** Margaret I Sanchez, Harold Rabinovitz, Margaret Oliverio, George W Elgart, Mark Eller and James M Grichnik. Miami, FL.
- 766 Biopsy performance of a multi-spectral computer vision system for melanoma compared to physicians.** Judah N Greenberg, Alicia Toledo, Joanna S Adrian, Dina Gutkowicz-Krusin and Suephy C Chen. Atlanta, GA; Decatur, GA; Washington, DC and Irvington, NY.

- 767*** **Side population cells from human melanoma tumors reveal diverse mechanisms for chemoresistance.** Yuchun Luo, Lixia Z Ellis, Katiuscia Dallaglio, Weimin Liu, Moe Takeda, William A Robinson, Steven Robinson, Karl D Lewis, Martin D McCarter, Rene Gonzalez, David A Norris, Dennis R Roop, Natalie G Ahn and Mayumi Fujita. Aurora, CO and Boulder, CO.
- 768*** **Dysregulation of the unfolded protein response contributes to chemoresistance in melanocytes.** Tsing Cheng, Seth J Orlow and Prashiela Manga. New York, NY.
- 769** **Interferon-gamma and tumor associated macrophages in human melanoma patients.** Tatyana Petukhova, Thomas McCormick, Meg Gerstenblith, Jeremy Bordeaux, Julian Kim, Kord Honda and Kevin Cooper. Cleveland, OH.
- 770** **Dual inhibition of Akt and mTOR by fisetin induces tumor regression in a 3-D melanoma model.** Deeba N Syed, Vaqar Adhami, Jean-Christopher Chamcheu and Hasan Mukhtar. Madison, WI.
- 771** **Neutrophilic dermatoses associated with vemurafenib.** Roberto A Novoa, Kord Honda, Henry B Koon and Meg R Gerstenblith. Cleveland, OH.
- 772** **Genital melanocytic nevi in children.** RaeganD Hunt, Julie V Schaffer and Seth J Orlow. New York, NY.
- 773** **Detection of melanoma by systemic administration of fluorocoxib and wide-field fluorescence imaging.** Emilio Gonzalez-Gonzalez, Hyejun Ra, Maria Fernanda Lara Cabanas, Jashim Uddin, Lawrence J Marnett, Robyn P Hickerson, Roger L Kaspar and Christopher H Contag. Stanford, CA; Santa Cruz, California and Nashville, TN.
- 774** **Inhibition of FICZ-induced pigmentation through an AhR antagonist towards NHEK.** Earl C Goyarts, Lu Ming, Dan Yarosh and Nadine Pernodet. Melville, NY and Shanghai, China.
- 775** **Distinct gene expression signatures classify desmoplastic and nodular melanomas.** Khang Nguyen, Parisa Momtaz, Hojabr Kakavand, Hans R Widlund, Mick Correll, F S Hodi, Martin C Mihm, John F Thompson, George F Murphy, Richard A Scolyer and Jennifer Y Lin. Boston, MA and Sydney, Australia.
- 776*** **The dichotomous effects of IL-17 and TNF on normal human melanocytes may contribute to both hyper- and hypo-pigmentation associated with skin inflammation.** Claire Q Wang, Yemsratch T Akalu, Judilyn Fuentes-Duculan, Mayte Suarez-Farinás, Hiroshi Mitsui and James G Krueger. New York, NY.
- 777** **Role of microRNA-211 in melanocytes and melanoma.** Nityanand Maddodi, Shajil Madhavan, Sulochana Devi, Ashika Jayanthi and Vijayasaradhi Setaluri. Madison, WI.
- 778*** **A mouse model of vitiligo with spontaneous epidermal depigmentation.** Jonathan Eby, Jared Klarquist, Hee-Kap Kang, Michael Nishimura, Shikhar Mehrotra and I Caroline Le Poole. Maywood, IL and Charleston, SC.
- 779** **New dynamic mechanisms of melanogenesis in each pattern of vitiligo patients treated with NB-UVB phototherapy.** Salvador Sobrevilla-Ondarza, Amalia Reyes-Herrera, Juan P Castanedo-Cázares, Bertha Torres-Alvarez, Keyla N Alvarado-Estrada and Raúl Rosales-Ibañez. San Luis Potosí, Mexico.
- 780*** **Deficiency in IL-23, but not IL-12, promotes the development of melanocytic tumors with regional lymph node involvement in C3H/HeN mice.** Tahseen Nasti, Tarannum Jaleel, Barry Cochran, Laura Timares and Craig Elmets. Birmingham, AL.
- 781**** **Efforts to provide a comprehensive overview of genetic changes in canine melanoma as a means to identify genetic correlates for drug response.** Aleksandar Sekulic, Victoria Zismann, Roe Froman, April Allen, Matthew Huenteleman, Melissa Paoloni, Mark Neff, Barbara Davis, Allison Cox, Nick Duesbery, Jianfeng Xu, Michael Bittner, Craig Webb, Kevin Brown, Patricia LoRusso and Jeffrey Trent. Phoenix, AZ; Scottsdale, AZ; Grand Rapids, MI; Bethesda, MD; Medford, MA; Winston-Salem, NC and Detroit, MI.
- 782*** **Keratinocyte p53, skin tanning and melanoma.** Tamara Terzian, Kayla Boortz, Regan Stiegmann, Victoria Gonzalez, Graeme Walker and Neil Box. Aurora, CO and Brisbane, Australia.
- Tissue Regeneration, Stem Cells and Wound Healing**
All orals [designated with an asterisk (*)] listed below are presented in the Tissue Regeneration, Stem Cells and Wound Healing Minisymposium on Saturday, May 12, 2012 from 12:30-4:00 p.m. in Raleigh Convention Center 306 C. Orals designated by two asterisks (**) will be presented during a Plenary Session.
- 783**** **Inhibition of wound-induced hair neogenesis by prostaglandin D2.** Amanda M Nelson, Dorothy E Loy, John A Lawson, Adiya S Katseff, Garrett A Fitzgerald and Luis A Garza. Baltimore, MD and Philadelphia, PA.
- 784** **New shallow wound model using ablative CO₂ fractional laser in hairless mice.** Ji-Hae Lee, Il-Hong Bae, Young-Ho Park and Kyung-Min Lim. Yongin-si, South Korea.
- 785** **Delayed wound healing due to increased interleukin-10 expression in mice with lymphatic dysfunction.** Takayuki Kimura, Makoto Sugaya, Andrew Blauvelt, Hitoshi Okochi and Shinichi Sato. Tokyo, Japan and Portland, OR.
- 786** **Patternable epithelial-mesenchymal interaction for skin appendage regeneration.** Chih-Chieh Chan, Meng-Wei Lin, Sabrina Fan, Jung-Yi Chan, Tsung-Hua Tsai and Sung-Jan Lin. Taipei, Taiwan and New Taipei City, Taiwan.
- 787** **Histological and immunohistological analyses of epithelial regeneration and wound healing affected by Bisphosphonates (BPs) using a living oral mucosa equivalent model.** Taro Saito, Kenji Izumi, Aki Shiomi, Hisashi Ohnuki, Hiroko Kato, Michiko Terada, Yoshiro Kawano, Kayoko Nozawa-Inoue, Ritsuo Takagi and Takeyasu Maeda. Niigata, Japan.
- 788** **Roles of PDGF-BB in the behavior of mesenchymal stem cells in human skin.** Tsutomu Soma, Haruyo Yamanishi, Yumiko Ishimatsu-Tsuji and Shigeyoshi Fujiwara. Yokohama, Japan.
- 789** **Stat3 controls cell migration by directly regulating Tcf3.** Qi Miao, Yudai Nishino, Jeffrey M Howard, Amy Ku, Tim M Shaver, Gloria E Garcia, Diep N Le, Kristen L Meerbrey, Thomas F Westbrook, Valeria Poli and Hoang Nguyen. Houston, TX and Turin, Italy.
- 790** **Effect of self-assembling peptide gel on wound healing in guinea pig.** Meya Li, Shuhei Kan, Kotaro Sakanishi and Motomichi Matsuoka. Kasugai, Japan.
- 791** **Fidgetin-like 2 siRNA and Kif19 siRNA loaded nanoparticles alter wound healing speeds in a murine wound model.** David Schairer, Jason Chouake, Joshua Nosanchuk, David Sharp and Adam Friedman. Bronx, NY.
- 792** **Phloridzin from Acantopanax senticosus protects human epidermal stem cells from mechanical stress through the inhibition of JNK activation.** Eunsun Jung, Jienny Lee, Jongsung Lee and Deokhoon Park. Seongnam, South Korea.
- 793** **Proliferative effect of Phloridzin from Acantopanax senticosus on human epidermal stem cells.** Jienny Lee, Eunsun Jung, Jongsung Lee and Deokhoon Park. Seongnam-Si, South Korea.
- 794** **Targeting OGT to promote healing in diabetic wounds.** Kasper Runager, Jane Petersen, Meryem Bektas, Paula Berkowitz and David S Rubenstein. Chapel Hill, NC.
- 795** **Growth dynamic of keratinocyte clones.** John J Wille, Mark R Pittelkow and Nell Swanson. Chesterfield, NJ and Rochester, MN.
- 796** **Skin-derived precursors as a source of progenitors for cutaneous nerve regeneration.** Zhiguo Chen, Sanjay Pradhan, Chiachi Liu and LuQ Le. Dallas, TX.
- 797*** **Human hair follicle neogenesis using dermal papilla cells.** Claire A Higgins, Colin A Jahoda and A M Christiano. Columbia, NY and Durham, United Kingdom.
- 798** **A facilitative role for caspase 3 & caspase 7 in wound healing and tissue regeneration.** Fang Li, Qian Huang, Jiang Chen, Dennis R Roop and Chuan-Yuan Li. Durham, NC and Aurora, CO.
- 799** **Age-Dependent differences in putative epidermal stem cell activity assessed in human skin equivalents.** Brad Jarrold, Akira Date and Rosemarie Osborne. Kobe, Japan.
- 800** **Dysregulated wound healing in inter-alpha-trypsin inhibitor deficient mice.** Carol S Trempus, Gordon P Flake, Grace E Kissling, Vandy Stober, Lisheng Zhuo, Koji Kimata and Stavros Garantziotis. Research Triangle Park, NC.

- 801** Direct reprogramming of human fibroblasts int dopaminergic neurons. Xinjian Liu, Fang Li, Elizabeth A Stublefield, Barbara Blanchard, Toni Richards, Gaynor A Larson, Qian Huang, Timothy A Benke, John R Sladek and Chuan-Yuan Li. Durham, NC and Durham, CO.
- 802*** Epidermal Wnt ligands are required for adult hair follicle regeneration. Peggy Myung, Makoto Takeo, Mayumi Ito and Radhika Atit. Cleveland, OH and New York, NY.
- 803** Cutaneous wounds in mice lacking functional hyaluronan synthases Has1 and Has3 display phenotypic features associated with tissue fibrosis. Judith A Mack, Hannah M Stubbs and Edward V Maytin. Cleveland, OH.
- 804** Defining the function of adipocyte lineage cells during skin wound healing. Barbara Schmidt. New Haven, CT.
- 805** Corneocyte interaction with provisional clots/scabs in human acute incisional wounds. Marcia L Usui, Robert A Underwood, Philip Fleckman and John E Olerud. Seattle, WA.
- 806** A new, proprietary onion extract gel improves the appearance of postsurgical dermal scars. Z Draelos, L Baumann, E Avakian, S Plaum and B Hardas. Durham, NC; Miami Beach, FL and Greensboro, NC.
- 807** Catecholamine stress alters the wound immunophenotype. Farzam Gorouhi, Haitao Shen, Sandra Ramirez, Marianne Chigbrow, Athena M Soulka and Rivkah R Isseroff. Sacramento, CA.
- 808** Adult human dermal fibroblast cell migration accelerates to fast speeds on micron size fibers compared to slow steady speeds on 2D surfaces. Sisi Qin, Richard A Clark, Ryan Lindeborg and Miriam H Rafailovich. Stony Brook, NY and Dana Point, CA.
- 809** Long-term histoculture of mouse whiskers follicles enables real-time imaging of the behavior of nestin-expressing multi-potent stem cells. Jennifer Duong, Sumiyuki Mii, Fang Liu, A R Moossa and Robert M Hoffman. San Diego, CA and Shanghai, China.
- 810**** The role of voltage-gated calcium channels in controlling stem cells in non-excitable tissues. Gozde Yucel, Banu Altindag, Natalia Gomezospina, Ricardo Dolmetsch and Anthony Oro. Stanford, CA.
- 811*** Nestin-expressing multi-potent stem cells originate in the bulge of the hair follicle and migrate to the dermal papilla. Aisada Uchugonova, Jennifer Duong, Nan Zhang, Karsten Koenig and Robert M Hoffman. San Diego, CA and Saarbruecken, Germany.
- 812** Non-invasive *in vivo* tomography of nestin-expressing multi-potent stem cells in the mouse whisker. Aisada Uchugonova, Robert M Hoffman, Martin Weinigel and Karsten Koenig. San Diego, CA; Saarbruecken, Germany and Jena, Germany.
- 813** Hair follicle nestin-expressing stem cells form the hair follicle sensory nerve and fuse with the trigeminal nerve in 3-dimensional histoculture. Sumiyuki Mii, Jennifer Duong, Fang Liu, Yasuyuki Amoh, Norimitsu Saito, Kensei Katsuoka, A R Moossa and Robert M Hoffman. San Diego, CA; Kanagawa, Japan and Shanghai, China.
- 814** Differential IL6 and TNF α production in human mesenchymal stem cells following TLR2 ligation. Mohan R Dasu, Sandra R Ramirez, Jan Nolta and Rivkah R Isseroff. Davis, CA and Sacramento, CA.
- 815*** Dissociated human dermal papilla cells induce hair follicle neogenesis when incorporated into dermal-epidermal composites grafted to nude mice. R Thangapazham, P Klover, J Wang, Y Zheng, A Devine, S Li, L Sperling, G Cotsarelis and T N Darling. Bethesda, MD and Philadelphia, PA.
- 816** Retrospective evaluation of the safety of large skin flap and graft surgery in the outpatient setting. Adam R Schmitt and Jeremy S Bordeaux. Cleveland, OH.
- 817*** Differentiation of human induced pluripotent stem cells into dermal fibroblasts. Munenari Itoh and Angela M Christiano. New York, NY and Tokyo, Japan.
- 818** Withdrawn.
- 819*** Differentiation-associated silencing of the Nanog locus is accompanied by changes in its nuclear positioning in human embryonic stem cells. Mohammed I Ahmed, Neil J Harrison, Andrei Mardaryev, Michael Y Fessing, Krzysztof Poterlowicz, Peter W Andrews and Vladimir A Botchkarev. Bradford, United Kingdom; Boston, MA and Sheffield, United Kingdom.
- 820** Cell-based regenerative medicine by nestin+ stem cells: Stimulation of reepithelialization, angiogenesis, and granulation tissue formation in wounded human skin. Stephan Tiede, Janin Lehmann, Tian Liao, Sabine Nagel, Anna Petschnik, Sandra Danner, Charli Kruse and Ralf Paus. Lübeck, Germany and Manchester, United Kingdom.
- 821** Plantaricin A promotes *in vitro* proliferation and migration of human keratinocytes and increases the expression of TGF- β 1, FGF7, VEGF-A and IL-8 genes. Barbara Marzani, Daniela Pinto, Maria De Angelis, Marco Gobbetti, Anna Benedusi and Giammaria Giuliani. Milan, Italy and Bari, Italy.
- 822** Bone morphogenetic protein signalling inhibits skin regeneration after injury via altering keratinocyte proliferation and migration. Chris J Lewis, Andrei N Mardaryev, Andrei A Sharov, Tatyana Y Sharova, Vladimir U Emelyanov, Mohammed I Ahmed, Natalia V Botchkareva, David T Sharpe and Vladimir A Botchkarev. Bradford, United Kingdom and Boston, MA.
- 823** Kallikrein-related peptidase 8-dependent skin wound healing is associated with upregulation of kallikrein-related peptidase 6 and protease-activated receptor 2. Mari Kishibe, YoshiBando, Tatsuhide Tanaka, Shigetaka Yoshida, Akemi Ishida-Yamamoto and Hajime Iizuka. Asahikawa, Japan.
- 824** Various growth factors secreted into hUCB-MSC conditioned medium enhance proliferation of human keratinocyte. Hyun-Ah Oh and Ju-Yeon Kim. Seoul, South Korea.
- 825** hUCB-MSC conditioned media show enhanced synthesis of procollagen in Hs68 cells. Ju-Yeon Kim. Seoul, South Korea.
- 826** Endothelial necrosis at 1h post-burn predicts progression of tissue injury and ultimate scar formation. Douglas A Hirth, Steve McClain, Adam J Singer and Richard A Clark. Stony Brook, NY.
- 827** Role of ZO-1 and Occludin in normal wound healing and chronic wounds. T Volksdorf, J Lentfer, S Pollok, C Bohner, S Vidal-y-Sy, N Kirschner, S Sehner, M Zorn-Kruppa, I Moll and J Brandner. Hamburg, Germany.
- 828** Creation of duofluorescent reporter mouse as a tool to trace follicular stem cells. Jin-Bon Hong, Sung-Jan Lin, Shu-Wha Lin, June-Tai Wu and You-Tzung Chen. Taipei, Taiwan.
- 829** Engineered micronics promote keratinocyte stem cell clustering in a bioengineered skin model. Amanda L Clement and George D Pins. Worcester, MA.
- 830** Identification of novel mutations in the candidate keratinocyte stem cell regulatory gene, Bone Morphogenetic Protein 5. Ashok Singh, Carol S Trempus and Rebecca J Morris. Austin, MN and Research Triangle Park, NC.
- 831** Impedance spectroscopy—a tool for the characterization of skin equivalents. Jan Hansmann, Florian Groeber and Heike Walles. Stuttgart, Germany.
- 832** Development of induced pluripotent stem cell-based therapy for pseudoxanthoma elasticum. Shunsuke Takahagi, Qijie Jiang, Ganna Biloussova, Dennis R Roop and Jouni Uitto. Philadelphia, PA and Aurora, CO.
- 833** Central role of eccrine sweat glands in cutaneous wound healing in humans. Laure Ritté, Dana L Sachs, Jeffrey S Orringer, John J Voorhees and Gary J Fisher. Ann Arbor, MI.
- 834** Secreted heat shock protein-90alpha and its F-5 fragment promote rapid healing of porcine skin wounds. K O'Brien, F Tsen, M Chen, D Woodley and W Li. Los Angeles, CA.
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Conflict of Interest Disclosure Key

A - Advisory Board
B - Board of Directors
C - Consultant
E - Employee or Salary Support
F - Founder
G - Grant or Research Support
H - Honoraria
I - Investigator
P - Co-inventor on Patent Held by University or Corporation
SB - Speakers Bureau
SH - Stock Holder
O - Other

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1985	Herman Beerman
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2000	Richard Dobson
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2002	Eugene Bauer
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2010	Dennis Roop
2011	John Stanley

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<i>This award is given to enlighten present and future workers about the importance of clinical investigation. It honors an individual who has made significant contributions to our understanding of clinical medicine.</i>	1989	Tung-Tien Sun	2000	Robert Langer
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	1996	Thomas Kupper	2007	Stuart Schreiber
	1997	Barbara Gilchrest	2009	Daniel Kastner
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1995	Judah Folkman	2000	Thomas Luger	Jennifer Lippincott-
1996	Jean Wilson	2001	Peter Elias	Schwartz
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1999	Eli Gilboa	1961	Rene Dubos	
1999	Stephen Johnston	1962	Hans Selye	
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2000	Nigel Bennett	1964	Curt Stern	
2000	Ronald Crystal	1965	Albert Szent-Gyorgyi	
2000	Ralph Steinman	1966	Jerome Gross	
2001	Roland Martin	1967	G.J.V. Nossal	
2002	Gerald Crabtree	1968	John Buettner-Janusch	
2004	Adrian Hayday	1969	Henry Kunkel	
2005	Polly Matzinger	1970	Norman Wessells	
2006	Alexander Rudensky	1971	Aiden Breathnach	
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2009	Jamey Marth	1973	H. Hugh Fudenberg	
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