

# MEETING PROGRAM



Society for  
Investigative  
Dermatology

## 2010 Annual Meeting

May 5-8, 2010

Hilton Atlanta

Atlanta, Georgia



The Duke Department of Dermatology presents the 2010 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 April 8, 2010)



PHARMACEUTICALS

## 2010 Annual Meeting Exhibitors

Bridge PTS  
Canfield Imaging Systems  
CellnTec  
Elsevier  
Invitrogen, Part of Life Technology  
Nature Publishing Group  
WCD 2011  
Zen-Bio, Inc.

## Future Annual Meetings

May 4 – 7, 2011  
JW Marriott Desert Ridge Resort and Spa  
Phoenix, AZ

May 9 – 12, 2012  
Raleigh Convention Center  
Raleigh, NC

## Officers

Richard Clark, MD  
*President*  
George Stricklin, MD/PhD  
*Vice President*

Kathleen Green, PhD  
*President-elect*  
Victoria Werth, MD  
*Vice President-elect*  
Thomas Lawley, MD  
*Immediate Past President*

Robert Swerlick, MD  
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Russell P. Hall, III, MD  
*Assistant Secretary-Treasurer*  
Paul Bergstresser, MD  
*JID Editor*  
Lowell Goldsmith, MD MPH  
*SID Senior Medical and Scientific Advisor*

## Board of Directors

Angela Christiano, PhD  
Lisa Beck, MD  
Richard Eckert, PhD  
Richard Gallo, MD/PhD  
Sewon Kang, MD  
Alexa Kimball, MD MPH  
Brian Nickoloff, MD/PhD  
David Rubenstein, MD/PhD  
Anton Stuetz, PhD  
Mark Udey, MD/PhD  
Keith Choate, MD/PhD  
Todd Becker, MD/PhD

# Welcome to the 70<sup>th</sup> SID Annual Meeting

On behalf of the Society for Investigative Dermatology (SID), we welcome you to the SID 70th Annual Meeting. The Society strives to offer programming that reaches all members of the dermatology and cutaneous biology research communities—from basic science researchers and clinicians to students and residents; attendees hail from academia, government and industry. We are dedicated to the presentation of new research findings, exchange of information and ideas, education of the clinical, scientific, and commercial communities. We are a diverse community of discovery.

Our host city—Atlanta (originally referred to as Marthasville)—was established in 1837 as a hub connecting the US railway system. A hundred years later, the SID was founded. Our attendees represent over 30 countries from around the world and conduct research in dermatology, cutaneous biology, and a variety of other specialties and disciplines. For the next four days these entities will overlap to serve as a modern knowledge hub, connecting over 1,500 attendees from around the globe.

The scientific program has been developed to inform and engage members of many other communities in order to establish new venues for exchange and collaboration. We thank the 2009-2010 Committee on Scientific Programs for their dedication in developing this program.

## Committee on Scientific Programs

### Co-Chairs

Philip Fleckman, MD  
Xiao-Jing Wang, MD/PhD

### Committee Members

Jack Arbiser, MD/PhD  
James T. Elder, MD/PhD  
Michael Girardi, MD  
Christina Herrick, MD/PhD  
Tom Hornyak, MD/PhD  
David Margolis, MD/PhD  
Anthony Oro, MD/PhD  
Julie Segré, PhD

Welcome to Atlanta. We encourage you to return your meeting evaluation forms so we can incorporate your feedback into the development of future educational offerings.



Richard A. Clark, MD  
President



Robert Swerlick, MD  
Secretary-Treasurer



Russell Hall, MD  
Asst. Secretary-Treasurer



Society for  
Investigative  
Dermatology

# CME Statement & Objectives

The Duke Department of Dermatology presents the 2010 Society for Investigative Dermatology Annual Meeting.  
Jointly sponsored by:



## Commercial Support Statement

This CME activity is supported by educational grants from Amgen, Centocor, and Merz Pharmaceuticals, LLC.

## Purpose

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.

## Expected Results

Activities are primarily designed to improve competence, defined as the skills, abilities and strategies a physician would put into practice in the evaluation, diagnosis and management of patients with skin diseases. These activities will bring clinicians to the cutting edge of new diagnostic techniques, provide increased understanding of the pathogenesis of disease and in the long term improve patient outcome using evidence based data. For researchers, education is designed to improve research skills, abilities and strategies.

Results of SID education are expected to include a change in knowledge and competence as measured by post meeting evaluations, an ability to describe how new knowledge may be applied to research; a reported intent to apply new knowledge by making changes in research strategies; and a description of how new knowledge has been applied.

## Faculty Listing

### Activity Medical Director:

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

### Activity Co-Director:

Robert Swerlick, MD  
Associate Professor and Chair  
Emory University

### Summary of Faculty Disclosure/Conflict Resolution

### Staff and Content Validation Reviewer Disclosure

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

## Resolution of Conflicts of Interest

In accordance with the ACCME Standards for Commercial Support of CME, the Duke University School of Medicine implemented 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

The following speakers and/or planning committee members have indicated they have no relationship(s) with industry to disclose relative to the content of this CME activity:

- Rafi Ahmed, PhD
- Masayuki Amagai, MD/PhD
- Wilma Bergfeld, MD
- Paul Bergstresser, MD
- Richard Clark, MD
- Oscar Colegio, MD/PhD
- Edward Cowen, MD/MHSc
- Ponciano Cruz, MD
- Michael Detmar, MD
- Paolo G. Dotto, MD/PhD
- James T. Elder, MD/PhD
- Jamison Feramisco, MD/PhD
- Richard Gallo, MD/PhD
- Sam Hwang, MD/PhD
- Heidi Jacobe, MD
- Stephen Katz, MD/PhD
- Alexa Kimball, MD MPH
- Heidi Kong, MD
- Maranke Koster, PhD
- Robert Lavker, PhD
- Lu Q. Le, MD/PhD
- My Mahoney, PhD
- Arlo Miller, MD/PhD
- Paul Nghiem, MD/PhD
- Susan Schayes, MD
- Helen Selser, MD
- Robert A. Swerlick, MD
- Jouni Uitto, MD/PhD
- Robert Vandre, DDS/MS
- Xiao-Jing Wang, MD/PhD

The following speakers/planning committee members have indicated that they have relationship with industry to disclose. Presenters for minisymposium sessions will verbally disclose any relevant conflicts on interest prior to their presentations.

**Marcus Bosenberg, MD/PhD**, fulfills the role of Consultant for AVEO Pharmaceuticals.

**Steven T Boyce, PhD**, fulfills the role of Stockholder - Consultant for Lonza Walkersville Inc.

**Rachael Clark, MD/PhD**, fulfills the role of Consultant for Graceway Pharmaceuticals. Advisory Board Member for Therakos.

**Andrzej Dlugosz, MD**, fulfills the role of Consultant for Enzon Pharmaceuticals.

**Kristina Callis Duffin, MD**, fulfills the role of Speaker for Abbott Laboratories. Speaker - advisory board member for Amgen. Speaker for Johnson & Johnson.

**Ervin Epstein, MD**, fulfills the role of Advisory Board Member for Genentech. Consultant for Novartis.

**Philip Fleckman, MD**, fulfills the role of Advisory Board Member for Schering-Plough.

**Markus Frank, MD**, fulfills the role of Advisory Board Member for Ticeba GmbH Heidelberg Germany.

**Joel M Gelfand, MD/MSCE**, fulfills the role of Principal Investigator for Abbott Pharmaceuticals. Consultant for Abbott Pharmaceuticals. Principal Investigator for Amgen. Consultant for Amgen. Consultant for Celgene. Principal Investigator for Genentech. Consultant for Novartis. Principal Investigator for Novartis. Principal Investigator for Pfizer. Consultant for Centocor.

**Michael Girardi, MD**, fulfills the role of Advisory Board Member for Pfizer.

**Doug Grossman, MD/PhD**, fulfills the role of Consultant for GlaxoSmithKline.

**Russell P. Hall, MD**, fulfills the role of Principal Investigator for Centocor. Principal Investigator for Genentech. Principal Investigator for OSI Pharmaceuticals Inc.

**Adam J. Katz, MD**, fulfills the role of Consultant for LifeNet Health. Stockholder for PluroGen Therapeutics Inc. Inventor Founder for The GID Group. Inventor for Artecel Inc..

**Sancy Leachman, MD/PhD**, fulfills the role of Principal Investigator for Myriad Genetics.

**Raphael Lehrer, PhD**, fulfills the role of Employment for CollabRx. Founder for CollabRx.

**Wilson Liao, MD**, fulfills the role of Consultant for Kinemed Inc. Advisory Board Member for PsoriasisDx. Speaker for GlaxoSmithKline.

**Douglas Lowy, MD**, fulfills the role of Inventor for NIH.

**Anthony Oro, MD/PhD**, fulfills the role of Advisory Board Member for Genentech.

**Amy S Paller, MD**, fulfills the role of Principal Investigator for Amgen. Principal Investigator for Johnson & Johnson. Advisory Board Member for Johnson & Johnson. Principal Investigator for Astellas. Principal Investigator for Leo. Principal Investigator for Regenerix. Consultant for SkinMedica. Consultant for Galderma. Consultant for Promius. Consultant for Astellas.

**Abrar Qureshi, MD/MPH**, fulfills the role of Principal Investigator for Amgen. Consultant for Pfizer. Consultant for Centocor. Consultant for Abbott Pharmaceuticals.

**Nicholas John Reynolds, MD**, fulfills the role of Advisory Board Member for Basilea Pharmaceutica. Advisory Board Member for Abbott Laboratories. Expert Reviewer for All Global Limited. Advisory Board Member for Janssen. Advisory Board Member for Succinct Healthcare Company. Expert Reviewer for Chugai Pharmaceutical Co Ltd. Consultant for Janssen. Principal Investigator for Stiefel Laboratories UK Ltd. Principal Investigator for Astra Zeneca. BSID annual meeting 2009 for Stiefel Laboratories UK Ltd.

**Alain Rook, MD**, fulfills the role of Consultant - Consultant for Johnson & Johnson - Hy Biopharma.

**Raymond F Schinazi, PhD/DSc**, receives royalties from GlaxoSmithKline.

**Thomas Schwarz, MD**, fulfills the role of Advisory Board Member for Abbott Laboratories. Principal Investigator for Johnson & Johnson. Advisory Board Member for Novartis. Expert Reviewer for Proctor & Gamble.

**John T Seykora, MD/PhD**, fulfills the role of Consultant for Merck. Advisory Board Member for Sanofi-Aventis - Signum Pharmaceuticals.

**John R. Stanley, MD**, is affiliated with Life Sciences. Stockholder for GE.

**Hensin Tsao, MD**, fulfills the role of Consultant for SciBASE.

**Victoria Patricia Werth, MD**, fulfills the role of Consultant for Medimmune. Principal Investigator for Orphan.

#### 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 be discussing information about pharmaceutical agents that is outside of U.S. Food and Drug Administration approved labeling. Disclosure of off-label uses will be noted by presenters during sessions, if applicable.

#### 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 activity evaluation form and return it 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

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.

#### Designation

The Duke University School of Medicine designates this educational activity for a maximum of 37.75 AMA PRA Category 1 Credit(s)<sup>TM</sup>. Physicians should only claim credit commensurate with the extent of their participation in the activity.

# Meeting-at-a-Glance

## Wednesday, May 5, 2010

<b>Resident Retreat for Future Academicians</b> Room 309-311, Hilton Atlanta	7:30 am - 3:00 pm
<b>SID Board of Directors Meeting</b> Room 206, Hilton Atlanta	8:00 am - 2:00 pm
<b>Registration</b> Lobby Registration Desk, Hilton Atlanta	8:00 am - 8:00 pm
<b>International PC Consortium (PC Project)</b> Salon C, Hilton Atlanta	9:00 am - 12:00 pm
<b>Translational Research Symposium</b> <i>Personalized Genetics in Medicine: Are We There Yet?</i> Salons A/B, Hilton Atlanta	12:00 pm - 3:00 pm
<b>Irvin H. Blank Forum</b> <i>What's New in Skin Cancer: How Good Cells Go Bad</i> Salon A/B, Hilton Atlanta	3:00 pm - 5:00 pm
<b>Albert M. Kligman Tribute</b> Grand Ballroom, Hilton Atlanta	5:00 pm - 5:30 pm
<b>Albert M. Kligman/Phillip Frost Leadership Lecture</b> <i>Personal and Scientific Lessons from My Studies of Pemphigus</i> John Stanley, MD Grand Ballroom, Hilton Atlanta	5:30 pm - 6:00 pm
<b>State-of-the-Art Plenary Lecture 1</b> <i>Mechanisms of Organogenesis Through the Study of Hedgehog Signaling</i> Anthony Oro, MD/PhD Grand Ballroom, Hilton Atlanta	6:00 pm - 6:30 pm
<b>State-of-the-Art Plenary Lecture 2</b> <i>Microbial Diversity of Human Skin</i> Heidi Kong, MD Grand Ballroom, Hilton Atlanta	6:30 pm - 7:00 pm
<b>State-of-the-Art Plenary Lecture 3</b> <i>Skin Development and Disease: The p63 Story</i> Maranke Koster, PhD Grand Ballroom, Hilton Atlanta	7:00 pm - 7:30 pm
<b>Welcome Reception</b> <i>FREE TO ALL MEETING ATTENDEES</i> Salon West Corridor, Hilton Atlanta	7:30 pm - 9:30 pm

Indicates CME Credit Offered

## Thursday, May 6, 2010

<b>Registration</b> Lobby Registration Desk, Hilton Atlanta	7:30 am - 4:00 pm
<b>Plenary Session I</b> Grand Ballroom, Hilton Atlanta	8:00 am - 9:00 am
<b>Herman Beerman Lecture</b> <i>Towards Curative Therapies for HIV and HCV</i> Raymond Schinazi, PhD Grand Ballroom, Hilton Atlanta	9:00 am - 9:30 am
<b>Naomi M. Kanof Lecture</b> <i>Current and Future Preventive HPV Vaccines: Implications from the Virus Life Cycle</i> Douglas Lowy, MD Grand Ballroom, Hilton Atlanta	9:30 am - 10:00 am
<b>American Skin Association Achievement Award</b> Grand Ballroom, Hilton Atlanta	10:00 am - 10:10 am
<b>David Martin Carter Mentor Award</b> Grand Ballroom, Hilton Atlanta	10:10 am - 10:15 am
<b>Poster Session I/Technical Exhibits Open w/Coffee Break</b> <i>Odd 001-297/Even 298-596</i> Galleria Exhibit Hall, Hilton Atlanta	10:00 am - 12:00 pm
<b>Clinical Scholars Plenary Session</b> Salon A, Hilton Atlanta	10:00 am - 12:00 pm
<b>Post Doctoral Luncheon</b> <i>TICKETED EVENT; PRE-REGISTRATION REQUIRED</i> Salon D, Hilton Atlanta	12:00 pm - 2:00 pm
<b>Satellite Symposium I</b> <i>Regenerative Medicine</i> Grand Ballroom, Hilton Atlanta	12:00 pm - 2:00 pm
<b>Resident Symposium</b> <i>Insights into an Academic Career</i> 212-213, Hilton Atlanta	2:00 pm - 5:00 pm
<b>Cutaneous T Cell Lymphoma Symposium</b> Salon A, Hilton Atlanta	2:00 pm - 5:30 pm
<b>Concurrent Minisymposia</b> <i>Pigmentation and Melanoma</i> Salon C	2:00 pm - 5:30 pm
<i>Angiogenesis, Vascular Biology and Wound Healing</i> Room 205	
<i>Epidermal Structure and Function</i> Room 206-207	
<i>Immunology I: Adaptive Immunity</i> Salon B	
<i>Genetic Disease, Gene Regulation &amp; Gene Therapy</i> Room 208-209	
<b>Social Event</b> <i>TICKETED EVENT; TICKETS MUST BE PURCHASED IN ADVANCE</i> See page 32 for additional information; Buses depart from the Hilton Harris Street exit beginning at 5:00 p.m. Georgia Aquarium	5:00 pm - 11:00 pm

## **Friday, May 7, 2010**

<b>Registration</b>	7:30 am - 4:00 pm
Lobby Registration Desk, Hilton Atlanta	
<b>Business Meeting for Members</b>	7:45 am - 8:30 am
Grand Ballroom, Hilton Atlanta	
<b>Plenary Session II</b>	8:30 am - 9:30 am
Grand Ballroom, Hilton Atlanta	
<b>Stephen Rothman Award</b>	9:30 am - 9:40 am
<i>Presented to Dennis Roop, PhD</i>	
Grand Ballroom, Hilton Atlanta	
<b>Eugene M. Farber Lecture</b>	9:40 am - 10:10 am
<i>Psoriasis: The Path of Translational Medicine</i>	
James G. Krueger, MD/PhD	
Grand Ballroom, Hilton Atlanta	
<b>State-of-the-Art Plenary Lecture 4</b>	10:15 am - 10:45 am
<i>Pemphigus Vulgaris as a Paradigm of Autoimmune Disease</i>	
Masayuki Amagai, MD/PhD	
Grand Ballroom, Hilton Atlanta	
<b>State-of-the-Art Plenary Lecture 5</b>	10:45 am - 11:15 am
<i>The Role of Cadherins in Normal and Diseased Skin</i>	
Carien Niessen, PhD	
Grand Ballroom, Hilton Atlanta	
<b>Poster Session II/Technical Exhibits Open w/Coffee Break</b>	11:15 am - 1:15 pm
<i>Even 002-296/Odd 597-893</i>	
Galleria Exhibit Hall, Hilton Atlanta	
<b>Clinical Scholars Program</b>	11:30 am - 1:30 pm
Salon A, Hilton Atlanta	
<b>Satellite Symposium II</b>	12:00 pm - 2:00 pm
<i>Emerging Mechanism-based Therapies for Skin Cancer</i>	
Grand Ballroom, Hilton Atlanta	
<b>Research in Cutaneous Surgery Symposium</b>	1:30 pm - 4:30 pm
Salon B, Hilton Atlanta	
<b>Concurrent Minisymposia</b>	2:00 pm - 5:30 pm
<i>Autoimmunity and Inflammation</i>	
Salon C	
<i>Hair and Cutaneous Development I: Embryonic Skin Development / Stem Cell Functions</i>	
Salon D	
<i>Growth Factors &amp; Signal Transduction</i>	
Room 208-209	
<i>Carcinogenesis &amp; Cancer Genetics</i>	
Room 206-207	
<i>Epidemiology/Health Services Research</i>	
Room 204	
<b>SID-AAD Co-Morbidity Conference</b>	2:00 pm - 5:30 pm
Salon E, Hilton Atlanta	
<b>North American Hair Research Society Scientific Meeting</b>	6:00 pm - 9:30 pm
Salon B, Hilton Atlanta	
<b>Trainee Dinner Session</b>	7:30 pm - 9:30 pm
<i>TICKETED EVENT; TICKETS MUST BE PURCHASED IN ADVANCE</i>	
Crystal Executive Ballroom, Hilton Atlanta	

## **Saturday, May 8, 2010**

<b>SID Board of Directors Meeting</b>	7:00 am - 8:00 am
Room 203, Hilton Atlanta	
<b>Registration</b>	7:30 am - 12:00 pm
Lobby Registration Desk, Hilton Atlanta	
<b>Plenary Session III</b>	8:00 am - 9:00 am
Grand Ballroom, Hilton Atlanta	
<b>William Montagna Lecture</b>	9:00 am - 9:30 am
<i>Inherited Skin Disease: Causes and Cures</i>	
W.H. Irwin McLean, PhD	
Grand Ballroom, Hilton Atlanta	
<b>American DermatoEpidemiology Network Business/Scientific Session</b>	9:00 am - 1:30 pm
Room 204-205, Hilton Atlanta	
<b>Julius Stone Lecture</b>	9:30 am - 10:00 am
<i>Immune Strategies for Treating Chronic Viral Infections</i>	
Rafi Ahmed, PhD	
Grand Ballroom, Hilton Atlanta	
<b>Clinical Scholars Program</b>	10:00 am - 12:00 pm
Salon A, Hilton Atlanta	
<b>Poster Session III/Technical Exhibits Open w/Coffee Break</b>	10:00 am - 12:00 pm
<i>Odd 299-595/Even 598-894</i>	
Galleria Exhibit Hall, Hilton Atlanta	
<b>Concurrent Minisymposia</b>	2:00 pm - 5:30 pm
<i>Immunology II: Innate Immunity &amp; Microbiology</i>	
Salon C	
<i>Cell Adhesion/Matrix Biology</i>	
Salon B	
<i>Clinical Research and Therapeutics</i>	
Salon E	
<i>Photobiology</i>	
Salon A	
<i>Hair and Cutaneous Development II: Hair Differentiation &amp; Cycling</i>	
Salon D	

# Full Schedule

## Wednesday, May 5, 2010

<b>Resident Retreat for Future Academicians</b>	7:30 am - 3:00 pm
Room 309-311, Hilton Atlanta	
<b>SID Board of Directors Meeting</b>	8:00 am - 2:00 pm
Room 206, Hilton Atlanta	
<b>Registration</b>	8:00 am - 8:00 pm
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<b>International PC Consortium (PC Project)</b>	9:00 am - 12:00 pm
Salon C, Hilton Atlanta	
<b>Translational Research Symposium</b>	12:00 pm - 3:00 pm
<i>Personalized Genetics in Medicine: Are We There Yet?</i>	
Salons A/B, Hilton Atlanta	
<b>Irvin H. Blank Forum</b>	3:00 pm - 5:00 pm
<i>What's New in Skin Cancer: How Good Cells Go Bad</i>	
Salon A/B, Hilton Atlanta	
<b>Albert M. Kligman Tribute</b>	5:00 pm - 5:30 pm
Grand Ballroom, Hilton Atlanta	
<b>Kligman/Frost Leadership Lecture</b>	5:30 pm - 6:00 pm
<i>Personal and Scientific Lessons from My Studies of Pemphigus</i>	
John Stanley, MD	
Grand Ballroom, Hilton Atlanta	
<b>State-of-the-Art Plenary Lecture 1</b>	6:00 pm - 6:30 pm
<i>Mechanisms of Organogenesis Through the Study of Hedgehog Signaling</i>	
Anthony Oro, MD/PhD	
Grand Ballroom, Hilton Atlanta	
Presiders: Philip Fleckman, MD and Xiao-Jing Wang, MD/PhD	
<b>State-of-the-Art Plenary Lecture 2</b>	6:30 pm - 7:00 pm
<i>Microbial Diversity of Human Skin</i>	
Heidi Kong, MD	
Grand Ballroom, Hilton Atlanta	
Presiders: Philip Fleckman, MD and Xiao-Jing Wang, MD/PhD	
<b>State-of-the-Art Plenary Lecture 3</b>	7:00 pm - 7:30 pm
<i>Skin Development and Disease: The p63 Story</i>	
Maranke Koster, PhD	
Grand Ballroom, Hilton Atlanta	
Presiders: Philip Fleckman, MD and Xiao-Jing Wang, MD/PhD	
<b>Welcome Reception</b>	7:30 pm - 9:30 pm
Salon West Corridor, Hilton Atlanta	

## Thursday, May 6, 2010

<b>Registration</b>	7:30 am - 4:00 pm
Lobby Registration Desk, Hilton Atlanta	
<b>Plenary Session I</b>	8:00 am - 9:00 am
Grand Ballroom, Hilton Atlanta	
Presiders: Richard Clark, MD and Kathleen Green, PhD	
<b>1. Genomic approaches to the investigation of wound microbiology and pathogenesis.</b> <u>A Han</u> , J Zenilman, J Melendez, E Mongodin, A Agostinho, G James, M Shirtliff, A Rickard and G Lazarus. Baltimore, MD; Bozeman, MT and Binghamton, NY. <i>8:00 a.m. Poster #001</i>	
<b>2. p38 alpha MAPK is not required for the loss of intercellular adhesion in pemphigus vulgaris.</b> <u>X Mao</u> , Y Sano, JM Park and AS Payne. Philadelphia, PA and Boston, MA. <i>8:12 a.m. Poster #212</i>	
<b>3. Micronized sunscreen particles were not shown to penetrate beyond the stratum corneum in adults and children.</b> <u>M Mack</u> , GN Stamatatos and P Horowitz. Skillman, NJ; Issy-les-Moulineaux, France and Valencia, CA. <i>8:24 a.m. Poster #259</i>	
<b>4. Genome organiser and special AT-rich binding protein Satb1 controls the establishing tissue-specific chromatin organization during development of the epidermis.</b> MY Fessing, MR Gdula, AN Mardaryev, AA Sharov, TY Sharova, KB Gordon, T Kohwi-Shigematsu and <u>VA Botchkarev</u> . Bradford, United Kingdom; Boston, MA and Berkeley, CA. <i>8:36 a.m. Poster #634</i>	
<b>5. Langerhans cell dendrites penetrate through epidermal tight junction barrier during foreign antigen uptake.</b> <u>A Kubo</u> , K Nagao, M Yokouchi, K Yoshida, H Sasaki and M Amagai. Tokyo, Japan and Osaka, Japan. <i>8:48 a.m. Poster #747</i>	
<b>Herman Beerman Lecture</b>	9:00 am - 9:30 am
<i>Towards Curative Therapies for HIV and HCV</i>	
Raymond Schinazi, PhD	
Grand Ballroom, Hilton Atlanta	
<b>Naomi M. Kanof Lecture</b>	9:30 am - 10:00 am
<i>Current and Future Preventive HPV Vaccines: Implications from the Virus Life Cycle</i>	
Douglas Lowy, MD	
Grand Ballroom, Hilton Atlanta	
<b>American Skin Association Achievement Award</b>	10:00 am - 10:10 am
Grand Ballroom, Hilton Atlanta	
<b>David Martin Carter Mentor Award</b>	10:10 am - 10:15 am
Grand Ballroom, Hilton Atlanta	
<b>Poster Session I/Technical Exhibits Open w/coffee break</b>	10:00 am - 12:00 pm
<i>Odd 001-297/Even 298-596</i>	
Galleria Exhibit Hall, Hilton Atlanta	

<b>Clinical Scholars Plenary Session</b>	10:00 am - 12:00 pm	9. <b>Thyrotropin-releasing hormone (TRH) is a novel pigmentary hormone <i>in situ</i> and <i>in vitro</i>.</b> KT Nguyen-Thi, E Gáspár, C Hardenbicker, D Pattwell, S Tiede and R Paus. Lübeck, Germany and Manchester, United Kingdom. 3:36 p.m. Poster #880	
<b>Salon A, Hilton Atlanta</b>			
<b>Post Doctoral Luncheon</b>	12:00 pm - 2:00 pm	10. <b>Investigation of melanosome-based mechanisms underlying melanoma treatment resistance.</b> ML Wei, M Chinen, DC Bennett, EV Sviderskaya, PJ Chang and Z Huang. San Francisco, CA and London, United Kingdom. 3:48 p.m. Poster #893	
<i>TICKETED EVENT; PRE-REGISTRATION REQUIRED</i>			
<b>Salon D, Hilton Atlanta</b>			
<b>Satellite Symposium I</b>	12:00 pm - 2:00 pm	11. <b>The melanocyte-specific glycoprotein, Pmel17/gp100, is released by ectodomain shedding.</b> T Hoashi, N Kanda, S Watanabe, S Sato and VJ Hearing. Tokyo, Japan and Bethesda, MD. 4:00 p.m. Poster #830	
<i>Regenerative Medicine</i>			
<b>Grand Ballroom, Hilton Atlanta</b>			
<b>Resident Symposium</b>	2:00 pm - 5:00 pm	12. <b>CYLD inhibits melanoma growth and metastasis.</b> H Ke and JY Zhang. Durham, NC. 4:12 p.m. Poster #869	
<i>Insights into an Academic Career</i>			
212-213, Hilton Atlanta		13. <b>Prognostic significance of BRMS1 expression in human melanoma.</b> Y Cheng, J Li, M Martinka and G Li. Vancouver, Canada. 4:24 p.m. Poster #852	
<b>Cutaneous T Cell Lymphoma Symposium</b>	2:00 pm - 5:30 pm	14. <b>The BH3-mimetic ABT-737 induces strong synergistic killing of melanoma cells when combined with the alkylating agent temozolomide.</b> SN Reuland, NB Goldstein, KA Partyka, YG Shellman and DA Norris. Aurora, CO. 4:36 p.m. Poster #884	
<b>Salon A, Hilton Atlanta</b>			
<b>Concurrent Minisymposium 1</b>	2:00 pm - 5:30 pm	15. <b>Novel 5,7-unsaturated steroid and secosteroidal products of cytochrome P450scc show antimelanoma activity.</b> A Slominski, Z Janjetovic, T Kim, MA Zmijewski, RC Tuckey, T Sweatman, W Li, J Zjawiony, J Chen, D Miller, R Bieniek, MN Nguyen, T Chen and M Holick. Memphis, TN; Gdansk, Poland; Crawley, Australia; University, MS and Boston, MA. 4:48 p.m. Poster #848	
<i>Pigmentation and Melanoma</i>			
<b>Salon C</b>			
Presiders: Anand Ganesan, MD and Maria Wei, MD/PhD			
<b>1. A mechanism of acquired resistance to B-RAF (V600E) inhibition in melanoma.</b> RS Lo, R Nazarian, Q Wang, X Kong, RC Koya, N Attar, H Sazegar, Z Chen, S Nelson, G McArthur, J Sosman, JS Economou and A Ribas. Los Angeles, CA; Melbourne, Australia and Nashville, TN. 2:00 p.m. Poster #831		<b>Concurrent Minisymposium 2</b>	2:00 pm - 5:30 pm
<b>2. The p16<sup>INK4A</sup> tumor suppressor regulates cellular oxidative stress.</b> NC Jenkins, T Liu, AG Goodson, G Samadashwily and D Grossman. Salt Lake City, UT. 2:12 p.m. Poster #827		<i>Angiogenesis, Vascular Biology and Wound Healing</i>	
<b>3. Regulation of human skin pigmentation <i>in situ</i> by repetitive UV exposure - molecular characterization of responses to UVA and/or UVB.</b> W Choi, Y Miyamura, R Wolber, C Smuda, W Reinhold, H Liu, L Kolbe and VJ Hearing. Bethesda, MD; Hamburg, Germany and Washington, DC. 2:24 p.m. Poster #843		Room 205	
<b>4. Exploring the role of keratinocyte-derived inflammation in melanogenesis.</b> A Zhuang, C Cataisson, R Zaidi, S Hakim, G Merlino and SH Yuspa. Bethesda, MD. 2:36 p.m. Poster #845		Presiders: Erwin Tschachler, MD and Nicole Ward, PhD	
<b>5. Targeting altered glucose metabolism in melanoma.</b> J Qin, H Xin and BJ Nickoloff. Chicago, IL. 2:48 p.m. Poster #863			
<b>6. Human Numb is required for proper mitotic entry and progression in melanoma cells.</b> TL Schmit, V Setaluri, VS Spiegelman and N Ahmad. Madison, WI. 3:00 p.m. Poster #862		<b>1. Lhx2 regulates Sox9 and Tcf4 to supply hair follicle-derived progenitor cells to the wound epithelium.</b> AN Mardaryev, AA Sharov, TY Sharova, MY Fessing, S Werner and VA Botchkarev. Bradford, United Kingdom; Boston, MA and Zurich, Switzerland. 2:00 p.m. Poster #017	
<b>7. Heat-treated vaccinia and attenuated vaccinia viruses induce apoptosis and inflammatory responses in melanoma cells and cause tumor regression in murine B16 melanoma model.</b> X Wu, P Dai, H Cao, T Parikh, T Feldman, X Jiang, AC Halpern, A Houghton, J Wolchok, S Shuman and L Deng. New York, NY. 3:12 p.m. Poster #847		<b>2. Pericyte-derived MFG-E8 regulates angiogenesis.</b> S Motegi, M Lu, M Heneghan, C Wu, T Chavakis and MC Udey. Bethesda, MD. 2:12 p.m. Poster #004	
<b>8. Association of high c-SKI/SnoN expression and efficient TGF-β/SMAD signaling in human melanoma cells.</b> D Javelaud, V Alexaki, L van Kempen, E Le Scolan, K Luo and A Mauviel. Orsay, France; Paris, France; Radboud, Netherlands and Berkeley, CA. 3:24 p.m. Poster #878		<b>3. Wilms Tumor 1 (WT-1) overexpression causes malignant transformation of endothelial cells.</b> R Chua, L Souza, M McLemore, MY Bonner, C Cohen and JL Arbiser. Atlanta, GA. 2:24 p.m. Poster #007	
		<b>4. Epidermal growth factor receptor-mediated reepithelialization in an <i>in vitro</i> diabetes model.</b> KK Quan and LG Hudson. Albuquerque, NM. 2:36 p.m. Poster #010	
		<b>5. The neuropeptide pituitary adenylate cyclase activating Polypeptide regulates neuro-vascular responses in human skin <i>in vivo</i>.</b> J Buddenkotte, S Seeliger, V Shpacovitch, A Schmidt-Choudhury, C Rosignoli, R Rukwied, M Schmelz, J Voegel and M Steinhoff. Muenster, Germany; Goettingen, Germany; Bochum, Germany; Sophia Antipolis, France; Mannheim, Germany and San Francisco, CA. 2:48 p.m. Poster #018	

6. A 124-amino acid peptide from secreted heat shock protein-90 (HSP90) is a novel wound repair agent. W Li, C Cheng, Z Zhao, J Dai, J Fan, M Chen and D Woodley. Los Angeles, CA. 3:00 p.m. Poster #021
7. Transgenic overexpression of keratinocyte-specific VEGF and Ang1 in combination promotes wound healing under nondiabetic but not diabetic conditions: A mechanistic role for Ang1-mediated delay in re-epithelialization. C Matheny, D Diaconu, G Adams, W Fu, D Knutson and NL Ward. Cleveland, OH. 3:12 p.m. Poster #019
8. Cholesterol synthesis mediates inhibition of wound healing via anti-inflammatory signals whereas statins reverse it. E Lebrun, O Stojadinovic, S Vukelic, I Pastar, S Resnik and M Tomic-Canic. Miami, FL. 3:24 p.m. Poster #024
9. TGF $\beta$  dependent differentiation of dermal fibroblasts to myofibroblasts is regulated by CLIC4. A Shukla, Y Yang, PV Chellamal, S Madanikia and SH Yuspa. Bethesda, MD. 3:36 p.m. Poster #023
10. Curcumin at nM concentrations limits burn injury progression and causes  $\beta$ -adrenergic receptor-mediated vasodilation. A Dewar, B Taira, AJ Singer, RA Clark and MD Frame. Stony Brook, NY. 3:48 p.m. Poster #014
11. Rapamycin blocks lymphangiogenesis induced by TSC2-null hamartoma cells. S Rajesh, S Li, J Wang, R Thangapazham, J Moss and TN Darling. Bethesda, MD. 4:00 p.m. Poster #016
12. Transgenic activation of lymphatic vessel function specifically reduces edema formation during acute skin inflammation. R Huggenberger, D Brander, K Alitalo and M Detmar. Zurich, Switzerland and Helsinki, Finland. 4:12 p.m. Poster #006
13. Calpain activity is essential for cell recruitment, myofibroblast differentiation and angiogenesis in early stages of skin wound. D Nassar, E Letavernier, L Baud, S Aractingi and K Khosrotehrani. Paris, France and Brisbane, Australia. 4:24 p.m. Poster #005
14. Psychological stress-induced delays in cutaneous wound healing reversed by inhibitor of the glucocorticoid activating enzyme, 11 $\beta$ -hydroxysteroid dehydrogenase type 1. J Youm, Y Uchida, PM Elias and WM Holleran. San Francisco, CA. 4:36 p.m. Poster #022
15. Effect of superoxide dismutase (SOD) /catalase mimetic EUK-207 on the radiation-induced skin injury. MM Jourdan, A Lopez, EB Olasz, JE Moulder, BL Fish, M Mader, A Schock, B Althouse, SD Doctrow and Z Lazarova. Milwaukee, WI and Boston, MA. 4:48 p.m. Poster #012

#### **Concurrent Minisymposium 3**

*Epidermal Structure and Function*

Room 206-207

Presiders: Spiro Getsios, MD and Matthias Schmuth, MD

2:00 pm - 5:30 pm

1. Differentiation of human induced pluripotent stem (iPS) cells into keratinocytes. M Itoh and AM Christiano. New York, NY. 2:00 p.m. Poster #493

2. Essential roles of the calcium-sensing receptor in epidermal differentiation and barrier function. C Tu, D Crumrine, M Man, W Chang, H Elalieh, PM Elias and DD Bikle. San Francisco, CA. 2:12 p.m. Poster #408
3. Loricrin deficient mice as a model for atopic dermatitis. A Huebner, Y Refaeli and DR Roop. Aurora, CO. 2:24 p.m. Poster #491
4. PKC $\delta$  and  $\eta$ , MEKK1, MEK6, MEK3 and p38 $\delta$  are essential mediators of normal keratinocyte differentiation. G Adhikary, Y Chew, EA Reece and RL Eckert. Baltimore, MD. 2:36 p.m. Poster #420
5. TIG3, a retinoid-regulated suppressor of psoriatic phenotype, suppresses keratinocyte cell division by inhibiting daughter centrosome separation in mitosis. H Jiang, CA Kraft, T Scharadin, X Wen, EA Rorke and RL Eckert. Baltimore, MD. 2:48 p.m. Poster #422
6. AP1 factor inactivation in suprabasal epidermis causes increased epidermal hyperproliferation and hyperkeratosis but reduced carcinogen-dependent tumor formation. EA Rorke, R Jans, G Adhikary, JF Crish, Q Li, D Berman and RL Eckert. Baltimore, MD. 3:00 p.m. Poster #424
7. A novel neuroendocrine control of human mitochondrial activity and biogenesis *in situ*: TRH and TSH power mitochondria in human epidermis. J Knüver, B Poeggeler, E Gáspár, T Bíró, T Hellwig-Bürgel, E Bodó, M Klinger and R Paus. Lübeck, Germany; Debrecen, Hungary; Nyíregyháza, Hungary and Manchester, United Kingdom. 3:12 p.m. Poster #475
8. Plakophilin-1 protects keratinocytes from pemphigus vulgaris IgG by promoting desmosome assembly. DK Tucker, M Saito and AP Kowalczyk. Atlanta, GA. 3:24 p.m. Poster #478
9. IGFBP7 plays a key role in the pathogenesis of psoriasis. J Nousbeck, M Bidder, D Fuchs, A Gat, M Gini, H Matz, B Meilik, I Goldberg, C Enk, O Sarig, A Gilhar and E Sprecher. Tel Aviv, Israel; Haifa, Israel and Jerusalem, Israel. 3:36 p.m. Poster #435
10. Role of podoplanin in human epidermis. M Honma and H Iizuka. Asahikawa, Japan. 3:48 p.m. Poster #457
11. Inactivation of autophagy in murine epidermal keratinocytes is associated with hair loss and sebaceous gland abnormalities. H Rossiter, C Barresi, M Buchberger, M Ghannadan, C Stremnitzer, R Gmeiner, M Komatsu, L Eckhart and E Tschaehler. Vienna, Austria; Tokyo, Japan and Neuilly, France. 4:00 p.m. Poster #477
12. Multiple mechanisms regulate expression of the p21<sup>Cip21</sup> cyclin-dependent kinase inhibitor leading to cessation of proliferation during keratinocyte differentiation. Y Chew and RL Eckert. Baltimore, MD. 4:12 p.m. Poster #421
13. Zebrafish type XVII collagen/the 180-kDa bullous pemphigoid antigen: Gene structures, expression profiles, and morpholino "knock-down" phenotypes. S Kim, H Choi, J So, C Kim, S Ho, M Frank, Q Li and J Uitto. Koyang, South Korea; Seoul, South Korea; Daejeon, South Korea and Philadelphia, PA. 4:24 p.m. Poster #449
14. CD133 enriches for murine epidermal stem cell *in vivo*. A Charruyer, LR Strachan, AS Toth, L Yue, ML Mancianti and R Ghadially. San Francisco, CA and Berkeley, CA. 4:36 p.m. Poster #479

- 15. Outside-in signaling through non-junctional Dsg3: A key switch in keratinocyte proliferation and differentiation.** K Berard, A Galichet, D Howald, MM Suter and EJ Müller. Bern, Switzerland. 4:48 p.m. Poster #494
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- Concurrent Minisymposium 4** 2:00 pm - 5:30 pm  
*Immunology I: Adaptive Immunity*  
 Salon B  
 Presiders: Rachael Clark, MD/PhD and Daniel Kaplan, MD/PhD
- 1. PD-1 expression is a marker of a tumor-reactive but functionally impaired lymphocyte population infiltrating human melanoma.** T Inozume, K Hanada, J Wunderlich, S Rosenberg, S Shimada and Y James. Bethesda, MD and Chuo, Japan. 2:00 p.m. Poster #679
  - 2. The spatio-temporal analysis of T cell behavior in contact hypersensitivity response.** G Egawa, T Honda, H Tanizaki, Y Miyachi and K Kabashima. Kyoto, Japan. 2:12 p.m. Poster #705
  - 3. Psoriasis lesions are enriched in IL-22+ and IL-17+ T cells with an associated increase in the IL-17+/IL-13+ T cell ratio.** CJ Rubin, M Riblett, A Lin, RJ Nair, JT Elder and AT Bruce. Ann Arbor, MI. 2:24 p.m. Poster #717
  - 4. Sustained skin specific inflammation elicits increases in circulating Ly-6C monocytes and spontaneous atherosclerotic plaque formation in a murine model of psoriasis.** Y Wang, H Gao, C Matheny, W Fu, D Diaconu, S Liu, KD Cooper, DI Simon, TS McCormick and NL Ward. Cleveland, OH. 2:36 p.m. Poster #701
  - 5. In vivo immunomodulatory functions of Abcb5<sup>+</sup> dermal mesenchymal stem cells.** T Schatton, J Yang, M Grimm, M Gasser, AM Waaga-Gasser, MH Sayegh and MH Frank. Boston, MA and Würzburg, Germany. 2:48 p.m. Poster #687
  - 6. Langerhans cells induce expansion of skin resident tregs in the absence of exogenous antigen, but activate T effector memory cells in the presence of microbial antigen.** J Seneschal, RA Clark and TS Kupper. Boston, MA. 3:00 p.m. Poster #693
  - 7. Desmoglein 3-specific TCR transgenic CD4<sup>+</sup> T cells that escape from central tolerance induce autoreactive dermatitis.** H Takahashi, S Koyasu, M Kuwana and M Amagai. Tokyo, Japan. 3:12 p.m. Poster #681
  - 8. Vaccination through epidermis with Vaccinia Virus (VACV) generates skin resident T cells, central memory T cells and lung resident T cells which protect the host independent of antibody.** L Lisa, T Tian and TS Kupper. Boston, MA. 3:24 p.m. Poster #713
  - 9. Platelet induction of monocyte-to-dendritic cell maturation.** TS Durazzo, CL Berger and RL Edelson. New Haven, CT. 3:36 p.m. Poster #721
  - 10. Discovery of a new dendritic cell subset, termed "gr-DC", derived from a granulocyte precursor.** S Geng, H Matsushima and A Takashima. Toledo, OH. 3:48 p.m. Poster #686
  - 11. Intratumoral injection of a novel STAT3 inhibitor elicited strong antitumor effects by provoking innate and acquired immunity.** T Okamoto, N Shibagaki, K Harada and S Shimada. Chuo, Japan. 4:00 p.m. Poster #684
  - 12. Topical genetic immunization and engineered dendritic cell-based vaccines raise CD8 T cell specific responses against a carcinogen-induced point mutation of the H-ras oncogene.** K Rudemiller, G Twitty, H Kim, A Rivera, J Roth, A Holzer, N Yusuf, C Elmets and L Timares. Birmingham, AL. 4:12 p.m. Poster #718
  - 13. Immune evasion in human Merkel cell carcinoma: A case of T cell narcolepsy.** Y Jiang, L Wang, J Teague, R Watanabe, M Lichtman, P Ngheim, TS Kupper and R Clark. Boston, MA and Seattle, WA. 4:24 p.m. Poster #690
  - 14. Retinoid Orphan Receptor-gamma (ROR-γ) deficient mice generate potent Th9 responses, but not Th17 responses, under Th17 polarizing conditions.** R Purwar, AM Jetten and TS Kupper. Boston, MA and Research Triangle, NC. 4:36 p.m. Poster #710
  - 15. Galectin-1 is a potent inducer of a regulatory phenotype on skin-resident memory T cells.** F Cedeno-Laurent, SR Barthel, RA Clark and CJ Dimitroff. Boston, MA. 4:48 p.m. Poster #675
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- Concurrent Minisymposium 5** 2:00 pm - 5:30 pm  
*Genetic Disease, Gene Regulation & Gene Therapy*  
 Room 208-209  
 Presiders: Peter Koch, MD/PhD and Eli Sprecher, MD/PhD
- 1. Differentiation of induced pluripotent stem cells into a multipotent keratinocyte lineage.** G Bilousova, J Chen and DR Roop. Aurora, CO. 2:00 p.m. Poster #563
  - 2. DNMT1 maintains epidermal progenitor function.** GL Sen, JA Reuter, DE Webster, L Zhu and P Khavari. Palo Alto, CA and Stanford, CA. 2:12 p.m. Poster #519
  - 3. Requirement of the VDR coactivator SRC3 in the induction of innate immune genes and permeability barrier formation.** Y Oda, V Bul, Y Uchida, M Man, PM Elias, Y Lai, RL Gallo and DD Bikle. San Francisco, CA and San Diego, CA. 2:24 p.m. Poster #554
  - 4. Hairless and the polyamine putrescine form a negative feedback loop in keratinocytes.** C Luke, C Alex, H Kim, S Gilmour and AM Christiano. New York, NY and Wynnewood, PA. 2:36 p.m. Poster #553
  - 5. Promoter elements and protein function of TNIP1 indicate a regulatory feedback loop.** C Zhang, P Encarnacao, I Gurevich and B Aneskievich. Storrs, CT. 2:48 p.m. Poster #557
  - 6. Aminoglycosides restore type VII collagen function by overcoming premature stop mutations: Implications for DEB therapy.** J Weinstein, J Cogan, Y Hou, S Martin, X Wang, P Ghasri, A South, D Woodley and M Chen. Los Angeles, CA and Dundee, United Kingdom. 3:00 p.m. Poster #548
  - 7. Gene suppression in skin through topical delivery of polyvalent siRNA-gold nanoparticles.** AS Paller, D Giljohann, D Zheng, H Iordanov, X Wang and CA Mirkin. Chicago, IL and Evanston, IL. 3:12 p.m. Poster #502
  - 8. High efficiency exogenous gene expression in primary human skin cells using Bacmam technology.** S Gopinath, R Newman, D Kuninger, L Wilson and GD Shipley. Eugene, OR. 3:24 p.m. Poster #558

9. **Tolerance induction towards type XVII collagen.** M Ettinger, IK Gratz, D Peckl-Schmid, C Gruber, T Johnson, K Mahnke, H Hintner and J Bauer. Salzburg, Austria and Heidelberg, Germany. 3:36 p.m. Poster #541
10. **Topical application of type VII collagen for wound healing and treatment of DEB.** P Ghasri, X Wang, A Ng, D Woodley and M Chen. Los Angeles, CA. 3:48 p.m. Poster #537
11. **Delineation of the mode of action of SAMD9, a protein deficient in the normophosphatemic subtype of familial tumoral calcinosis.** D Hershkovitz, A Aronheim, Y Gross, O Sarig, A Salzberg, N Avidan, J Uitto and E Sprecher. Haifa, Israel; Tel Aviv, Israel and Philadelphia, PA. 4:00 p.m. Poster #540
12. **The abca12 gene is required for normal zebrafish skin development - a model system for harlequin ichthyosis.** M Frank, Q Li, M Akiyama, H Shimizu, S Ho and J Uitto. Philadelphia, PA and Sapporo, Japan. 4:12 p.m. Poster #516
13. **Pemphigus vulgaris: A genome-wide association study.** O Sarig, S Bercovici, L Zoller, M Indelman, I Goldberg, R Bergman, S Israeli, N Sagiv, S Rosenberg, A Darvasi, D Geiger and E Sprecher. Tel Aviv, Israel; Haifa, Israel and Jerusalem, Israel. 4:24 p.m. Poster #525
14. **Genome-wide association study in alopecia areata implicates both innate and adaptive immunity.** L Petukhova, M Duvic, M Hordinsky, D Norris, V Price, Y Shimomura, H Kim, P Singh, A Lee, WV Chen, KC Meyer, R Paus, C Jahoda, CI Amos, PK Gregersen and AM Christiano. New York, NY; Houston, TX; Minneapolis, MN; Denver, CO; San Francisco, CA; Manhasset, NY; Lubeck, Germany; Manchester, United Kingdom and Durham, United Kingdom. 4:36 p.m. Poster #551
15. **A large mutational study in pachyonychia congenita.** NJ Wilson, SA Leachman, PR Hull, LM Milstone, ME Schwartz, CD Hansen and FJ Smith. Dundee, United Kingdom; Salt Lake City, UT; Saskatoon, Canada and New Haven, CT. 4:48 p.m. Poster #544
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- Social Event** 5:00 pm - 11:00 pm  
**TICKETED EVENT; TICKETS MUST BE PURCHASED IN ADVANCE**  
*See page 32 for additional information; Buses depart from the Hilton Harris Street exit beginning at 5:00 p.m.*  
 Georgia Aquarium
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2. **A milieu of regulatory elements in the epidermal differentiation complex (EDC) syntenic block: Implications for atopic dermatitis and psoriasis.** C de Guzman Strong, S Conlan, CB Deming, J Cheng, K Sears and JA Segre. Bethesda, MD and Urbana, IL. 8:42 a.m. Poster #543
3. **p63 and IRF6 are components of a common molecular pathway disrupted in ectodermal dysplasias.** F Moretti, G Spallone, E Botti, A Giunta, N Lo Iacono, G Merlo, A Mills, S Alemà, S Chimenti, L Guerrini and A Costanzo. Rome, Italy; Milan, Italy; Turin, Italy; Cold Spring Harbor, NY and Monterotondo, Italy. 8:54 a.m. Poster #626
4. **Neuraminidase 3 (Neu3) is critically involved in the initiation of the UVA stress response.** S Grether-Beck, R Walli, Z Kohne, H Brenden, I Felsner, M Majora, J Füllekrug, T Kurzchalia and J Krutmann. Düsseldorf, Germany; Heidelberg, Germany and Dresden, Germany. 9:06 a.m. Poster #792
5. **Regulation of asymmetric cell divisions in developing epidermis.** N Poulson and T Lechler. Durham, NC. 9:18 a.m. Poster #410
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**Stephen Rothman Award** 9:30 am - 9:40 am  
*Presented to Dennis Roop, PhD*

Grand Ballroom, Hilton Atlanta

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**Eugene M. Farber Lecture** 9:40 am - 10:10 am  
*Psoriasis: The Path of Translational Medicine*  
 James G. Krueger, MD/PhD  
 Grand Ballroom, Hilton Atlanta

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**State-of-the-Art Plenary Lecture 4** 10:15 am - 10:45 am  
*Pemphigus Vulgaris as a Paradigm of Autoimmune Disease*  
 Masayuki Amagai, MD/PhD  
 Grand Ballroom, Hilton Atlanta  
 Presiders: David Margolis, MD/PhD and Anthony Oro, MD/PhD

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**State-of-the-Art Plenary Lecture 5** 10:45 am - 11:15 am  
*The Role of Cadherins in Normal and Diseased Skin*  
 Carsten Niessen, PhD  
 Grand Ballroom, Hilton Atlanta  
 Presiders: David Margolis, MD/PhD and Anthony Oro, MD/PhD

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**Poster Session II/Technical Exhibits Open w/coffee break** 11:15 am - 1:15 pm  
*Even 002-296/Odd 597-893*  
 Galleria Exhibit Hall, Hilton Atlanta

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**Clinical Scholars Program** 11:30 am - 1:30 pm  
 Salon A, Hilton Atlanta

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**Satellite Symposium II** 12:00 pm - 2:00 pm  
*Emerging Mechanism-based Therapies for Skin Cancer*  
 Grand Ballroom, Hilton Atlanta

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**Research in Cutaneous Surgery Symposium** 1:30 pm - 4:30 pm  
 Salon B, Hilton Atlanta

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## Friday, May 7, 2010

**Registration** 7:30 am - 4:00 pm  
 Lobby Registration Desk, Hilton Atlanta

**Business Meeting for Members** 7:45 am - 8:30 am  
 Grand Ballroom, Hilton Atlanta

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**Plenary Session II** 8:30 am - 9:30 am  
 Grand Ballroom, Hilton Atlanta

Presiders: James T. Elder, MD/PhD and Michael Girardi, MD

- Generation of a hyper iNOS-expressing macrophage leads to a severe delay in wound healing.** BW Doreian, J Rosenjack, KD Cooper and KQ Lu. Cleveland, OH. 8:30 a.m. Poster #120

**Concurrent Minisymposium 6**  
*Autoimmunity and Inflammation*  
Salon C  
Presiders: Andrew Blauvelt, MD and Tom McCormick, PhD

1. **The psoriasis associated IL12B risk haplotype influences IL-12 and IL-23 expression and secretion.** JE Gudjonsson, X Xing, RP Nair, JJ Voorhees, A Johnston and JT Elder. Ann Arbor, MI. 2:00 p.m. Poster #119
2. **Targeted depletion of IL-23 by IL-4 *in vivo* impairs T cell mediated DTHR.** E Guenova, W Hoetzenrecker, N Hamdi, T Volz, Y Boettcher, M Schaller, M Röcken and T Biedermann. Tuebingen, Germany. 2:12 p.m. Poster #065
3. **Syndecan-4 is an important negative regulator of T cell immunity and a potentially useful target for treating diseases resulting from such immunity.** J Chung, M Tomihari, T Kojima, P Cruz and K Ariizumi. Dallas, TX and Nagoya, Japan. 2:24 p.m. Poster #047
4. **Plasmin is involved in the pathogenesis of psoriasis by inducing CCL20 expression in macrophages.** Q Li, F Ke and H Wang. Shanghai, China. 2:36 p.m. Poster #071
5. **Distinct roles of IL-23 and IL-17 in the development of psoriasis-like lesion in a mouse model.** K Nakajima, T Kanda, M Takaishi, K Miyoshi, JM Benson, MM Elloso, Y Iwakura, J DiGiovanni and S Sano. Kochi, Japan; Radnor, PA; Tokyo, Japan and Smithville, TX. 2:48 p.m. Poster #075
6. **A xenograft model of human skin to study the role of dendritic cells in inflammatory skin disease.** J Wegner-Kops, J Hemmerling, D Wolff, S Grabbe, E von Stebut, RG Meyer and RE Schopf. Mainz, Germany. 3:00 p.m. Poster #055
7. **Effects of defensamide, a newly synthesized epidermal AMP stimulating molecule, on oxazolone-induced atopic dermatitis animal model.** S Jeong, J Bae, M Kwon, H Kim, T Mauro, A Celli and S Lee. Daejeon, South Korea; Seoul, South Korea and San Francisco, CA. 3:12 p.m. Poster #073
8. **Ketoconazole activates nuclear factor-erythroid 2-related factor-2 (Nrf2) via aryl hydrocarbon receptor signaling pathway: A possible mechanism of anti-inflammatory effect.** G Tsuji, M Takahara, H Uchi, S Takeuchi, C Mitoma, Y Moroi and M Furue. Fukuoka, Japan. 3:24 p.m. Poster #074
9. **The TLR4 ligands Mrp8/14 play a critical role in the development of autoreactive CD8+ T cells.** K Loser, T Vogl, TA Luger, J Roth and S Beissert. Muenster, Germany. 3:36 p.m. Poster #057
10. **IgG4 and IgE anti-Dsg1 auto-antibodies recognize *Lutzomyia longipalpis* salivary gland antigens.** Y Qian, JG Valenzuela, G Flores, EA Rivitti, V Aoki, G Hans-Filho and LA Diaz. Chapel Hill, NC; Rockville, MD; Sao Paulo, Brazil and Campo Grande, Brazil. 3:48 p.m. Poster #117
11. **Human IgG1 mAb against human COL17 NC16A developed from BP patients induces blisters in experimental bullous pemphigoid model.** A Shibaki, Q Li, H Ujiie, G Wang, R Moriuchi, H Qiao, H Morioka, S Shinkuma, K Natsuga, HA Long, W Nishie and H Shimizu. Sapporo, Japan and Kumamoto, Japan. 4:00 p.m. Poster #063

12. **Passive transfer of dermatitis herpetiformis serum high in IgA anti-TG3 produces granular IgA deposition in the papillary dermis of human skin engrafted on SCID mice. JJ Zone, LA Schmidt, T Taylor, C Hull, M Sotiriou, T Jaskowski, H Hill and LJ Meyer.** Salt Lake City, UT. 4:12 p.m. Poster #054
13. **Systems level high-throughput and multiparametric analyses to elucidate cell death associated molecules involved in pemphigus vulgaris.** N Cirillo, A Lanza and SS Prime. Bristol, United Kingdom and Napoli, Italy. 4:24 p.m. Poster #062
14. **Modifying the heavy chain third complementarity determining region (H-CDR3) of pemphigus antibody to prevent pathogenicity but not binding suggests a novel approach to targeted therapy.** J Yamagami, AS Payne, S Kacir, K Ishii, DL Siegel and JR Stanley. Philadelphia, PA and Tokyo, Japan. 4:36 p.m. Poster #102
15. **The genetics of actively induced murine epidermolysis bullosa acquisita.** RJ Ludwig, K Bieber, S Müller, A de Castro Marques, D Banczyk, M Hirose, M Kasperkiewicz, N Ishii, A Recke, E Schmidt, J Westermann, D Zillikens and SM Ibrahim. Lübeck, Germany and Fukuoka, Japan. 4:48 p.m. Poster #037

**Concurrent Minisymposium 7**  
*Hair and Cutaneous Development I: Embryonic Skin Development / Stem Cell Functions*  
Salon D  
Presiders: Maranke Koster, PhD and Satrajit Sinha, PhD

1. **Dlx3 expression in neural crest-derived cells is required for normal hair and tooth development.** O Duverger, NB Gentile, AK Bartels, KM Maddox, AD Lee, J Okano and MI Morasso. Bethesda, MD. 2:00 p.m. Poster #644
2. **Regulation of Shh and Sox9 by Trps1 in the developing murine hair follicle.** KA Fantauzzo and AM Christiano. New York, NY. 2:12 p.m. Poster #643
3. **The ΔNp63 isoform is an essential regulator of epithelial development and stem cell renewal.** R Romano and S Sinha. Buffalo, NY. 2:24 p.m. Poster #650
4. **Important role of hair follicle stem cells for continuous sebaceous gland renewal.** M Petersson, H Brylka, A Kraus, D Fehrenbach and C Niemann. Cologne, Germany. 2:36 p.m. Poster #651
5. **Characterization of A20 epidermal-specific knockout mice.** S Lippens, B Gilbert, M Sze, L Vereecke, C McGuire, P Vandenebeeck, C Guerin, M Pasparakis, R Beyaert, W Declercq and G van Loo. Ghent, Belgium and Cologne, Germany. 2:48 p.m. Poster #633
6. **Dicer is required in adult skin for maintenance of rapidly proliferating hair follicle matrix cells, hair shaft formation, and catagen.** M Teta, Y Choi, T Andl, EP Murchison, A Nagy, GJ Hannon and SE Millar. Philadelphia, PA; Cold Spring Harbor, NY and Toronto, Canada. 3:00 p.m. Poster #636
7. **Role of Sostdc1 in hair follicle and mammary gland development.** K Närhi, M Tummers, I Thesleff and ML Mikkola. Helsinki, Finland. 3:12 p.m. Poster #640

8. **Dkk4 and Eda regulate distinctive developmental mechanisms for subtypes of mouse hair.** C Cui, M Kunisada, Y Piao, V Childress, M Ko and D Schlessinger. Baltimore, MD and Kobe, Japan. 3:24 p.m. Poster #612
9. **Identification of human ABCB5<sup>+</sup> dermal progenitor cells with multipotent differentiation plasticity.** S Kim, B Meier, T Schatton, B Wilson, Q Zhan, YH Loh, GQ Daley, MH Sayegh, Y Ziouta, C Ganss, K Scharffetter-Kochanek, GF Murphy, MH Frank and NY Frank. Boston, MA; Ulm, Germany and Heidelberg, Germany. 3:36 p.m. Poster #642
10. **Wnt/β-catenin- and depilation-induced activation of hair follicle stem cells requires chromatin regulatory protein Pygo2.** P Sun and X Dai. Irvine, CA. 3:48 p.m. Poster #664
11. **Deletion of dermal integrin beta-1 leads to adhesion, but not hair follicle morphogenesis, defects.** MC DeRouen, MP Marinkovich and AE Oro. Stanford, CA. 4:00 p.m. Poster #619
12. **Defining BMP functions in hair follicle stem cells homeostasis by conditional ablation or activation of BMP receptor 1A.** E Kandyba, Y Leung, Y Chen and K Kobilak. Los Angeles, CA. 4:12 p.m. Poster #665
13. **Generation of induced pluripotent stem cells by reprogramming human dermal papilla cells.** CA Higgins, M Ito, K Inoue, GD Richardson, CA Jahoda and AM Christiano. New York, NY and Durham, United Kingdom. 4:24 p.m. Poster #663
14. **Suppression of Wnt/β-catenin pathway maintains melanocyte stem cells.** P Rabbani, W Chou, M Takeo, M Zhou, J Nguyen, P Myung, L Chin, M Taketo, T Andl, S Millar, G Cotsarelis and M Ito. New York, NY; Philadelphia, PA; Nashville, TN; Boston, MA and Kyoto, Japan. 4:36 p.m. Poster #671
15. **Remodeling of hair-follicle associated lymphatic vessels is dependent on hair follicle development and hair cycle dependent changes in murine skin.** B Posey, J Nugent, K Gupta and ME Ericson. St. Paul, MN and Minneapolis, MN. 4:48 p.m. Poster #658

**Concurrent Minisymposium 8** 2:00 pm - 5:30 pm

*Growth Factors & Signal Transduction*

Room 208-209

Presiders: Dan Bikle, MD/PhD and John Seykora, MD/PhD

1. **Galectin-12 deficiency enhances lipolysis and reduces adiposity in mice.** R Yang, L Yu, J Graham, DK Hsu, K Lloyd, PJ Havel and F Liu. Sacramento, CA and Davis, CA. 2:00 p.m. Poster #599
2. **Role of Smad-interacting protein 1 (SIP1) in collagen synthesis of dermal fibroblasts.** M Teraishi, M Takaishi, M Ikeda, T Furukawa, T Fukada, S Shimoda, Y Asada and S Sano. Nankoku, Japan; Suita, Japan and Yokohama, Japan. 2:12 p.m. Poster #572
3. **Slug modulates ultraviolet radiation induction of calprotectin in keratinocytes.** J He and DF Kusewitt. Smithville, TX. 2:24 p.m. Poster #604
4. **The TβRII Expression Levels determine whether TGFβ activates or inhibits ERK without participation of TβRI.** A Han, B Bandyopadhyay, J Dai, J Fan, Y Li, M Chen, D Woodley and W Li. Los Angeles, CA. 2:36 p.m. Poster #588

5. **ErbB2 interacting protein (Erbin) binds unique domains of the desmoglein 1 C-terminus to form a complex that cooperatively promotes epidermal differentiation.** CL Simpson, R Harmon, S Getsios and KJ Green. Chicago, IL. 2:48 p.m. Poster #573

6. **Amphiregulin carboxy-terminal domain regulates autocrine keratinocyte growth and differentiation.** SW Stoll, L Rittié and JT Elder. Ann Arbor, MI. 3:00 p.m. Poster #606

7. **EphA2 negatively regulates epidermal Erk1/2-MAPK signaling and growth.** S Lin, K Gordon and S Getsios. Chicago, IL. 3:12 p.m. Poster #580

8. **Targeted inducible expression of wnt5a in adult mouse epidermis.** L Reilly, M Romanowska and J Foerster. Dundee, United Kingdom. 3:24 p.m. Poster #575

9. **STA-21, a stat3 inhibitor, induces differentiation of normal human epidermal keratinocytes and human keratinocyte derived cell lines.** M Takaishi, M Yokogawa, K Miyoshi, K Nakajima, J DiGiovanni and S Sano. Nankoku, Japan and Austin, TX. 3:36 p.m. Poster #578

10. **Receptor type protein tyrosine phosphatase beta directly regulates hepatocyte growth factor receptor function in human keratinocytes.** Y Xu, D Baker, W Xia, J Zhou, B Cha, JJ Voorhees and GJ Fisher. Ann Arbor, MI. 3:48 p.m. Poster #589

11. **Molecular regulation of neuropeptide receptors by peptidase endothelin-converting enzyme-1: Impact on inflammation and pruritus.** D Roosterman, GS Cottrell, M Feld, NW Bunnett and M Steinhoff. San Francisco, CA and Muenster, Germany. 4:00 p.m. Poster #585

12. **The role of the PLD2/AQP3/PG signaling module in keratinocyte proliferation and differentiation.** H Qin and WB Bollag. Augusta, GA. 4:12 p.m. Poster #594

13. **Deacetylated ganglioside GM3 activates uPAR/p38 MAP kinase signaling in caveolar domains.** X Wang, P Sun, J Liu, Q Yan and AS Paller. Chicago, IL. 4:24 p.m. Poster #591

14. **Th2 cytokines-induced dual oxidase 1 in human epidermal keratinocytes makes a positive feedback loop for IL-4/IL-13 signaling by augmenting STAT6 phosphorylation via oxidative inactivation of protein tyrosine phosphatase 1B.** S Hirakawa, R Saito, H Ohara, R Okuyama and S Aiba. Sendai, Japan and Yokahama, Japan. 4:36 p.m. Poster #581

15. **Tissue inhibitor of metalloproteinase 1 is induced in th1 and th17 t-helper cell subsets in a stat-dependent manner.** AS Adamson, A Laurence, K Ghoreschi, M Rittler, Y Kanno, L Wei, W Stetler-Stevenson and J O'Shea. Cambridge, MA and Bethesda, MD. 4:48 p.m. Poster #595

**Concurrent Minisymposium 9**

2:00 pm - 5:30 pm

*Carcinogenesis & Cancer Genetics*

Room 206-207

Presiders: Mitchell Denning, PhD and Peter Marinkovich, MD

1. **Deregulated hedgehog signaling in the pathogenesis of Barrett's disease and gastric adenocarcinoma.** AN Ermilov, J Ferris, J Pero, D Hong and AA Dlugosz. Ann Arbor, MI. 2:00 p.m. Poster #175

2. **The tumour suppressor gene BRM is downregulated in human skin cancer.** GM Halliday, JG Lyons, VL Bock, FJ Moloney, PW Sou, Y Zhou, AM Jones, LA McDonald, XX Huang and RA Scolyer. Sydney, Australia. 2:12 p.m. Poster #133
3. **XPC silencing in normal human keratinocytes induces AKT activation and triggers metabolic alterations that drive the formation of squamous cell carcinomas.** HR Rezvani, F Mazurier, AL Kim, N Ali, M Daly, H de Verneuil, A Taieb and DR Bickers. Bordeaux, France and New York, NY. 2:24 p.m. Poster #162
4. **Dysregulated ΔNp63α modulates p16 expression, blocks senescence, and promotes malignant conversion of keratinocytes.** WC Weinberg, RM Ponnampерuma, S Jay, S Ricci and L Ha. Bethesda, MD and Frederick, MD. 2:36 p.m. Poster #171
5. **Novel ATM/ATR pathway inhibitors sensitize p53-deficient cells to DNA-damaging agents *in vitro* and *in vivo*.** M Kawasumi, H Sloan, J Bradner and P Nghiem. Seattle, WA and Boston, MA. 2:48 p.m. Poster #180
6. **Negative regulation of Shh expression in a model of the RAS/MAPK syndromes.** A Mukhopadhyay, S Kumar and BD Yu. San Diego, CA. 3:00 p.m. Poster #657
7. **Inflammation blocks carcinogenesis in skin with severe barrier defect.** S Demehri, M Turkoz, A Turkoz and R Kopan. St. Louis, MO. 3:12 p.m. Poster #136
8. **Epidermal expression of a mutant CYLD promotes skin carcinogenesis and metastasis.** P Miliani de Marval, S Lutfeali, JY Jin, B Leshin and JY Zhang. Durham, NC. 3:24 p.m. Poster #158
9. **Akt inhibition suppresses the growth of basal cell carcinomas (BCCs) in Ptc1+/-/SKH-1 mice by blocking Akt and sonic hedgehog (Shh)-dependent pathways.** Y Zhu, JH Back, X Tang, M Athar, AL Kim and DR Bickers. New York, NY and Birmingham, AL. 3:36 p.m. Poster #159
10. **PAF receptor knockout mice exhibit increased chemical carcinogenesis and an increase in chronic PMA-induced inflammation.** RL Konger, A Kozman, RP Sahu, S DaSilva and JB Travers. Indianapolis, IN. 3:48 p.m. Poster #182
11. **ERB-041, an estrogen receptor beta agonist inhibits skin photocarcinogenesis in SKH-1 hairless mice.** T Singh, P Kapur, SC Chaudhary, CA Elemts, L Kopelovich and M Athar. Birmingham, AL and Bethesda, MD. 4:00 p.m. Poster #134
12. **mtDNA changes in fibroblasts alter intracellular ROS levels resulting in enhanced cellular proliferation, migration and invasion.** J Jandova, SP Gottesman and J Sligh. Tucson, AZ. 4:12 p.m. Poster #144
13. **Identification of rare skin cancer stem cells using a syngeneic mouse model.** BJ Kubick, K Murao and DR Roop. Aurora, CO. 4:24 p.m. Poster #181
14. **New cancer models assessed via quantitative transcriptome analysis.** TW Ridky, JM Chow, DJ Wong and PA Khavari. Palo Alto, CA and Stanford, CA. 4:36 p.m. Poster #186
15. **Aberrant cell proliferation by enhanced mitochondrial biogenesis through mtTFA in arsenical skin cancers.** C Lee, S Wu, C Hong, W Liao, G Chen, Y Wei and H Yu. Kaohsiung, Taiwan and Taipei, Taiwan. 4:48 p.m. Poster #145

**Concurrent Minisymposium 10**  
*Epidemiology/Health Services Research*  
 Room 204  
 Presiders: Suephy Chen, MD and Abrar Qureshi, MD MPH

1. **Effect of sun protective behaviors on vitamin D levels in the US population: NHANES 2003-2006.** E Linos, E Keiser, M Kanzler, K Sainani, W Lee and JY Tang. Stanford, CA and San Jose, CA. 2:00 p.m. Poster #370
2. **Vitamin D and nonmelanoma skin cancer in a cohort of Caucasian health maintenance organization osteoporosis patients.** MJ Eide, D Johnson, R Krajenta, G Jacobsen, DS Rao, HW Lim and CC Johnson. Detroit, MI. 2:12 p.m. Poster #372
3. **How do sun protective habits (SPH) relate to vitamin D? A cross-sectional study using NHANES.** SC Chen, E Veledar, A Soman and M Saraiya. Atlanta, GA. 2:24 p.m. Poster #368
4. **Association of prediagnostic serum Vitamin D levels with the development of basal cell carcinoma.** M Asgari, J Tang, M Warton, M Chren, C Quesenberry, D Bikle, R Horst, N Orentreich, J Vogelman and G Friedman. Oakland, CA; San Francisco, CA; Stanford, CA; Ames, IA and Cold Spring-on-Hudson, NY. 2:36 p.m. Poster #348
5. **Cumulative ultraviolet radiation flux and risk for incident skin cancer in the United States.** A Qureshi, R Vleugels, R Puett, TR Fears, F Laden and J Han. Boston, MA and Bethesda, MD. 2:48 p.m. Poster #401
6. **Obesity and the risk of skin cancer.** SZ Pothiawala, AA Qureshi, Y Li and J Han. Boston, MA. 3:00 p.m. Poster #367
7. **Second primary melanomas have similar characteristics to the initial primary melanoma on the same patient.** ME Ming and DB Shin. Philadelphia, PA. 3:12 p.m. Poster #369
8. **Methods to account for actinic keratoses (AK) burden.** SC Chen, N Hill, E Veledar, M Weinstock and CVA AK Raters Group. Atlanta, GA; Providence, RI and Washington DC. 3:24 p.m. Poster #385
9. **High-dose topical tretinoin for reducing multiplicity of actinic keratoses.** MA Weinstock, SF Bingham and . VATTC Trial Group. Providence, RI and Perry Point, MD. 3:36 p.m. Poster #373
10. **The compact SF-12 can detect both physical and mental impacts of psoriasis severity.** I Grozdev, D Kast, L Cao, D Carlson, K Kavlick, R Feig, P Pujari, B Schmotzer, D Babineau, E Kern, T McCormick, K Cooper and N Korman. Cleveland, OH. 3:48 p.m. Poster #375
11. **Prevalence of psoriasis severity and predictive value of psoriasis codes in The Health Improvement Network (THIN) — a population based study.** N Seminara, K Abuabara, D Shin, S Kimmel, DJ Margolis, AB Troxel and JM Gelfand. Philadelphia, PA. 4:00 p.m. Poster #355
12. **Depression and risk of incident psoriasis in US women: A prospective study.** PL Dominguez, J Han, G Curhan, HK Choi and AA Qureshi. Boston, MA. 4:12 p.m. Poster #388
13. **Association of IgE levels and eczema in the US population: Results from NHANES 2005-2006.** T Fu, E Keiser, E Linos, M Kanzler, K Sainani, A Lane and J Tang. Palo Alto, CA. 4:24 p.m. Poster #394

<b>14. Effect of tetracycline antibiotics for acne on the development of inflammatory bowel disease.</b> <u>MJ Fanelli</u> , JD Lewis, O Hoffstad and DJ Margolis. Philadelphia, PA. 4:36 p.m. Poster #354	<b>Julius Stone Lecture</b> 9:30 am - 10:00 am <i>Immune Strategies for Treating Chronic Viral Infections</i> Rafi Ahmed, PhD Grand Ballroom, Hilton Atlanta
<b>15. Evidence of reliability, reproducibility, and validity of the ItchyQoL in the veteran population.</b> <u>SP Kini</u> , S Coleman King, E Veledar, LK DeLong, Z Rice, J Kamalpour and SC Chen. Atlanta, GA. 4:48 p.m. Poster #387	<b>Clinical Scholars Program</b> 10:00 am - 12:00 pm Salon A, Hilton Atlanta
<b>SID-AAD Co-Morbidity Conference</b> 2:00 pm - 5:30 pm Salon E, Hilton Atlanta	<b>Poster Session III/Technical Exhibits Open w/coffee break</b> 10:00 am - 12:00 pm <i>Odd 299-595/Even 598-894</i> Galleria Exhibit Hall, Hilton Atlanta
<b>North American Hair Research Society Scientific Meeting</b> 6:00 pm - 9:30 pm Salon B, Hilton Atlanta	<b>Concurrent Minisymposium 11</b> 2:00 pm - 5:30 pm <i>Immunology II: Innate Immunity &amp; Microbiology</i> Salon C Presiders: Lloyd Miller, MD/PhD and Esther Von Stebut, MD
<b>Trainee Dinner Session</b> 7:30 pm - 9:30 pm <i>TICKETED EVENT; TICKETS MUST BE PURCHASED IN ADVANCE</i> Crystal Executive Ballroom, Hilton Atlanta	<b>1. TLR2-activation turn mast cells in skin sentinels against viruses.</b> Z Wang, Y Lai, DT McLeod, AL Cogen and <u>A Di Nardo</u> . La Jolla, CA. 2:00 p.m. Poster #740

## Saturday, May 8, 2010

<b>SID Board of Directors Meeting</b> 7:00 am - 8:00 am Room 203, Hilton Atlanta	<b>2. Orchestration of atopic dermatitis inflammation by <i>Staphylococcus aureus</i>: Toll-like receptor 2 ligands exaggerate dermatitis and Th1 responses.</b> <u>S Kaesler</u> , Y Böttcher, K Chen, E Guenova, U Hein, T Volz and T Biedermann. Tuebingen, Germany. 2:12 p.m. Poster #730
<b>Registration</b> 7:30 am - 12:00 pm Lobby Registration Desk, Hilton Atlanta	<b>3. <i>Staphylococcus aureus</i> derived monomeric peptidoglycan is a NOD2 ligand and aggravates TLR mediated inflammation by amplifying Th1 and Th17 responses.</b> <u>I Volz</u> , M Nega, J Buschmann, S Kaesler, E Guenova, M Röcken, F Götz and T Biedermann. Tübingen, Germany. 2:24 p.m. Poster #728
<b>Plenary Session III</b> 8:00 am - 9:00 am Grand Ballroom, Hilton Atlanta Presiders: Andrzej Dlugosz, MD and Richard Gallo, MD/PhD	<b>4. Survey of bacterial diversity on infant skin over the first year of life.</b> K Capone, SE Dowd, GN Stamatatos and <u>J Nikolovski</u> . Skillman, NJ; Issy-les-Moulineaux, France and Lubbock, TX. 2:36 p.m. Poster #744
<b>1. Follicle stem cell compartments differ in responsiveness to oncogenic Hedgehog signaling.</b> <u>M Grachtchouk</u> , J Pero, M Verhaegen, AN Ermilov, J Diener, J Ferris, LE Michael and AA Dlugosz. Ann Arbor, MI. 8:00 a.m. Poster #661	<b>5. Development of a <i>Staphylococcus aureus</i> superficial skin infection model in mice that uses advanced <i>in vivo</i> imaging to evaluate topical antimicrobial therapy and immune responses in real-time.</b> J Zussman, JS Cho, RI Ramos, NC Garcia, RL Modlin, J Kim and <u>LS Miller</u> . Los Angeles, CA. 2:48 p.m. Poster #748
<b>2. Lifetime UV exposure and risk for lentigo maligna melanoma.</b> <u>E Linos</u> , J Han and A Qureshi. Stanford, CA and Boston, MA. 8:12 a.m. Poster #371	<b>6. Isoprenylcysteine (IPC) analogs: A novel topical acne therapeutic possessing antimicrobial and anti-inflammatory activity against <i>Propionibacterium acnes</i>.</b> <u>X Feng</u> , JR Fernández, K Rouzard, AV González, E Perez, JB Stock, M Stock and JS Gordon. Monmouth Junction, NJ. 3:00 p.m. Poster #761
<b>3. Effector memory T cells persist long term in the skin, and their recirculation into blood is limited.</b> <u>X Jiang</u> , A Wagers, R Clark, L Liu, R Fuhlbrigge and T Kupper. Boston, MA. 8:24 a.m. Poster #712	<b>7. IL-23 and Th17 cytokines control cutaneous infection with <i>Candida albicans</i> as well as <i>C. albicans</i>-induced epidermal hyperplasia.</b> <u>S Kagami</u> , H Rizzo, S Kurtz and A Blauvelt. Portland, OR. 3:12 p.m. Poster #729
<b>4. In vivo regeneration of the follicular pigmentary unit with melanocyte progenitors from adult skin.</b> H Hwang, G Diwakar, MR Zaidi, GT Merlino and <u>TJ Hornyak</u> . Bethesda, MD. 8:36 a.m. Poster #874	<b>8. Leukotriene A4 Hydrolase (LTA4H) is expressed in leprosy lesions and variants are associated with susceptibility to mycobacterial diseases.</b> <u>JC Vary</u> , DM Tobin, SJ Dunstan, ND Bang, DA Hagge, S Khadge, M King, L Ramakrishnan and TR Hawn. Seattle, WA; Ho Chi Minh City, Viet Nam; Oxford, United Kingdom and Kathmandu, Nepal. 3:24 p.m. Poster #755
<b>William Montagna Lecture</b> 9:00 am - 9:30 am <i>Inherited Skin Disease: Causes and Cures</i> W.H. Irwin McLean, PhD Grand Ballroom, Hilton Atlanta	
<b>American DermatoEpidemiology Network Business/Scientific Session</b> 9:00 am - 1:30 pm Room 204-205, Hilton Atlanta	

9. **IL-22 contributes to disease progression in Leishmania major-infected mice.** S Brosch, S Haak, B Lorenz, B Becher and E von Stebut. Mainz, Germany and Zürich, Switzerland. 3:36 p.m. Poster #756
10. **Epidermal Langerhans cells act as negative regulators of a protective anti-Leishmania response, whereas dermal CD11chigh dendritic cells promote healing.** K Kautz-Neu, D John, S Dinges, M Noordegraaf, BE Clausen and E von Stebut. Mainz, Germany; Rotterdam, Netherlands and Amsterdam, Netherlands. 3:48 p.m. Poster #754
11. **Investigating the influence of Langerhans cells on keratinocyte proliferative response to chemical and ultraviolet B (UVB) exposure.** K Golubets, R Filler, J Lewis, DA Smith, W Zhang, DE Brash, MW Bosenberg, WE Damsky and M Girardi. New Haven, CT. 4:00 p.m. Poster #760
12. **The Activating Transcription Factor 3 (ATF3) determines the state of postseptic immune suppression in humans.** W Hoetzenegger, B Echtenacher, E Guenova, J Brueck, K Hoetzenegger, T Biedermann, K Ghoreschi and M Roecken. Tuebingen, Germany; Regensburg, Germany and Vienna, Austria. 4:12 p.m. Poster #743
13. **Dietary vitamin D3 protects against bacterial skin infection.** B Muehleisen, T Jaleel, K Radek and R Gallo. San Diego, CA; Birmingham, AL and Maywood, IL. 4:24 p.m. Poster #726
14. **Production of LL-37 during herpes simplex virus types 2 infection in human keratinocytes enhances HIV susceptibility in Langerhans cells.** Y Ogawa, T Kawamura, A Blauvelt and S Shimada. Yamanashi, Japan and Portland, OR. 4:36 p.m. Poster #738
15. **TNF $\alpha$ , a critical cytokine for cutaneous immunity to vaccinia virus.** T Tian, K Dubin, A Qureshi, L Liu, X Jiang, T Kupper and R Fuhlbrigge. Boston, MA. 4:48 p.m. Poster #762

#### **Concurrent Minisymposium 12**

*Cell Adhesion/Matrix Biology*

Salon B

Presiders: Jonathan Jones, PhD and Peter Marinkovich, MD

1. **Plakoglobin rescues adhesive defects induced by desmoglein 1 truncation: Implications for exfoliative toxin-mediated blistering.** CL Simpson, S Kojima, S Getsios and KJ Green. Chicago, IL. 2:00 p.m. Poster #208
2. **Therapeutic implications of EGFR transactivation in pemphigus acantholysis.** P Jolly, M Bektas and DS Rubenstein. Chapel Hill, NC. 2:12 p.m. Poster #210
3. **DSC3 in skin tumor development and progression.** J Chen, C O'Shea, JE Fitzpatrick and PJ Koch. Aurora, CO. 2:24 p.m. Poster #235
4. **The p65 subunit of NF- $\kappa$ B inhibits COL1A1 gene transcription in human dermal fibroblasts through protein interaction with hc-KROX, SP1 and SP3.** G Beauchef, N Bigot, M Kyriouli, E Renard, B Porée, R Widom, A Dompmartin-Blanchere, T Oddos, F Maquart, M Demoor, K Boumediene and P Galéra. Caen, France; Boston, MA; Val de Reuil, France and Reims, France. 2:36 Poster #207

5. **Polyclonal nature of pemphigus vulgaris IgG contributes to desmosomal disassembly by causing clustering and endocytosis of Dsg3.** M Saito, M Kaufman, DK Tucker and AP Kowalczyk. Atlanta, GA. 2:48 Poster #216
6. **Role of protease-activated receptors-1 and -2 in murine skin fibrosis and human scleroderma.** F Cevikbas, S Seeliger, M Fastrich, H Robenek, B Homey and M Steinhoff. San Francisco, CA; Goettingen, Germany; Muenster, Germany and Duesseldorf, Germany. 3:00 p.m. Poster #220
7. **The desmosomal armadillo protein plakoglobin regulates keratinocyte motility through extracellular matrix modification.** V Todorovic, BV Desai, MJ Schroeder Patterson, E Amargo, AD Dubash, JC Jones and KJ Green. Chicago, IL. 3:12 p.m. Poster #197
8. **Keratinocyte cell surface heparan sulfate proteoglycans are required for uptake of double-stranded RNA prior to toll-like receptor 3 activation.** DT MacLeod and RL Gallo. La Jolla, CA. 3:24 p.m. Poster #190
9. **Novel role for human desmoglein 3 in regulating E-cadherin mediated adherens junctions through Src family kinase activation.** S Tsang, L Liu, M Teh, A Wheeler, K Piper, R Grose, I Hart, D Garrod, F Fortune and H Wan. London, United Kingdom and Manchester, United Kingdom. 3:36 p.m. Poster #195
10. **Elucidation of the structural and functional abnormalities of type VII collagen RDEB mutants created by site-directed mutagenesis.** Y Hou, J Cogan, E Ahdoot, A Ng, E Cua, D Woodley and M Chen. Los Angeles, CA. 3:48 p.m. Poster #221
11. **Down-regulation of desmocollin-2 induces epithelial cell proliferation through activation of Akt/beta-catenin signaling.** K Kolegraff, P Nava and A Nusrat. Atlanta, GA. 4:00 p.m. Poster #222
12. **The role of the receptor tyrosine kinase Axl in cell-cell adhesion and signaling in cancer.** MA Cichon, IC Mackenzie and EA O'Toole. London, United Kingdom. 4:12 p.m. Poster #200
13. **Caveolin-1 interacts with desmogleins and modulates desmosome homeostasis.** D Brennan, S Peltonen, W Medhat, KJ Green, F Del Galdo and MG Mahoney. Philadelphia, PA; Turku, Finland and Chicago, IL. 4:24 p.m. Poster #234
14. **Desmosome assembly and dynamics in migrating epithelial cells.** JK Wahl, B Roberts and A Pashaj. Lincoln, NE. 4:36 p.m. Poster #236
15. **Non-muscle myosin II isoform roles and regulation during *in vivo* wound closure in the mouse epidermis.** JF Crish and T Egelhoff. Cleveland, OH. 4:48 p.m. Poster #215

#### **Concurrent Minisymposium 13**

*Clinical Research and Therapeutics*

Salon E

Presiders: Maryam Asgari, MD MPH and Stuart Lessin, MD

1. **A phase I/II trial of photoactivated tissue bonding ("nanosuturing") for excisional wound closure.** S Tsao, M Yao, FP Henry, H Tsao, Y Zhao, J Kochevar, R Redmond and I Kochevar. Boston, MA. 2:00 p.m. Poster #252

2. **Results of a phase 2b clinical trial of valomaciclovir versus valacyclovir for treating herpes zoster.** L Morrison and S Tiryng. Houston, TX. 2:12 p.m. Poster #248
3. **Molecular tumor characteristics and pharmacodynamic (PD) responses of patients (pts) with advanced basal cell carcinoma (BCC) in a phase I trial of the hedgehog (Hh)pathway inhibitor GDC-0449.** IL Caro, RL Yauch, W Darbonne, CA Callahan, HM Mackey, CM Rudin, PM LoRusso, JC Reddy, JA Low and DD Von Hoff. San Francisco, CA; Baltimore, MD; Detroit, MI and Scottsdale, AZ. 2:24 p.m. Poster #301
4. **Visualization of untreated premature atherosclerosis in a US psoriasis cohort.** D Kast, I Grozdev, L Cao, D Carlson, R Feig, P Pujari, D Babineau, E Kern, C Orringer, T McCormick, K Cooper and N Korman. Cleveland, OH. 2:36 p.m. Poster #326
5. **The intrinsic type of atopic dermatitis shows normal barrier function, lack of filaggrin mutations, high percentage of Th1 cells, and high frequency of metal allergy.** R Kabashima, M Nakamura, M Kobayashi, T Bito, K Kabashima, Y Nomura, M Akiyama, H Shimizu and Y Tokura. Kitakyushu, Japan and Sapporo, Japan. 2:48 p.m. Poster #286
6. **Blockade of the IL-17R with AMG 827 leads to rapid reversal of gene expression and histopathologic abnormalities in human psoriatic skin.** CB Russell, K Kerkof, J Bigler, M Timour, AA Welcher, I Novitskaya, A Khatcherian, J Krueger, H Rand and DA Martin. Seattle, WA and New York, NY. 3:00 p.m. Poster #273
7. **Novel mechanism for topical treatment of plaque psoriasis—Results of a randomized, double blind, concentration ranging, vehicle controlled 12 week study with JAK 1/2 inhibitor INCB018424 cream.** K Callis Duffin, M Luchi, R Fidelus-Gort, R Newton, J Fridman, T Burn, P Haley, P Scherle, R Flores, N Punwani, R Levy, W Williams and A Gottlieb. Wilmington, DE; Salt Lake City, UT and Boston, MA. 3:12 p.m. Poster #261
8. **Determining the extent to which clinically effective treatment, ustekinumab or etanercept, reverses the molecular disease profile of psoriatic skin: Comparisons of lesional, non-lesional and normal skin.** J Krueger, K Li, F Baribaud, M Suarez-Farinias and C Brodmerkel. New York, NY and Malvern, PA. 3:24 p.m. Poster #298
9. **A long-term study of safety and allergic comorbidity development in a randomized trial of pimecrolimus cream in infants with atopic dermatitis.** JM Hanifin, M Boguniewicz, LF Eichenfield, LC Schneider, AS Paller, JA Preston, F Kieran, J Nyirady, RK Zeldin, M Figliomeni and JM Spergel. Portland, OR; Denver, CO; San Diego, CA; Boston, MA; Chicago, IL; East Hanover, NJ and Philadelphia, PA. 3:36 p.m. Poster #328
10. **In vitro release of interferon-gamma from peripheral blood lymphocytes in cutaneous adverse drug reactions.** I Goldberg, M Hanson, E Sprecher, G Chodick, I Shirazi and S Brenner. Tel Aviv, Israel. 3:48 p.m. Poster #283
11. **Gadolinium deposition in disease affected versus unaffected skin of nephrogenic systemic fibrosis.** KN Christensen, CU Lee, MM Hanley, N Leung, TP Moyer and MR Pittelkow. Rochester, MN. 4:00 p.m. Poster #320
12. **Dermatoproteome arrays — a novel immunoassay method for stratification of systemic and cutaneous lupus erythematosus phenotypes.** BF Chong, AB Pazandak, HB Prather, Q Li, NJ Olsen and C Mohan. Dallas, TX. 4:12 p.m. Poster 339
13. **NVP-LDE225 inhibits the formation and induces the regression of murine basaloid tumor nests in embryonic and newborn murine skin organ cultures derived from *Ptch<sup>+/−</sup>* *LacZ* heterozygous mice.** X Wu, Y Wang, R Javed, S Pan, A Stuetz and FS Kalthoff. Vienna, Austria and San Diego, CA. 4:24 p.m. Poster #260
14. **Epidermal growth factor receptor inhibitors do not suppress the expression of the antimicrobial peptide human β-defensin 3 in the skin of treated patients.** TV Cartee, K White, B Pollack, M Newton-West and RA Swerlick. Atlanta, GA. 4:36 p.m. Poster #329
15. **Atrophic acne scars may arise from both inflammatory and non-inflammatory acne lesions.** MJ Patel, A Antony, T Do, G Hinds, D Sachs, J Voorhees and S Kang. Baltimore, MD and Ann Arbor, MI. 4:48 p.m. Poster #344
- 
- Concurrent Minisymposium 14** 2:00 pm - 5:30 pm  
*Photobiology*  
 Salon A  
 Presiders: Dennis Oh, MD/PhD and Laura Timares, PhD
1. **Preventive effects of ultraviolet radiation on autochthonous murine mammary tumor carcinogenesis - Is sun avoidance killing patients?** P Davari, F Gorouhi and EH Epstein. Oakland, CA. 2:00 p.m. Poster #764
2. **Alteration of the migratory behavior of UV-induced regulatory T cells *in vivo*.** A Schwarz, BE Clausen and I Schwarz. Kiel, Germany and Rotterdam, Netherlands. 2:12 p.m. Poster #767
3. **Obesity exacerbates UVB radiation-induced inflammation and cell survival signals in UVB-irradiated mouse skin.** SD Sharma and SK Katiyar. Birmingham, AL. 2:24 p.m. Poster #768
4. **Visualization of *in vivo* behavioral responses of Langerhans cells to UVB irradiation.** R Lu and A Takashima. Toledo, OH. 2:36 p.m. Poster #778
5. **Deficiency of xeroderma pigmentosum A results in an augmentation of UVB mediated oxidative stress and platelet-activating factor activity.** Y Yao, RL Konger and JB Travers. Indianapolis, IN. 2:48 p.m. Poster #783
6. **Photosensitive and non-photosensitive trichothiodystrophy: Specific XPD protein regions play a major role in human photosensitivity.** SG Khan, X Zhou, KS Oh, J Boyle, T Ueda, D Tamura, C Nadem, A Mattia, JJ DiGiovanna and KH Kraemer. Bethesda, MD and Providence, RI. 3:00 p.m. Poster #780
7. **Enhancement of protoporphyrin IX and suppression of ferrochelatase levels by Vitamin D in tumor models of nonmelanoma skin cancer: Implications for tumor response to photodynamic therapy.** S Anand, N

- Atanaskova, C Wilson, T Hasan and EV Maytin. Cleveland, OH and Boston, MA. 3:12 p.m. Poster #817
- 8. Loss of epidermal PPAR $\gamma$  in SKH-1 mice results in absent sebaceous glands, a defect in permeability barrier function, and augmented UVB-induced apoptosis and inflammatory responses.** RP Sahu, S DaSilva and RL Konger. Indianapolis, IN. 3:24 p.m. Poster #818
- 9. Ultraviolet A radiation causes loss of subcutaneous fat.** M Majora, S Franke, S Grether-Beck, P Schroeder and J Krutmann. Duesseldorf, Germany. 3:36 p.m. Poster #791
- 10. Proteomics-based analysis of the effects of *in vivo* ultraviolet radiation on human skin.** C Malbasa, M Lam, P Karnik, C Yuan, H Zhao, MR Chance, M Matsui, D Yarosh, KD Cooper and ED Baron. Cleveland, OH and Melville, NY. 3:48 p.m. Poster #812
- 11. Ultraviolet B radiation of human skin generates platelet-activating factor receptor agonists.** J Travers, Y Yao, RL Konger and JB Travers. Indianapolis, IN. 4:00 p.m. Poster #782
- 12. Endogenous and exogenous urocanic acid protects against ultraviolet B-induced DNA damage.** C Stremnitzer, C Barresi, V Mlitz, S Kezic, A Kammeyer, M Ghannadan, K Posa-Markaryan, C Selden, E Tschachler and L Eckhart. Vienna, Austria; Amsterdam, Netherlands; London, United Kingdom and Neuilly, France. 4:12 p.m. Poster #816
- 13. Generation of immature dendritic cells by modified extracorporeal photophoresis.** AH Baird, CL Berger and RL Edelson. New Haven, CT. 4:24 p.m. Poster #813
- 14. Photodynamic therapy with the phthalocyanine Pc 4 for T cell mediated diseases: Activated T cells exhibit increased uptake of Pc 4 and increased susceptibility to PDT-mediated cell death.** J Ohtola, H Sugiyama, ME Rodriguez, NL Oleinick, M Lam, TS McCormick, KD Cooper and ED Baron. Cleveland, OH. 4:36 p.m. Poster #771

#### Concurrent Minisymposium 15

2:00 pm - 5:30 pm

Hair and Cutaneous Development II:

Hair Differentiation & Cycling

Salon D

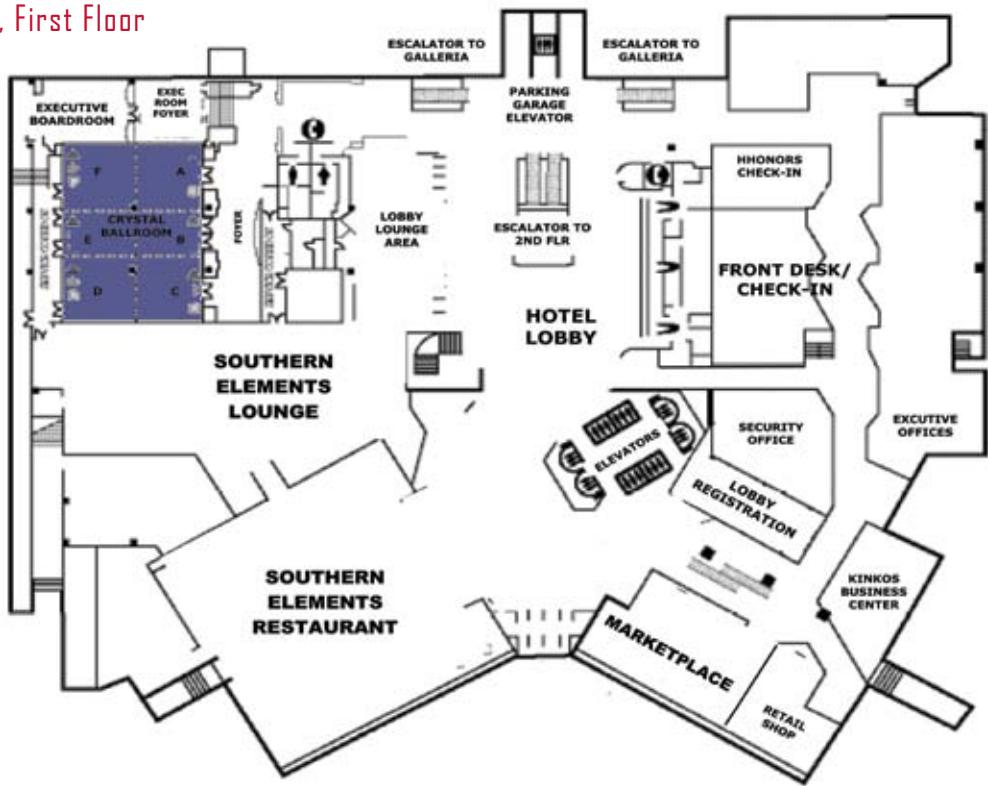
Presiders: Valerie Horsley, PhD and Sarah Millar, PhD

- 1. Dermal Sonic Hedgehog signaling is required for hair follicle morphogenesis and regeneration.** W Woo, HH Zhen and AE Oro. Palo Alto, CA. 2:00 p.m. Poster #618
- 2. Fuz is a PCP effector gene that controls the morphogenesis and differentiation of hair follicles.** D Dai, H Zhu, B Wlodarczyk, L Zhang, AG Li, RH Finnell, DR Roop and J Chen. Aurora, CO; Houston, TX and Portland, OR. 2:12 p.m. Poster #617
- 3. Inductive signaling from the dermal papilla of the hair follicle.** D Enshell-Seijfers, M Kashiwagi and BA Morgan. Boston, MA. 2:24 p.m. Poster #647
- 4. Inducible deletion of  $\beta$ -Catenin reveals essential roles in adult hair follicle proliferation and maintenance, and epidermal homeostasis.** Y Zhang, X Wu, A Nagy, T Andl and SE Millar. Philadelphia, PA and Toronto, Canada. 2:36 p.m. Poster #654

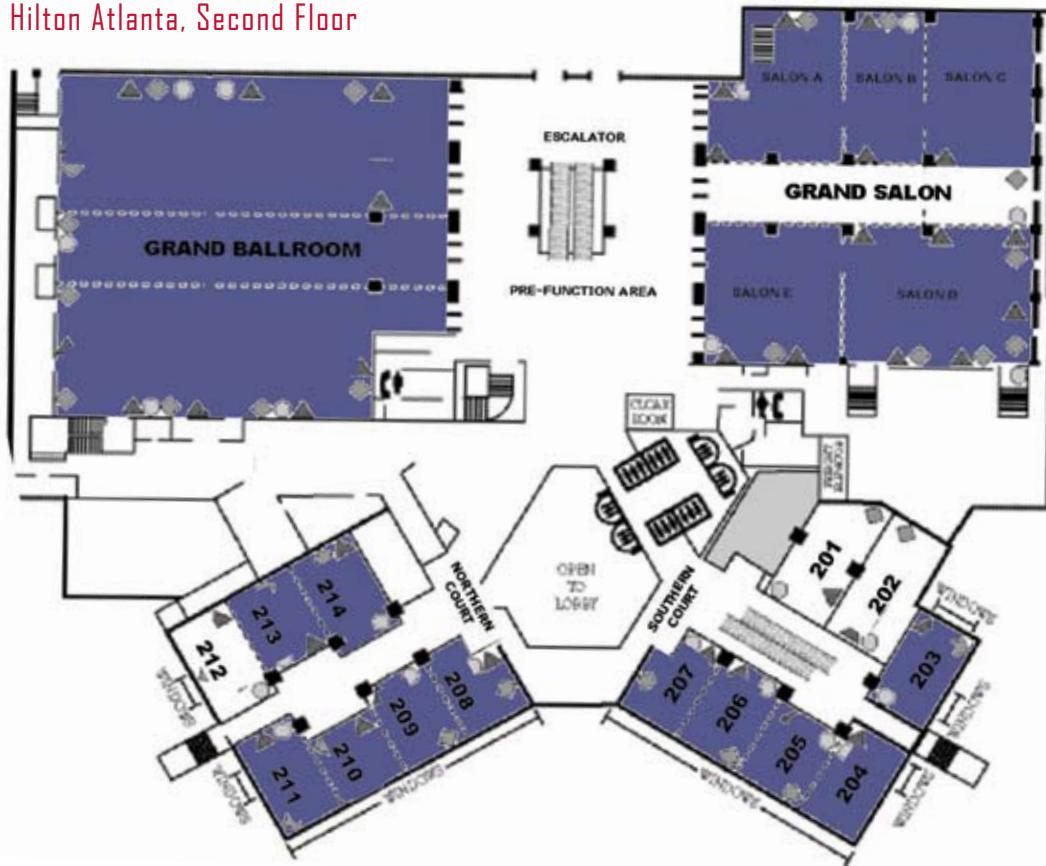
- 5. A two-step mechanism for stem cell activation during hair regeneration.** V Greco, T Chen, M Rendl, M Schober, A Pasolli, N Stokes, J Dela Cruz-Racelis and E Fuchs. New Haven, CT and New York, NY. 2:48 p.m. Poster #611
- 6. Extrinsic regulation of hair follicle cycling.** E Festa, M Rodeheffer, M Horowitz and V Horsley. New Haven, CT. 3:00 p.m. Poster #655
- 7. The living wave: Self-organizing regenerative behavior of stem cells revealed in the cycling of large hair follicle populations.** MV Plikus, RE Baker, C Chen, Fare, D de la Cruz, PK Maini, S Millar, RB Widelitz and CM Chuong. Los Angeles, CA; Oxford, United Kingdom and Philadelphia, PA. 3:12 p.m. Poster #662
- 8. A novel, complex enzymatic control of mammalian pigmentation: UDP-N-GlcNAc 1-phosphotransferase regulates POMC gene expression, tyrosinase sorting and subsequent melanin synthesis *in situ* and *in vitro*.** S Tiede, JE Kloepper, K Kollmann, T Braulke and R Paus. Lübeck, Germany; Hamburg, Germany and Manchester, United Kingdom. 3:24 p.m. Poster #652
- 9. Keratin 74 is a novel determinant of human hair texture and is mutated in autosomal dominant woolly hair.** Y Shimomura, M Wajid, L Petukhova, M Kurban and AM Christiano. New York, NY. 3:36 p.m. Poster #668
- 10. The miRNA-processing enzyme Drosha is required for hair follicle regression, hair shaft differentiation, long-term maintenance of hair follicle stem cells, and epidermal homeostasis.** Y Choi, A Nagy, O Tam, GJ Hannon and SE Millar. Philadelphia, PA; Toronto, Canada and Cold Spring Harbor, NY. 3:48 p.m. Poster #645
- 11. Overexpression of microRNA miR-31 in mouse skin alters hair growth.** L Luan, L Nanney, L King and T Andl. Nashville, TN. 4:00 p.m. Poster #656
- 12. c-myb ablation affects hair follicle homeostasis.** J Murphy, E Lustiger, JC Strange, J Frampton and A Engelhard. New York, NY and Edgbaston, United Kingdom. 4:12 p.m. Poster #667
- 13. Patterning dissociated heterotypic adult cells into functional folliculoid organ germs by substratum-facilitated self-assembly.** J Hong, C Chan, C Yen and S Lin. Taipei, Taiwan. 4:24 p.m. Poster #620
- 14. Adult human epithelial stem cells are a novel target for thyroid hormone regulation *in situ* and *in vitro*.** K Bohm, S Tiede, N Meier and R Paus. Lübeck, Germany and Manchester, United Kingdom. 4:36 p.m. Poster #648
- 15. The nude mutant gene Foxn1 is a HOXC13 regulatory target during hair follicle and nail differentiation.** CS Potter, ND Pruett, MJ Kern, AR Godwin, JP Sundberg and A Awgulewitsch. Charleston, SC; Kansas City, KS and Bar Harbor, ME. 4:48 p.m. Poster #649

# Hilton Atlanta Maps

Hilton Atlanta, First Floor



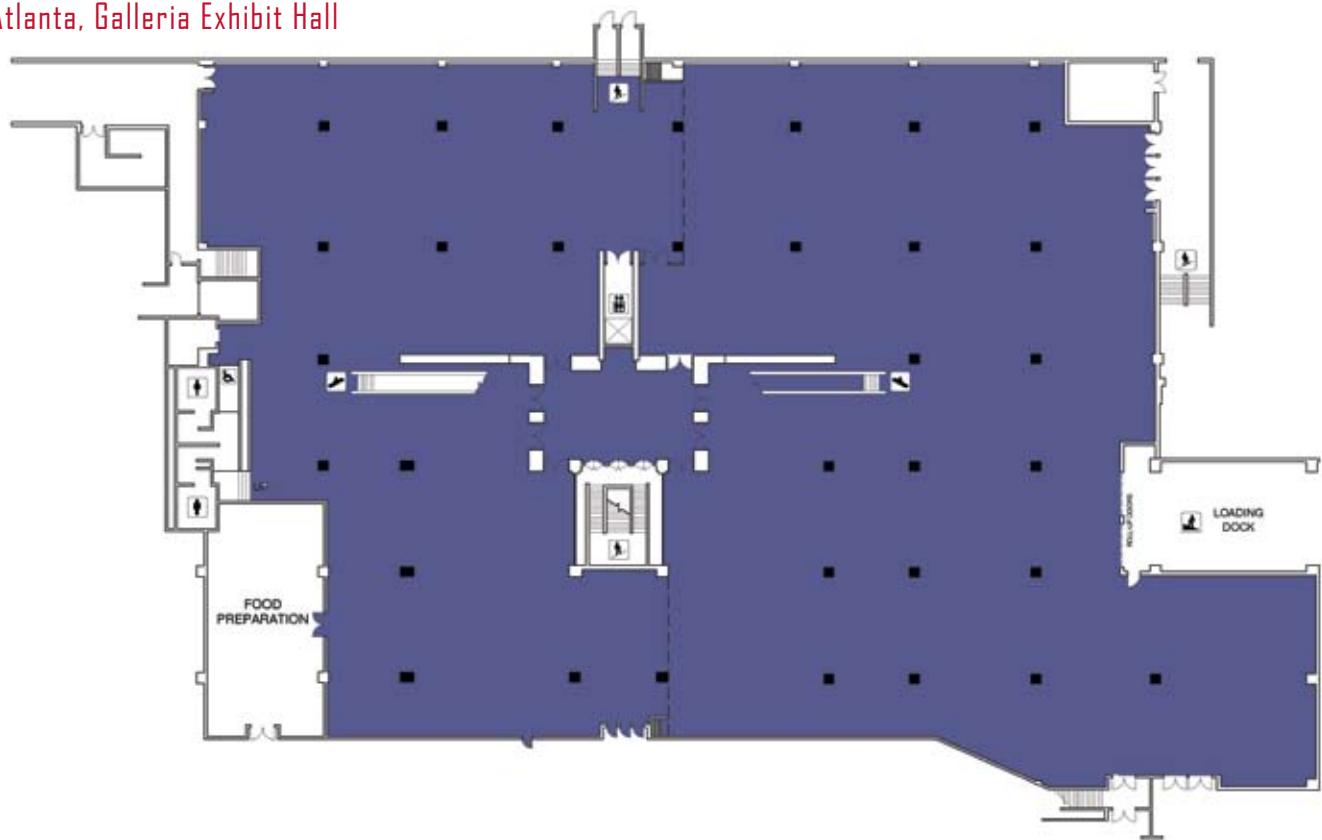
Hilton Atlanta, Second Floor



## Hilton Atlanta, Third Floor



## Hilton Atlanta, Galleria Exhibit Hall



# 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 2010 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 Registration Counter at the Atlanta Hilton during the following hours:

Wednesday, May 5, 2010 • 8:00 am - 8:00 pm  
Thursday, May 6, 2010 • 7:30 am - 4:00 pm  
Friday, May 7, 2010 • 7:30 am - 4:00 pm  
Saturday, May 8, 2010 • 7:30 am - 12:00 pm

## Badges

Badges are issued at the Registration Counter. 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](http://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 the Galleria Exhibit Hall of the Hilton Atlanta:

Thursday, May 6, 2010 • 10:00 a.m.-12:00 p.m.  
Friday, May 7, 2010 • 11:15 a.m.-1:15 p.m.  
Saturday, May 8, 2010 • 10:00 a.m.-12:00 p.m.

The SID welcomes representatives from the following companies.

Bridge PTS  
Canfield Imaging Systems  
CellInTec  
Elsevier  
Invitrogen, Part of Life Technology  
Nature Publishing Group  
WCD 2011  
Zen-Bio, Inc.

# Notes

# Notes



## Session Information

- 23 Special Lectures & State-of-the-Art Lectures
- 24 Blank Forum, Awards, & Business Meeting
- 25 Satellite Symposia:  
*Regenerative Medicine*  
*Emerging Mechanism-based Therapies for Skin Cancers*
- 26 SID-AAD Co-Morbidity Conference
- 27 International Pachyonychia Congenita Consortium
- 28 Cutaneous T Cell Lymphoma Symposium
- 29 Research in Cutaneous Surgery Symposium
- 30 North American Hair Research Society Scientific Meeting
- 31 American DermatoEpidemiology Network Business & Scientific Session
- 32 Networking and Social Events & Ancillary Groups

# Special Lectures & State-of-the-Art Lectures

## Special Lectures



**Albert M. Kligman / Phillip Frost  
Leadership Lecture**  
*Personal and Scientific Lessons from My Studies of Pemphigus*  
**John R. Stanley, MD**  
Milton B. Hartzell Professor and Chairman, Dept. of Dermatology, University of Pennsylvania, Philadelphia, Pennsylvania



**Herman Beerman Lecture**  
*Towards Curative Therapies for HIV and HCV*  
**Raymond Schinazi, PhD**  
Professor and Division Director, Emory University, Atlanta, Georgia



**Naomi M. Kanof Lecture**  
*Current and Future Preventive HPV Vaccines: Implications from the Virus Life Cycle*  
**Douglas Lowy, MD**  
Head, Signaling and Oncogenesis Section Laboratory Chief, Laboratory of Cellular Oncology, National Institutes of Health, Bethesda, Maryland



**Eugene M. Farber Lecture**  
*Psoriasis: The Path of Translational Medicine*  
**James G. Krueger, MD/PhD**  
Director, Milstein Medical Research Program, The Rockefeller University, New York, New York



**William Montagna Lecture**  
*Inherited Skin Disease: Causes and Cures*  
**W. H. Irwin McLean, PhD**  
Professor of Human Genetics, Division of Molecular Medicine, University of Dundee, Dundee, United Kingdom



**Julius Stone Lecture**  
*Immune Strategies for Treating Chronic Viral Infections*  
**Rafi Ahmed, PhD**  
Director, Emory Vaccine Center, Emory University, Atlanta, Georgia

## State-of-the-Art Lectures



**State-of-the-Art Plenary Lecture 1**  
*Mechanisms of Organogenesis Through the Study of Hedgehog Signaling*  
**Anthony Oro, MD/PhD**  
Associate Professor, Dept. of Dermatology, Stanford University, Stanford, California



**State-of-the-Art Plenary Lecture 2**  
*Microbial Diversity of Human Skin*  
**Heidi Kong, MD**  
Assistant Clinical Investigator, Dermatology Branch, National Institutes of Health, Bethesda, Maryland



**State-of-the-Art Plenary Lecture 3**  
*Skin Development and Disease: The p63 Story*  
**Maranke Koster, PhD**  
Assistant Professor, Dept. of Dermatology, University of Colorado, Denver, Colorado



**State-of-the-Art Plenary Lecture 4**  
*Pemphigus Vulgaris as a Paradigm of Autoimmune Disease*  
**Masayuki Amagai, MD/PhD**  
Professor and Chairman, Dept. of Dermatology, Keio University, Tokyo, Japan



**State-of-the-Art Plenary Lecture 5**  
*The Role of Cadherins in Normal and Diseased Skin*  
**Carien Niessen, PhD**  
Professor, University of Cologne, Cologne, Germany

# Blank Forum, Awards, & Business Meeting

## Irvin H. Blank Forum

Held annually, the Irvin H. Blank Forum is designed especially for residents, post doctoral fellows and students. This year's forum, *What's New in Skin Cancer: How Good Cells Go Bad*, will be held on Wednesday, May 5, 2010 from 3:00-5:00 pm. The forum is open to all attendees and is an integral part of the Resident Track, Clinical Scholars Track and Translational Research Track.



### *Introduction*

#### **John Seykora, MD/PhD**

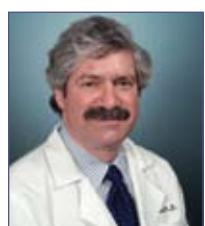
Assistant Professor of Dermatology  
University of Pennsylvania  
Philadelphia, Pennsylvania



### *Characterization of Individual Cells Capable of Melanoma Formation*

#### **Marcus Bosenberg, MD/PhD**

Associate Professor of Dermatology and Pathology  
Yale School of Medicine  
New Haven, Connecticut



### *The Importance of Host Immunity in Cutaneous T-Cell Lymphoma*

#### **Alain Rook, MD**

Professor of Dermatology  
University of Pennsylvania  
Philadelphia, Pennsylvania



### *Notch and Calcineurin Signaling in Integrated Control of Skin Homeostasis and Carcinogenesis*

#### **G. Paolo Dotto, MD/PhD**

Professor  
Massachusetts General Hospital/Harvard Medical School  
Charlestown, Massachusetts



### *From Bench to Clinic with a Hedgehog: Targeted Therapeutics for Basal Cell Carcinoma*

#### **Andrzej Dlugosz, MD**

Professor of Cutaneous Oncology  
University of Michigan  
Ann Arbor, Michigan

## American Skin Association Achievement Awards

Thursday, May 6, 2010 • 10:00 - 10:10 am • Grand Ballroom

The American Skin Association presents its Achievement Awards to Diane R. Baker, MD/FAAD; Gregory S. Barsh, MD; Kevin D. Cooper, MD/FAAD; Malcolm W. Greaves, MD/PhD; Martin A. Weinstock, MD/PhD.

## David Martin Carter Mentor Award

Thursday, May 6, 2010 • 10:10 - 10:15 am • Grand Ballroom

The American Skin Association presents the 2010 David Martin Carter Mentor Award to Robert A. Briggaman, MD/FAAD.

## Stephen Rothman Memorial Award

Friday, May 7, 2010 • 9:30-9:40 am • Grand Ballroom



*The SID's highest award presented for distinguished service to cutaneous medicine*

#### **Dennis Roop, PhD**

Professor of Dermatology  
Director, Regenerative Medicine/Stem Cell Biology Program  
University of Colorado, Denver Anschutz Medical Campus

## Albert M. Kligman Tribute

Wednesday, May 5, 2010 • 5:00 pm - 5:30 pm  
Grand Ballroom, Hilton Atlanta

## Business Meeting for Members

Friday, May 7, 2010 • 7:45 am - 8:30 am • Grand Ballroom

Members of the SID will meet on Friday, May 7, 2010 from 7:45 am - 8:30 am in the Grand Ballroom. 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 2009 Business Meeting and discuss SID affairs. New officers and directors will be elected during the Business Meeting. Officials from the ESDR, JSID and SID leadership will also acknowledge travel grant recipients and provide updates on IID2013.

# Satellite Symposia

## Regenerative Medicine

Thursday, May 6, 2010 • 12:00 pm - 2:00 pm • Grand Ballroom

Chair: Richard Clark, MD, Professor, Department of Biomedical Engineering, State University of New York, Stony Brook, New York

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12:00 pm

### Welcome

Richard Clark, MD, Chair

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12:05 pm – 12:20 pm

### Why the DOD is Pursuing Regenerative Medicine Research

Colonel Robert Vandre, DDS/MS, Project Director, Armed Forces Institute of Regenerative Medicine, Fort Detrick, Maryland

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12:20 pm – 12:35 pm

### Composite Tissue Allografts: Cleveland Clinic's Experience with the First Large Face Transplant

Wilma Bergfeld, MD, Professor of Dermatology and Pathology, The Cleveland Clinic, Cleveland, Ohio

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12:35 pm – 1:00 pm

### Engineered Skin Substitutes

Steven Boyce, PhD, Research Associate Professor, University of Cincinnati, Cincinnati, Ohio

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1:00 pm – 1:25 pm

### Adipose-Derived Stem Cells

Adam Katz, MD, Associate Professor, Departments of Plastic Surgery and Biomedical Engineering, University of Virginia, Charlottesville, Virginia

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1:25 pm - 1:45 pm

### Fibronectin in Wound Healing: Lessons from Normal Healing Processes Applied to Therapies for Progressive Injury and Nonhealing States

Richard Clark, MD, Professor, Department of Biomedical Engineering, State University of New York, Stony Brook, New York

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1:45 pm – 2:00 pm

### Panel Discussion / Q & A

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## Emerging Mechanism-based Therapies for Skin Cancers

Friday, May 7, 2010 • 12:00 pm - 2:00 pm • Grand Ballroom

Chairs: Anthony Oro, MD/PhD, Associate Professor, Department of Dermatology, Stanford University, Stanford, California

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

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12:00 pm – 12:10 pm

### Welcome and Overview

Anthony Oro, MD/PhD and Paul Nghiem, MD/PhD, Chairs

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12:10 pm – 12:30 pm

### Personalized Medicine: A Case for Multiplex Mutational Analysis Directing the Treatment of Melanoma

Jeffrey Sosman, MD, Professor of Medicine, Departments of Hematology/Oncology, Vanderbilt University, Nashville, Tennessee

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12:30 pm – 12:35 pm

### Questions

12:35 pm – 12:55 pm

### Cutaneous T-cell Lymphoma: New and Rational Treatments Based on a Better Understanding of CTCL Biology

Rachael Clark, MD/PhD, Assistant Professor, Department of Dermatology, Harvard Medical School, Boston, Massachusetts

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12:55 pm – 1:00 pm

### Questions

1:00 pm - 1:20 pm

### Merkel Cell Carcinoma: Identifying and Overcoming Cellular Immune Evasion Mechanisms in a Polyomavirus-associated Skin Cancer

Paul Nghiem, MD/PhD, Chair

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1:20 pm – 1:25 pm

### Questions

1:25 pm – 1:45 pm

### The Fall of the House of Mohs

Ervin Epstein, MD, Scientist, Children's Hospital Oakland Research Institute, San Francisco, California

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1:45 pm – 1:50 pm

### Questions

1:55 – 2:00

### Panel Discussion, Final Comments

Anthony Oro, MD/PhD and Paul Nghiem, MD/PhD, Chairs

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# SID-AAD Co-Morbidity Conference

## Applying Epidemiology Research to Individual Patients

Friday, May 7, 2010 • 2:00 pm - 5:30 pm • Salon E

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2:00 pm - 2:10 pm

### Introductions and Setting the Stage

Robert Swerlick, MD, Associate Professor and Chair, Dept. of Dermatology, Emory University, Atlanta, Georgia

William James, MD, Professor and Vice Chair, Dept. of Dermatology, University of Pennsylvania, Philadelphia, Pennsylvania

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### Session I: Epidemiologic and Genetic Bases for Complete Patient Care (CPC)

Co-Chairs: Abrar Qureshi, MD MPH, Assistant Professor, Dept. of Dermatology, Brigham and Women's Hospital, Boston, Massachusetts  
Jiali Han, PhD, Assistant Professor of Medicine, Harvard University, Boston, Massachusetts

2:10 pm - 2:30 pm

### More Than a CPT Code: The Systemic Nature of Many Skin Diseases

Alexa Kimball, MD MPH, Vice Chair, Dept. of Dermatology, Massachusetts General Hospital, Boston, Massachusetts

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2:30 pm - 2:50 pm

### Epidemiological Approaches to Understanding Co-morbidity Risk: The Psoriasis Model

Joel Gelfand, MD MSCE, Assistant Professor, Dept. of Dermatology, University of Pennsylvania, Philadelphia, Pennsylvania

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2:50 pm - 3:10 pm

### Applying Gene Wide Association Studies to Individual Patients

James T. Elder, MD PhD, Professor, Dept. of Dermatology, University of Michigan, Ann Arbor, Michigan

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3:15 pm - 3:30 pm

### Delegating Patient Data Collection to Patients: Are We ready for Outsourcing and Crowdsourcing?

Robert Swerlick, MD, Associate Professor and Chair, Dept. of Dermatology, Emory University, Atlanta, Georgia

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3:30-3:45 pm

### Break

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### Session II: Incorporating Patient Perspective in Developing a Research Agenda

Chairman & Moderator: Robert Swerlick, MD, Associate Professor and Chair, Dept. of Dermatology, Emory University, Atlanta, Georgia

3:45 pm - 5:00 pm

### Panel

Panelists: Jamie Weisman, MD, Dermatologist, Atlanta, Georgia  
Helen Selser, MD, Dermatologist, Kaiser Permanente, Atlanta, Georgia  
Victoria Werth, MD, Professor of Dermatology, University of Pennsylvania, Philadelphia, Pennsylvania  
Susan Schayes, MD, Division Chief, Family Medicine, Emory University, Atlanta, Georgia

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5:00 pm - 5:25 pm

### Open Discussion and Real Time Feedback/Voting

5:25 pm - 5:30 pm

### AAD and SID Next Steps

Robert Swerlick, MD, Associate Professor and Chair, Dept. of Dermatology, Emory University, Atlanta, Georgia

William James, MD, Professor and Vice Chair, Dept. of Dermatology, University of Pennsylvania, Philadelphia, Pennsylvania

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# Associate Meetings

## International Pachyonychia Congenita Consortium

Hosted by Pachyonychia Congenita Project

Tuesday, May 4, 2010 • 9:00 am - 5:00 pm • Salon C

**OPEN TO ALL MEETING REGISTRANTS**

### Update on Delivery

**Section Chair:** Dennis Roop, PhD, University of Colorado, Denver, Colorado

W.H. Irwin McLean, DSc, FRSE, College of Life Sciences, University of Dundee, Dundee, United Kingdom

Roger L. Kaspar, PhD, TransDerm, Inc., Santa Cruz, California

Chris Contag, PhD, Stanford University, Palo Alto, California

Emilio Gonzalez, PhD, Stanford University, Palo Alto, California

Robyn Hickerson, PhD, TransDerm, Inc., Santa Cruz, California

### Discussion: Delivery of Nucleic Acids to Skin

### PC Research Studies

**Section Chair:** E. Birgit Lane, PhD

Leonard Milstone, MD and Hector Zambrano, MD, Yale University, New Haven, Connecticut

Diana Gaitini, PhD and Eli Sprecher, MD, Tel Aviv Sourasky Medical Center, Tel Aviv, Israel

Fernando Larcher, PhD and Marcela Del Rio, PhD, Epithelial Biomedicine Division, CIEMAT, Madrid, Spain

W. H. Irwin McLean, DSc, FRSE, College of Life Science, University of Dundee, Dundee, United Kingdom and Peter Hull, MD, PhD, Royal University Hospital - Division of Dermatology, Saskatoon, Saskatchewan, Canada

### Discussion: Future Research Projects

**HOSTED DINNER—6:30 pm for participants**

## International Pachyonychia Congenita Consortium

Hosted by Pachyonychia Congenita Project

Wednesday, May 5, 2010 • 9:00 am - 12:00 pm • Salon C

**OPEN TO ALL MEETING REGISTRANTS**

### New Data from the Int'l PC Research Registry

**Section Chair:** Sancy Leachman, MD/PhD

C. David Hansen, MD and Mark Eliason, MD  
University of Utah, Salt Lake City, Utah

Frances J.D. Smith, PhD  
College of Life Science, University of Dundee, Dundee, United Kingdom

Robert Gruber, MD and Matthias Schmuth, MD  
Innsbruck Medical University, Innsbruck, Austria

Jean Tang, MD, PhD and Teresa Fu, MD  
Stanford University, Palo Alto, California

Edel O'Toole, MB, PhD, FRCPI, FRCP  
Queen Mary's School of Medicine and Dentistry, London, United Kingdom

Amy S. Paller, MD  
Northwestern University, Chicago, Illinois

Adam I. Rubin, MD  
Hospital of the University of Pennsylvania, Philadelphia, Pennsylvania

### Best Practices Discussion

*Following the session, the IPCC will join the SID Translational Research Symposium 12:00 pm - 3:00 pm*

### Contact for additional information:

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PC Project

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# Associate Meetings

## Cutaneous T Cell Lymphoma Symposium

Thursday, May 6, 2010 • 2:00 pm - 5:30 pm • Salon A

### OPEN TO ALL MEETING REGISTRANTS

Presiders: Stuart Lessin, MD and Gary Wood, MD

#### Cutaneous Lymphoma Foundation Young Investigator Award

Makoto Sugaya, MD, University of Tokyo, Tokyo, Japan

**Eotaxin-CCR3 interaction promotes survival of anaplastic large cell lymphoma cells via ERK1/2 activation.** T Miyagaki, M Sugaya, T Kadono, T Murakami, H Okochi, K Tamaki and S Sato. Tokyo, Japan and Tochigi, Japan. 2:00 p.m. Poster #583

1. **Increased twist expression in advanced stage Mycosis Fungoides (MF)/Sézary Syndrome (SS).** X Ni, M Goswami, L Shiue, A Dougherty and M Duvic. Houston, TX. 2:12 p.m. Poster #137
2. **Cutaneous T cell lymphoma utilizes distinct syndecan-4 moieties to bind DC-HIL avidly and to trap TGF-β: Novel mechanisms that may blunt host anti-tumor responses.** J Chang, P Cruz and K Ariizumi. Dallas, TX. 2:24 p.m. Poster #251
3. **Upregulation of inflammatory cytokines and STAT3 characterizes the tumor microenvironment leading to tumor formation in a murine model of cutaneous lymphoma.** X Wu, R Sells and ST Hwang. Milwaukee, WI. 2:36 p.m. Poster #148
4. **The clonal malignant T cells in leukemic CTCL have diverse functionalities and cytokine production profiles.** R Watanabe, J Teague, M Lichtman, Y Jiang, TS Kupper, J Campbell, M Tawa, E Martin, N Adams and R Clark. Boston, MA. 2:48 p.m. Poster #279
5. **Chemokine requirements for epidermal T cell trafficking.** JJ Campbell and NJ Tubo. Boston, MA. 3:00 p.m. Poster #691
6. **Epigenetic mechanisms regulate the T-Plastin (PLS3) gene, a gene highly expressed in Sézary T cells.** H Gibson, H Wong and P Porcu. Detroit, MI and Columbus, OH. 3:12 p.m. Poster #178
7. **High-resolution characterization of the cutaneous T-cell lymphoma genome.** WM Lin, C Kacie, S Reddy, A Thornberg, G Saksena, S Westman, G Getz, S Mane, C Berger, R Edelson and M Girardi. New Haven, CT and Cambridge, MA. 3:24 p.m. Poster #179
8. **Restoring FAS expression by reversing FAS promoter methylation: A novel approach to CTCL therapy.** J Wu and GS Wood. Madison, WI. 3:36 p.m. Poster #173
9. **Anti-tumor effects of sapacitabine in cutaneous T-cell lymphoma (CTCL) cells.** X Zhang, S Noorudien, A Huen, M Duvic and C Zhang. Houston, TX. 3:48 p.m. Poster #255
10. **High clinical response rate of Sézary syndrome with immune modifying therapies: Prognostic markers of response.** BA Raphael, DB Shin, KR Suchin, K Morrissey, C Vittorio, E Kim, J Gardner, K Evans, C Introcaso, JM Gelfand and AH Rook. Philadelphia, PA. 4:00 p.m. Poster #264
11. **Low dose alemtuzumab (LDA) depletes malignant central memory T cells but spares normal skin resident effector memory T cells in leukemic CTCL.** R Clark, R Watanabe, DC Fisher, M Walsh, M Tawa, J Campbell, E Martin, N Adams and TS Kupper. Boston, MA. 4:12 p.m. Poster #278
12. **Mapping toll-like receptor activity in different stages of cutaneous T-cell lymphoma.** JA Kado and DR Mehregan. Detroit, MI and Monroe, MI. 4:24 p.m. Poster #151
13. **Minimizing the immunosuppressive effects of histone deacetylase inhibitors (HDACi): Implications for therapy of cutaneous T-cell lymphoma (CTCL).** A Anshelevich, M Wysocka, BM Benoit and AH Rook. Philadelphia, PA. 4:36 p.m. Poster #306
14. **Classification of skin manifestations of adult T-cell leukemia/lymphoma useful for staging and predictive for prognosis.** Y Sawada, R Hino, K Hama, M Nakamura and Y Tokura. Kitakyushu, Japan. 4:48 p.m. Poster #383
15. **Effect of extracorporeal photopheresis on dendritic cell populations in patients with Sézary syndrome and graft versus host disease.** LH Shiue, M Goswami, A Alousi , M Duvic and X Ni. Houston, TX. 5:00 p.m. Poster #709
16. **Patient-specific dendritic cell immunization against tumor in Sézary syndrome.** LJ Geskin, OE Akilov, L Butterfield, TL Whiteside and LD Falo. Pittsburgh, PA. 5:12 p.m. Poster #333
17. **Long-term outcomes in a cohort of 1263 Mycosis Fungoides (MF) and Sézary Syndrome (SS) patients.** R Talpur, S Daulat, P Liu and M Duvic. Houston, TX. 5:24 p.m. Poster #336

# Associate Meetings

## Research in Cutaneous Surgery Symposium

Friday, May 7, 2010 • 1:30 pm - 4:30 pm • Salon B

OPEN TO ALL MEETING REGISTRANTS

Presiders: Murad Alam, MD/PhD and Sherrif Ibrahim, MD/PhD

1. A double-blind, randomized, vehicle-controlled proof of concept study to evaluate the safety, local tolerability, pharmacokinetics and pharmacodynamics of multiple topical administrations Of LDE225 (a specific smoothened inhibitor) on skin basal cell carcinomas in Gorlin Syndrome patients. MA de Rie, H Skvara, L Mickel, C Schuster, G Stary, A Stuetz, F Kalthoff, AM Costa Antunes, OJ David, K Rose, AP Bertolino and G Stingl. Basel, Switzerland; Vienna, Austria and East Hanover, NJ. 2:00 p.m. Poster #524
2. Engineering of murine Basal Cell Carcinoma (BCC) allograft as hedgehog (HH) inhibitor screening platform. GY Wang, P So, E Libove and EH Epstein. Oakland, CA and Berkeley, CA. 2:12 p.m. Poster #340
3. The role of cancer stem cells in the initiation and propagation of human cutaneous squamous cell carcinoma in an *in vivo* model. GK Patel, CL Yee, A Montemorano, K Maggio and JC Vogel. Cardiff, United Kingdom; Bethesda, MD and Washington DC. 2:24 p.m. Poster #167
4. Regulatory T cells are associated with the human cutaneous SCC microenvironment and suppress activation of naïve T cells stimulated by CD3/28. MJ Bluth, J Pettersen, M Suárez-Fariñas, D Moussai, J Fuentes-Duculan, JG Krueger and JA Carucci. New York, NY. 2:36 p.m. Poster #345
5. Risk for multiple non-melanoma skin cancers among US women and men. AA Qureshi, Y Li and J Han. Boston, MA. 2:48 p.m. Poster #386
6. Development and validation of a high frequency ultrasound-guided fluorescence tomography system to improve targeting of photodynamic therapy of skin tumors. A Paliwal, JD Gruber, JA O'Hara, BW Pogue, T Hasan and EV Maytin. Cleveland, OH; Hanover, NH and Boston, MA. 3:00 p.m. Poster #784
7. The vitamin D receptor, Hedgehog signaling and epidermal carcinogenesis. A Teichert, V Bul and DD Bikle. San Francisco, CA. 3:12 p.m. Poster #138
8. Genetic polymorphisms and gene-environment interactions influence extrinsic skin aging. A Vierkötter, T Schikowski, U Krämer, U Ranft, D Sugiri, M Matsui and J Krutmann. Düsseldorf, Germany and Melville, NY. 3:24 p.m. Poster #359
9. Usage of indoor tanning beds and risk of melanoma, squamous cell carcinoma and basal cell carcinoma. Y Li, AA Qureshi and J Han. Boston, MA. 3:36 p.m. Poster #377
10. Hypovitaminosis D and non-melanoma skin cancer. M Skelsey, N Janicic, R Mendum, A Moshell, M Colombo and S Soldin. Washington, DC. 3:48 p.m. Poster #149
11. Rate of positive Sentinel Lymph Node Biopsy (SLNB) in shave vs. punch biopsies of thin (<1mm) melanomas. N Hill, A Page, P Bonaccorsi, K Delman, E Veledar and SC Chen. Boston, MA and Atlanta, GA. 4:00 p.m. Poster #398
12. Diagnostic detection of micrometastasis to sentinel lymph nodes by real-time PCR analysis in malignant melanoma. S Mukumoto, R Hino, T Mori, J Sakabe, M Nakamura and Y Tokura. Kitakyushu, Japan. 4:12 p.m. Poster #873
13. Merkel cell polyomavirus is present in Merkel cell cancer (MCC) but absent in gastrointestinal neuroendocrine carcinomas and trichodysplasia spinulosa. RC Wang, MR Matthews, L Matthews, R Law, JS Susa, G Hosler, J Browning, CJ Cockerell and KB Yancey. Dallas, TX and San Antonio, TX. 4:24 p.m. Poster #141
14. Merkel cell polyomavirus impairs repair of UV radiation-induced DNA damage. SK Demetriou, TK Dong and DH Oh. San Francisco, CA. 4:36 p.m. Poster #161
15. Utility of relaxing music and guided imagery in reducing intraoperative pain and anxiety during Mohs surgery. M Alam, J Wang, S Kakodkar, N Kim, J Havey, N Kohli, D Fife, A Butani, R Trella, D West, A Rademaker and S Yoo. Chicago, IL. 4:48 p.m. Poster #365
16. Reducing the pain of lidocaine administration by controlling angle of injection. KJ Martires, CG Malbasa and JS Bordeaux. Cleveland, OH. 5:00 p.m. Poster #341
17. Fractional photothermolysis treatment triggers a wound healing response and dermal remodeling in photoaged human skin *in vivo*. L Ritté, JS Orringer, D Baker, JJ Voorhees and GJ Fisher. Ann Arbor, MI. 5:12 p.m. Poster #309

# Associate Meetings

## North American Hair Research Society Scientific Meeting

Friday, May 7, 2010 • 6:00 pm - 9:30 pm • Salon B

### OPEN TO ALL MEETING REGISTRANTS

Presider: George Cotsarelis, MD

#### Business Meeting

##### Cell Fate Specification of Dermal Papilla Niche Cells

Michael Rendl, MD, Black Family Stem Cell Institute, Dept. of Development and Regenerative Biology, Dept. of Dermatology, Mount Sinai School of Medicine

#### Oral Abstract Presentations

1. **Impact of copy number variations in the human genome on hair patterns.** GK Lefkowitz, A Mukhopadhyay, C Cowing-Zittron and BD Yu. La Jolla, CA. 7:00 p.m. Poster #673
2. **MicroRNA-31 regulates a complex program of gene expression during murine hair cycle and associated tissue remodeling.** M Ahmed, A Mardaryev, N Vlahov, A Sharov and N Botchkareva. Bradford, United Kingdom and Boston, MA. 7:12 p.m. Poster #639
3. **Suppression of DNA degradation by inactivation of DNase1L2 leads to increased fragility of hair.** H Fischer, S Szabo, J Scherz, K Jaeger, M Buchberger, H Rossiter, M Ghannadan, R Gmeiner, M Hermann, DJ Tobin, EF Wagner, E Tschaehler and L Eckhart. Vienna, Austria; Bradford, United Kingdom; Madrid, Spain and Paris, France. 7:24 p.m. Poster #660
4. **Reconstitution of human hair follicles using fetal epidermal and dermal cells.** C Yang, D Gay and G Cotsarelis. Tainan, Taiwan and Philadelphia, PA. 7:36 p.m. Poster #670
5. **Effect of the Lexington LaserComb on hair regrowth in the C3H/HeJ model of alopecia areata.** JJ Jimenez, T Cao, R Sevel, LM Mauro, K Nouri and LA Schachner. Miami, FL and Ann Arbor, MI. 7:48 p.m. Poster #646

#### Poster Session

1. **Common mechanism of hair follicle formation from dissociated trichogenic epidermal and dermal cells.** Y Zheng, W Chen, Y Homan, K Watkins, L Sergott, A Nace, J VandeBerg, J Hsieh, M Breen and K Stenn. Philadelphia, PA; San Antonio, TX and Raleigh, NC. Poster #616
2. **Suppression of DNA degradation by inactivation of DNase1L2 leads to increased fragility of hair.** H Fischer, S Szabo, J Scherz, K Jaeger, M Buchberger, H Rossiter, M Ghannadan, R Gmeiner, M Hermann, DJ Tobin, EF Wagner, E Tschaehler and L Eckhart. Vienna, Austria; Bradford, United Kingdom; Madrid, Spain and Paris, France. Poster #660

3. **Defective metabolic degradation of retinoic acid in mice lacking Cyp26b1 alters skin development.** J Okano, U Lichti, M Aronova, G Zhang, SH Yuspa, Y Sakai and MI Morasso. Bethesda, MD and Osaka, Japan. Poster #610
4. **VEGF stimulates proliferation of human outer root sheath cells through VEGF receptor-2 mediated ERK signal pathway.** M Zheng, W Li, C Li, X Man, X Yang, S Cai and Z Lv. Hangzhou, China. Poster #621
5. **Differences in mean current intensity required to evoke sensation in c-fibers in the scalp of alopecia areata subjects and normal controls.** R Farah, R Farah, A Junqueira, H Guo, N Gallus, M Ericson, C Boeck and M Hordinsky. Minneapolis, MN. Poster #669
6. **A Safe and effective new topical treatment for nail fungus (Onychomycosis).** G Polson, N Skoulis, D Ciccognani, K Roberts, K DiNicola, K Lou and J Gruber. Cheshire, CT. Poster #631
7. **Modulation of hair follicle stem cell markers and hair growth.** C Meyrignac, A Perrin, C Gondran, K Cucumel, C Dal Farra and N Domloge. Sophia Antipolis, France and Wayne, NJ. Poster #625
8. **Modulation of basement membrane components in the hair follicle of human scalp skin grafts.** C Meyrignac, A Perrin, C Gondran, C Dal Farra and N Domloge. Sophia Antipolis, France and Wayne, NJ. Poster #628
9. **Effects of fermented *Rhus verniciflua Stokes* extract (FRVE) on hair regeneration in cyclophosphamide-induced Alopecia model C57BL/6 mouse.** K Lee, M Kim, H Shin, S Park and T Yi. Yongin-si, South Korea. Poster #672
10. **Gene expression profiling reveals similarities and distinct differences between lymphocytic and neutrophilic cicatricial alopecias.** S Parameswara Panicker, L Xu, MC Consolo, VH Price, P Mirmirani and P Karnik. Cleveland, OH; San Francisco, CA and Vallejo, CA. Poster #613
11. **The role of Prostaglandin D2 and its receptor DP-2 in promotion of androgenetic alopecia.** LA Garza, B Alagesan, JA Lawson, SM Norberg, E Loy, T Zhao, DC Stanton, L Carrasco, SM Fischer, GA Fitzgerald and G Cotsarelis. Baltimore, MD; Philadelphia, PA and Smithville, TX. Poster #615
12. **New pointers towards a role of perifollicular mast cells in alopecia areata.** M Bertolini, P Kleditzsch, VU Emelianov, K Sugawara, KC Meyer and R Paus. Lübeck, Germany and Manchester, United Kingdom. Poster #630

# Associate Meetings

## American DermatoEpidemiology Network (ADEN)

### Business & Scientific Session

Saturday, May 8, 2010 • 9:00 am - 1:30 pm • Room 204-205

#### *OPEN TO ALL MEETING REGISTRANTS*

Presiders: Joel Gelfand, MD/MSCE and Michael Ming, MD/MSCE

1. **Identifying persons at highest risk of melanoma using self-assessed risk factors: Results from a case-control study in Washington State.** LH Williams, WE Barlow, AR Shors, C Solomon and E White. Seattle, WA. *9:00 a.m. Poster #395*
2. **Rate of positive Sentinel Lymph Node Biopsy (SLNB) in shave vs. punch biopsies of thin (<1mm) melanomas.** N Hill, A Page, P Bonaccorsi, K Delman, E Veledar and SC Chen. Boston, MA and Atlanta, GA. *9:12 a.m. Poster #398*
3. **Risk for multiple non-melanoma skin cancers among US women and men.** AA Qureshi, Y Li and J Han. Boston, MA. *9:24 a.m. Poster #386*
4. **Classification of skin manifestations of adult T-cell leukemia/lymphoma useful for staging and predictive for prognosis.** Y Sawada, R Hino, K Hama, M Nakamura and Y Tokura. Kitakyushu, Japan. *9:36 a.m. Poster #383*
5. **Gender in examination and counseling of patients in primary care.** A Markova, MA Weinstock, P Risica, U Kirtania and H Ombao. Providence, RI. *9:48 a.m. Poster #358*
6. **39-year follow-up of xeroderma pigmentosum: Skin cancer, neurologic degeneration and mortality.** PT Bradford, AM Goldstein, JJ DiGiovanna, D Tamura, SG Khan, MA Tucker and KH Kraemer. Bethesda, MD and Providence, RI. *10:00 a.m. Poster #364*
7. **Screening for psoriatic arthritis and psoriasis phenotypes in the nurses' health study 2.** P Dominguez, H Choi, G Curhan, J Han and A Qureshi. Boston, MA. *10:12 a.m. Poster #396*
8. **Independent and significant association between severity of hypertension and psoriasis.** AW Armstrong, SW Lin, CJ Chambers and DL Chin. Sacramento, CA. *10:24 a.m. Poster #352*
11. **Skin color in the US population: An analysis of the distribution and validity of dermatologist-assessed Fitzpatrick skin type.** E Keiser, E Linos, M Kanzler, W Lee, K Sainani and J Tang. Palo Alto, CA. *11:12 a.m. Poster #393*

#### **ADEN Business Meeting**

**Discussion: Collaboration Opportunities (Pruritis, Psoriasis, Wound Healing, Melanoma)**

#### **Break**

9. **Health outcome measures in atopic dermatitis: A systematic review of trends in disease severity and quality-of-life instruments 1999-2009.** B Rehal and A Armstrong. Sacramento, CA. *10:48 a.m. Poster #349*
10. **Risk factors for lymphedema: The Iowa Women's Health Study.** RL Ahmed, KH Schmitz, A Prizment and AR Folsom. Minneapolis, MN and Philadelphia, PA. *11:00 a.m. Poster #363*

# Networking and Social Events & Ancillary Groups

## Networking and Social Events

### Opening Night Welcome Reception

Wednesday, May 5, 2010 • 7:30 pm - 9:30 pm  
Salon West Corridor, Hilton Atlanta

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. *THIS EVENT IS FREE TO ALL MEETING ATTENDEES.*

### Post Doctoral Luncheon

Thursday, May 6, 2010 • 12:00 pm - 2:00 pm  
Salon D, Hilton Atlanta

Young investigators are invited to attend the luncheon to learn about opportunities available through the SID, to provide input and feedback on programs that add value to the PhD experience (including career development), and to network. *TICKETED EVENT; PRE-REGISTRATION REQUIRED.*

### Trainee Dinner Session

Friday, May 7, 2010 • 7:30 pm - 9:30 pm  
Crystal Executive Ballroom, Hilton Atlanta

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, formerly called the Resident/Fellow Dinner Sessions—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, life in academia or how to combine clinical work with research. *THIS IS A TICKETED EVENT. TICKETS MUST BE PURCHASED IN ADVANCE.*

### Social Event at Georgia Aquarium

Thursday, May 6, 2010 • 5:00 pm - 11:00 pm

With more than eight million gallons of fresh and marine water and more aquatic life than found in any other aquarium, you are sure to see things you've never seen before! The five distinct galleries within the Georgia Aquarium depict five different habitats, ranging from arctic waters to tropical oceans.

Social Event attendees will have full access to all exhibit spaces at the Georgia Aquarium from 5:00 - 7:00 pm. After 7:00 pm, access to exhibit spaces will be limited. Come early so you can see all the Aquarium has to offer! Buses will depart from the Hilton Atlanta Harris Street exit beginning at 5:00 pm. Buses will begin shuttling guests back to the hotel beginning at 8:15 pm, departing from the Aquarium's Ballroom Entrance. *THIS IS A TICKETED EVENT. TICKETS MUST BE PURCHASED IN ADVANCE.*

## Ancillary Groups

### SID Board of Directors Meeting

Wednesday, May 5, 2010 • 8:00 am - 2:00 pm  
Room 206

### Journal of Dermatologic Science Editorial Board Meeting

Wednesday, May 5, 2010 • 12:00 pm - 1:30 pm  
Room 302-303

### BCCNS Life Support Network

Thursday, May 6, 2010 • 10:00 am - 12:00 pm  
Room 302-304

### Experimental Dermatology Board Meeting

Thursday, May 6, 2010 • 1:00 pm - 2:00 pm  
Room 210

### CDC Stakeholder Meeting for Psoriasis Registry

Friday, May 7, 2010 • 7:00 am - 12:00 pm  
Room 203

### National Psoriasis Foundation

Friday, May 7, 2010 • 8:00 am - 11:00 am  
Room 204

### Women's Dermatologic Society/SID Luncheon

Friday, May 7, 2010 • 12:00 pm - 2:00 pm  
Crystal Executive Ballroom

### JID Editorial Board Meeting

Friday, May 7, 2010 • 4:00 pm - 5:30 pm  
Room 309-311

### Galderma Japan Scientific Forum

Friday, May 7, 2010 • 6:30 pm - 9:30 pm  
Room 212-214

### SID Board of Directors Meeting

Saturday, May 8, 2010 • 7:00 am - 8:00 am  
Room 203

# Educational Tracks

## Educational Tracks

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- 36      Clinical Scholars Plenary Session
- 37      Clinical Scholars Lectures
- 38      Resident Symposium



# Educational Track Descriptions

The SID is pleased to offer three educational program tracks within the 2010 Annual Meeting: Translational Research Track, Clinical Scholars Track and Resident 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 an educational track. Spaces are limited, and early registration is recommended. Registration will remain open until all spaces are filled. Track participants are encouraged to attend other portions of the Meeting as well.

## Translational Research Track

- **Designed for investigators who are considering or are actively involved in translating cutaneous biology research findings into clinical applications**

This track combines clinically-oriented elements of the Meeting program with special lectures, including the Translational Research Symposium. This year's symposium, "Personalized Genetics in Medicine: Are We There Yet?" includes the following:

- Personalizing Melanoma Therapy
- Pharmacogenomics in Angiogenesis and Inflammation
- Personalized Medicine in Psoriasis
- Towards Determining Personal Cancer Therapy:  
The CollabRx Model
- Direct-to-Consumer Genetic Analyses of Risk and Ancestry  
Using the 23andMe Model
- Panel Discussions

## 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.

- Plenary Poster Discussion Session
- Lecture topics include: Interpretation of Microarray Experiments, Molecular Basis of Heritable Skin Disorders, Cancer Stem Cells, The Skin Microbiome and UVB Immunosuppressants

## Resident Track

- **Designed for current dermatology residents who are interested in overviews of current research topics and insight into the latest developments in skin disease and health research**

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

- Finding a Mentor/Finding a Niche
- The Academic Ladders
- How I Did It
- Giving a Good Talk
- The JID and Choosing an Appropriate Journal for the Perfect Paper
- Writing the Perfect Paper
- Pearls and Pitfalls for a Career in Academic Dermatology

# Educational Track Schedules

		8:00 am	9:00 am	10:00 am	11:00 am	12:00 pm	1:00 pm	2:00 pm
Wednesday, May 5, 2010		Translational Research					Translational Research Symposium	
		Clinical Scholars						
Thursday, May 6, 2010		Resident						
		Translational Research	Plenary Session 1	Beerman & Kanof Lectures	Poster Session 1 & Technical Exhibits		Satellite Symposium 1 <i>Regenerative Medicine</i>	
		Clinical Scholars	Plenary Session 1	Beerman & Kanof Lectures	Clinical Scholars Plenary Session		Satellite Symposium 1 <i>Regenerative Medicine</i>	
Friday, May 7, 2010		Resident	Plenary Session 1	Beerman & Kanof Lectures	Clinical Scholars Plenary Session		Post Doctoral Luncheon	
		Translational Research		Plenary Session 2	Farber Lecture	State-of-the-Art Plenary Lectures 4, 5		Satellite Symposium 2: <i>Emerging Mechanism-based Therapies for Skin Cancer</i>
		Clinical Scholars		Plenary Session 2		State-of-the-Art Plenary Lectures 4, 5	Clinical Scholars Lecture Session	Research in Cutaneous Minisymposium
Saturday, May 8, 2010		Resident		Plenary Session 2	Farber Lecture	State-of-the-Art Plenary Lectures 4, 5		Satellite Symposium 2: <i>Emerging Mechanism-based Therapies for Skin Cancer</i>
		Translational Research	Plenary Session 3	Montagna & Stone Lectures	Poster Session 3 & Technical Exhibits			
		Clinical Scholars	Plenary Session 3	Montagna & Stone Lectures	Clinical Scholars Lecture Session			
		Resident	Plenary Session 3	Montagna & Stone Lectures	Clinical Scholars Lecture Session			

3:00 pm	4:00 pm	5:00 pm	6:00 pm	7:00 pm	8:00 pm	9:00 pm	10:00 pm
Irvin H. Blank Forum		Kligman Frost Lecture	State-of-the-Art Plenary Lectures 1,2,3	Opening Night Welcome Reception			
Irvin H. Blank Forum		Kligman Frost Lecture	State-of-the-Art Plenary Lectures 1,2,3	Opening Night Welcome Reception			
Irvin H. Blank Forum		Kligman Frost Lecture	State-of-the-Art Plenary Lectures 1,2,3	Opening Night Welcome Reception			
Concurrent Minisymposia or CTCL Symposium	Social Event at Georgia Aquarium						
Concurrent Minisymposia or CTCL Symposium	Social Event at Georgia Aquarium						
Resident Symposium <i>ights into an Academic Career</i>	Social Event at Georgia Aquarium						
Gastrointestinal Surgery Symposium or Concurrent Minisymposia or Co-Morbidity Conference							
Gastrointestinal Surgery Symposium or Concurrent Minisymposia or Co-Morbidity Conference							
Gastrointestinal Surgery Symposium or Concurrent Minisymposia or Co-Morbidity Conference				Trainee Dinner Session			
Concurrent Minisymposia							
Concurrent Minisymposia							
Concurrent Minisymposia							

# Educational Track Programs

## Translational Research Symposium: Personalized Genetics in Medicine: Are We There Yet?

Wednesday May 5, 2010 • 12:00 pm - 3:00 pm • Salon A/B



### *Introduction*

**Paul Nghiem, MD/PhD**

Associate Professor of Dermatology  
University of Washington, Fred Hutchinson  
Cancer Research Center, Seattle, Washington



### *Personalizing Melanoma Therapy / Q & A*

**Hensin Tsao, MD/PhD**

Associate Professor, Department of  
Dermatology  
Harvard Medical School, Boston,  
Massachusetts



### *Towards Determining Personal Cancer Therapy: The CollabRx Model / Q & A*

**Raphael Lehrer, PhD**

Head of Personalized Oncology Services  
CollabRx, Inc., Palo Alto, California



### *Personalized Medicine in Psoriasis / Q & A*

**Wilson Liao, MD**

Assistant Professor of Dermatology  
University of California, San Francisco, San  
Francisco, California



### *Pharmacogenomics in Angiogenesis and Inflammation / Q & A*

**Michael Detmar, MD**

Professor of Pharmacogenomics  
Institute of Pharmaceutical Sciences, Swiss  
Federal Institute of Technology, Zurich,  
Switzerland



### *Direct-to-Consumer Genetic Analyses of Risk and Ancestry Using the 23andMe Model / Q & A*

**Serge Saxonov, PhD**

Director of R & D  
23andMe, Mountainview, California

## Clinical Scholars Plenary Session

Thursday, May 6, 2010 • 10:00 am - 12:00 pm • Salon A

*PRE-REGISTRATION IS ENCOURAGED, BUT NOT REQUIRED*

Presider: Ponciano Cruz, MD

- 1. Differentiation of induced pluripotent stem cells into a multipotent keratinocyte lineage.** G Bilousova, J Chen and DR Roop. Aurora, CO. *Poster #563*  
*Presented by Dennis R. Roop, PhD, Professor of Dermatology University of Colorado Denver Anschutz Medical Campus Denver, Colorado*
- 2. Gene suppression in skin through topical delivery of polyvalent siRNA-gold nanoparticles.** AS Paller, D Giljohann, D Zheng, H Iordanov, X Wang and CA Mirkin. Chicago, IL and Evanston, IL. *Poster #502*  
*Presented by Amy Paller, MD, Professor and Chairman of Dermatology, Northwestern University, Chicago, Illinois*
- 3. Genome-wide association study in alopecia areata implicates both innate and adaptive immunity.** L Petukhova, Duvic, M Hordinsky, D Norris, V Price, Y Shimomura, H Kim, P Singh, A Lee, WV Chen, KC Meyer, R Paus, C Jahoda, CI Amos, PK Gregersen and AM Christiano. New York, NY; Houston, TX; Minneapolis, MN; Denver, CO; San Francisco, CA; Manhasset, NY; Lubeck, Germany; Manchester, United Kingdom and Durham, United Kingdom. *Poster #551*  
*Presented by Angela M.Christiano, PhD, Professor and Vice Chair for Research, Dermatology and Genetics Development, Columbia University, New York, New York*
- 4. Topical application of type VII collagen for wound healing and treatment of DEB.** P Ghasri, X Wang, A Ng, D Woodley and M Chen. Los Angeles, CA. *Poster #537*  
*Presented by Mei Chen, PhD, Professor and Director of Research, Norris Comprehensive Cancer Center, University of Southern California, Los Angeles, California*
- 5. Visualization of untreated premature atherosclerosis in a US psoriasis cohort.** D Kast, I Grozdev, L Cao, D Carlson, R Feig, P Pujari, D Babineau, E Kern, C Orringer, T McCormick, K Cooper and N Korman. Cleveland, OH. *Poster #326*  
*Presented by Neil J. Korman, MD/PhD, Professor of Dermatology, University Hospitals Case Medical Center, Cleveland, Ohio*
- 6. Effect of tetracycline antibiotics for acne on the development of inflammatory bowel disease.** MJ Fanelli, JD Lewis, O Hoffstad and DJ Margolis. Philadelphia, PA. *Poster #354*  
*Presented by David J. Margolis, MD/PhD, Associate Professor of Dermatology, University of Pennsylvania, Philadelphia, Pennsylvania*

# Educational Track Programs

## Clinical Scholars Lecture Session

Friday, May 7, 2010 • 11:30 am - 1:30 pm • Salon A

*PRE-REGISTRATION IS ENCOURAGED, BUT NOT REQUIRED*

Presider: Nick Reynolds, MD/FRCP and Edward Cowen, MD



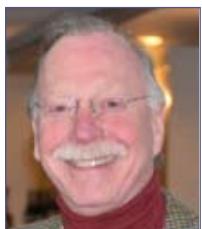
### *Interpretation of Microarray Experiments*

**James T. Elder, MD/PhD**

Professor

University of Michigan

Ann Arbor, Michigan



### *MicroRNAs in Skin Biology and Disease*

**Robert M. Lavker, PhD**

Professor of Dermatology

Northwestern University

Chicago, Illinois



### *Molecular Basis of Heritable Skin Disorders*

**Jouni J. Uitto, MD/PhD**

Professor and Chair

Jefferson Medical College

Philadelphia, Pennsylvania

## Clinical Scholars Lecture Session

Saturday, May 8, 2010 • 10:00 am - 12:00 pm • Salon A

*PRE-REGISTRATION IS ENCOURAGED, BUT NOT REQUIRED*

Presider: Nick Reynolds, MD/FRCP and Rachael Clark, MD/PhD



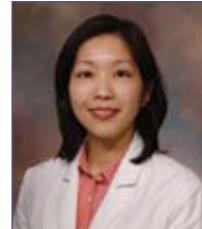
### *Cancer Stem Cells*

**Markus H. Frank, MD**

Associate Physician, Medicine

Brigham and Women's Hospital

Boston, Massachusetts



### *The Skin Microbiome*

**Heidi Kong, MD**

Assistant Clinical Investigator

Dermatology Branch, NIH

Bethesda, Maryland



### *UVB Immunosuppression*

**Thomas Schwarz, MD**

Professor and Chairman, Department of

Dermatology and Allergology

University of Kiel

Kiel, Germany

# Educational Track Programs

## Resident Symposium: Insights into an Academic Career

Thursday, May 6, 2010 • 2:00 pm - 5:00 pm • Room 212-213

*PRE-REGISTRATION IS ENCOURAGED, BUT NOT REQUIRED*



*Welcome*

**Oscar Colegio, MD/PhD**

Clinical Instructor, Yale School of Medicine,  
New Haven, Connecticut



*Giving a Good Talk*

**John Stanley, MD**

Chairman, Dept. of Dermatology, University  
of Pennsylvania, Philadelphia, Pennsylvania



*Finding a Mentor; Finding a Niche*

**Stephen Katz, MD/PhD**

Director, National Institute of Arthritis and  
Musculoskeletal and Skin Diseases, National  
Institutes of Health, Bethesda, Maryland



*The JID & Choosing an Appropriate Journal  
for the Perfect Paper*

**Paul Bergstresser, MD**

Professor of Dermatology, University of  
Texas Southwestern Medical Center, Dallas,  
Texas



*The Academic Ladders*

**Amy Paller, MD**

Professor and Chair, Dept. of Dermatology,  
Northwestern University, Chicago, Illinois



*Writing the Perfect Paper*

**Richard Gallo, MD/PhD**

Chief of Dermatology, University of  
California, San Diego, LaJolla, California



*How I Did It*

**Sam Hwang, MD/PhD**

Professor and Chair, Medical College of  
Wisconsin, Milwaukee, Wisconsin



*Pearls and Pitfalls for a Career in Academic  
Dermatology*

**Sewon Kang, MD**

Noxell Professor and Chairman, Department  
of Dermatology, Johns Hopkins University,  
Baltimore, Maryland

# Abstracts

## Abstracts

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# Abstract Presentation Information

## Oral Presentations

Oral presentations and lectures will take place at the Hilton Atlanta. 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 (Room 202).

## Poster Presentations

All posters will be displayed until Saturday, May 8 at 12:00 p.m. in the Galleria Exhibit Hall. 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 8. Posters may not be removed early. The SID is not responsible for posters left unclaimed as of 6:00 p.m. on Saturday, May 8. Unclaimed posters will not be returned.

### Install All Posters

Wednesday, May 5, 2010 • 8:00 am - 6:00 pm

### Poster Session I

Odd poster numbers 001-297 & Even poster numbers 298-596  
Thursday, May 6, 2010 • 10:00 am - 12:00 pm

### Poster Session II

Even Poster numbers 002-296 & Odd Poster numbers 597-893  
Friday, May 7, 2010 • 11:15 am - 1:15 pm

### Poster Session III

Odd Poster numbers 299-595 & Even Poster numbers 598-894  
Saturday, May 8, 2010 • 10:00 am - 12:00 pm

### Dismantle All Posters

Saturday, May 8, 2010 • 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

Room 202 will be available to all presenters.

Tuesday, May 4, 2010	4:00 pm - 7:00 pm
Wednesday, May 5, 2010	7:00 am - 7:00 pm
Thursday, May 6, 2010	7:00 am - 5:00 pm
Friday, May 7, 2010	7:00 am - 5:00 pm
Saturday, May 8, 2010	7:00 am - 4:00 pm

## Keyword Index

The keyword index is located on pages 62-65 and appears in the April issue of the *Journal of Investigative Dermatology* (JID).

# Poster Presentations / Abstract Titles

## Angiogenesis, Vascular Biology and Wound Healing

All orals [designated with an asterisk (\*)] listed below are presented in the Angiogenesis, Vascular Biology and Wound Healing Minisymposium on Thursday, May 6, 2010 from 2:00-5:30 p.m. in Room 205, Hilton Atlanta. Orals designated by two asterisks (\*\*) will be presented during a Plenary Session.

- 001\*\* **Genomic approaches to the investigation of wound microbiology and pathogenesis.** A Han, J Zenilman, J Melendez, E Mongodin, A Agostinho, G James, M Shirtliff, A Rickard and G Lazarus. Baltimore, MD; Bozeman, MT and Binghamton, NY.
- 002 **TGF-beta 1-treated conditioned media from adipose tissue-derived stem cells induces increased expressions of type I collagen and MMP-1 in human skin fibroblasts, thereby promoting wound healing process *in vivo*.** JW Cho, MC Kang and KS Lee. Daegu, South Korea.
- 003 **Novel topical foam shows promise in healing of superficial skin wounds when compared to two current treatments.** S Khan and MD Johnson. Newtown, PA and Mattawan, MI.
- 004\* **Pericyte-derived MFG-E8 regulates angiogenesis.** S Motegi, M Lu, M Heneghan, C Wu, T Chavakis and MC Udey. Bethesda, MD.
- 005\* **Calpain activity is essential for cell recruitment, myofibroblast differentiation and angiogenesis in early stages of skin wound.** D Nassar, E Letavernier, L Baud, S Aractingi and K Khosrotehrani. Paris, France and Brisbane, Australia.
- 006\* **Transgenic activation of lymphatic vessel function specifically reduces edema formation during acute skin inflammation.** R Huggenberger, D Brander, K Alitalo and M Detmar. Zurich, Switzerland and Helsinki, Finland.
- 007\* **Wilms Tumor 1 (WT-1) overexpression causes malignant transformation of endothelial cells.** R Chuá, L Souza, M McLemore, MY Bonner, C Cohen and JL Arbiser. Atlanta, GA.
- 008 **Increased expression of secreted frizzled-related protein 2 in patient with Keloid: Crucial role in the pathogenesis of tissue fibrosis.** G Zhang and W Gao. Wenzhou, China.
- 009 **Hypoxia and UV light modulate the level, localisation and activity of Hif1 $\alpha$ /Hif1 $\beta$  proteins in epidermal keratinocytes.** L Weir, A Wondimu, D Robertson and AA Panteleyev. Dundee, United Kingdom and New York, NY.
- 010\* **Epidermal growth factor receptor-mediated reepithelialization in an *in vitro* diabetes model.** KK Quan and LG Hudson. Albuquerque, NM.
- 011 **Characterization of biofilm infected wounds in diabetic mice.** G Zhao, EA Bauerle, ML Usui, RA Underwood, PK Singh, GA James, PS Stewart, JE Olerud and P Fleckman. Seattle, WA and Bozeman, MT.
- 012\* **Effect of superoxide dismutase (SOD) /catalase mimetic EUK-207 on the radiation-induced skin injury.** MM Jourdan, A Lopez, EB Olasz, JE Moulder, BL Fish, M Mader, A Schock, B Althouse, SD Doctrow and Z Lazarova. Milwaukee, WI and Boston, MA.
- 013 **High-fat diet promotes skin inflammation by vascular abnormality and accelerates UVB- induced skin damage.** M Takagi, M Sawane and K Kajiyama. Yokohama, Japan.
- 014\* **Curcumin at nM concentrations limits burn injury progression and causes  $\beta$ -adrenergic receptor-mediated vasodilation.** A Dewar, B Taira, AJ Singer, RA Clark and MD Frame. Stony Brook, NY.
- 015 **Modulation of VEGF expression enhances epidermal and blood vessel protection against UVB and oxidative stress.** L Mur, C Pouzet, C Serre, C Gondran, E Bauza, J Botto, C Dal Farra and N Domloge. Sophia Antipolis, France and Wayne, NJ.
- 016\* **Rapamycin blocks lymphangiogenesis induced by TSC2-null hamartoma cells.** S Rajesh, S Li, J Wang, R Thangapazham, J Moss and TN Darling. Bethesda, MD.
- 017\* **Lhx2 regulates Sox9 and Tcf4 to supply hair follicle-derived progenitor cells to the wound epithelium.** AN Mardaryev, AA Sharov, TY Sharova, MY Fessing, S Werner and VA Botchkarev. Bradford, United Kingdom; Boston, MA and Zurich, Switzerland.
- 018\* **The neuropeptide pituitary adenylate cyclase activating Polypeptide regulates neuro-vascular responses in human skin *in vivo*.** J Buddenkotte, S Seeliger, V Shpacovitch, A Schmidt-Choudhury, C Rosignoli, R Rukwied, M Schmelz, J Voegel and M Steinhoff. Muenster, Germany; Goettingen, Germany; Bochum, Germany; Sophia Antipolis, France; Mannheim, Germany and San Francisco, CA.
- 019\* **Transgenic overexpression of keratinocyte-specific VEGF and Ang1 in combination promotes wound healing under nondiabetic but not diabetic conditions: A mechanistic role for Ang1-mediated delay in re-epithelialization.** C Matheny, D Diaconu, G Adams, W Fu, D Knutson and NL Ward. Cleveland, OH.
- 020 **Regulation of extracellular matrix protein expression by NF- $\kappa$ B and its role in impaired wound healing response.** S Kaur and MD Southall. Skillman, NJ.
- 021\* **A 124-amino acid peptide from secreted heat shock protein-90 (HSP90) is a novel wound repair agent.** W Li, C Cheng, Z Zhao, J Dai, J Fan, M Chen and D Woodley. Los Angeles, CA.
- 022\* **Psychological stress-induced delays in cutaneous wound healing reversed by inhibitor of the glucocorticoid activating enzyme, 11 $\beta$ -hydroxysteroid dehydrogenase type 1.** J Youm, Y Uchida, PM Elias and WM Holleran. San Francisco, CA.
- 023\* **TGF $\beta$  dependent differentiation of dermal fibroblasts to myofibroblasts is regulated by CLIC4.** A Shukla, Y Yang, PV Chellamal, S Madanikia and SH Yuspa. Bethesda, MD.
- 024\* **Cholesterol synthesis mediates inhibition of wound healing via anti-inflammatory signals whereas statins reverse it.** E Lebrun, O Stojadinovic, S Vukelic, I Pastar, S Resnik and M Tomic-Canic. Miami, FL.
- 025 **Cutaneous wound healing in the EpiDerm-FT™ full-thickness *in vitro* human skin model.** AJ Armento, G Stolper, C Cooney, M Li, M Klausner and PJ Hayden. Ashland, MA.
- 026 **Structural relationships between dermal blood vessels and the epithelium in mouse skin.** Y Xiao and JC Vogel. Bethesda, MD.
- 027 **Overexpression of Hoxb13 in the basal layer of the epidermis results in upregulation of TGF- $\beta$  activity and an enhanced fibrotic response in cutaneous wounds.** J Mack and EV Maytin. Cleveland, OH.
- 028 **Human cutaneous squamous cell carcinoma is associated with increased numbers of VEGF-C producing macrophages.** D Moussai, H Mitsui, KR Shah, M Suárez-Fariñas, KC Pierson, IR Cardinale, MJ Bluth, JG Krueger and JA Carucci. New York, NY.
- 029 **Cutaneous response to long term percutaneous porous/solid biomaterial implants in a mouse model.** P Fleckman, R Underwood, M Usui, G Zhao, A Marshall, M Maginness, C Glaister, B Ratner and J Olerud. Seattle, WA.
- 030 **Comparison study with a honey dressing and collagen powder for healing of deep partial thickness wounds using a porcine model.** J Gil, J Valdes and SC Davis. Miami, FL.
- 031 **Tgfb3 decreases myofibroblast recruitment and keratinocyte proliferation during excisional wound repair.** M Le, J Morrison and M Dunnwald. Iowa City, IA.
- 032 **Chloride channels in epithelium and their roles in endogenous wound electric currents.** L Cao, B Reid and M Zhao. Davis, CA.

## Auto-immunity and Inflammation

All orals [designated with an asterisk (\*)] listed below are presented in the Auto-immunity and Inflammation Minisymposium on Friday, May 7, 2010 from 2:00-5:30 p.m. in Salon C, Hilton Atlanta. Orals designated by two asterisks (\*\*) will be presented during a Plenary Session.

- 033 **Identification of TRAIL and other molecules that distinguish inflammatory (CD11c+CD1c-) DCs from resident (CD1c+) DCs in human skin.** LC Zaba, J Fuentes-Duculan, J Eungdamrong, KE Nograles, TR White, KC Pierson, M Suárez-Fariñas, MA Lowes and JG Krueger. New York, NY.
- 034 **Fc $\gamma$ IRIV promotes, while Fc $\gamma$ RIIB protects from autoantibody-induced tissue damage in autoimmunity to type VII collagen.** M Kasperkiewicz, S Wende, F Nimmerjahn, M Hirose, K Kalies, J Westermann, J Köhl, D Zillikens and RJ Ludwig. Lübeck, Germany; Erlangen, Germany and Cincinnati, OH.
- 035 **Appearance in Japanese women correlates with age-related NADH oxidase levels and blood markers of lipid oxidation.** D Morré, DM Morré, DG Kern and SM Wood. West Lafayette, IN and Provo, UT.
- 036 **Induction of autoreactive dermatitis by T cells with retrovirally modified T cell receptor specificity to desmoglein 3.** M Kouno, H Takahashi, T Yamada, K Nagao and M Amagai. Tokyo, Japan.

- 037\* **The genetics of actively induced murine epidermolysis bullosa acquisita.** RJ Ludwig, K Bieber, S Müller, A de Castro Marques, D Banczyk, M Hirose, M Kasperkiewicz, N Ishii, A Recke, E Schmidt, J Westermann, D Zillikens and SM Ibrahim. Lübeck, Germany and Fukuoka, Japan.
- 038 **Antimitochondrial autoantibodies in pemphigus.** S Marchenko, A Chernyavsky, J Arredondo, V Gindi and S Grando. Irvine, CA.
- 039 **A study of culture and toxin genes of staphylococcus aureus in atopic dermatitis.** J Lee and J Roh. Incheon, South Korea.
- 040 **Lecinoxoids in the treatment of psoriasis.** E Breitbart, Y Cohen, E Ishai and I Mendel. Or Yehuda, Israel.
- 041 **Inhibition of Cox-2 suppresses keratinocyte antimicrobial peptide expression.** JJ Bernard and RL Gallo. San Diego, CA.
- 042 **Topical herbal extract exhibits both preventive and therapeutic effects in murine acute irritant contact dermatitis.** W Man, M Man, G Martin-Ezquerra, M Hupe, C Trullas, KR Feingold, PM Elias and M Man. San Francisco, CA and UAB, Spain.
- 043 **Th17 cells from human skin require proliferation for IL-17 production.** J Teague, D Hijnen, I Mollet, Y Jiang, R Watanabe, M Lichtman, TS Kupper and R Clark. Boston, MA; Utrecht, Netherlands and Ghent, Belgium.
- 044 **Immunologic actions of glycosaminoglycans in cutaneous lupus erythematosus & dermatomyositis.** A Nabatian, MM Bashir and VP Werth. Philadelphia, PA and New Brunswick, NJ.
- 045 **Up-regulation of CCL26 by IL-4 is through Jak-Stat pathway in atopic dermatitis.** L Bao, L Chen and LS Chan. Chicago, IL.
- 046 **In vivo conversion of CD4+FoxP3- to FoxP3+ T cells.** EN Huter, DD Glass and EM Shevach. Bethesda, MD and Heidelberg, Germany.
- 047\* **Syndecan-4 is an important negative regulator of T cell immunity and a potentially useful target for treating diseases resulting from such immunity.** J Chung, M Tomihari, T Kojima, P Cruz and K Ariizumi. Dallas, TX and Nagoya, Japan.
- 048 **IgG4 depletion as a therapeutic strategy in pemphigus.** T Funakoshi, CE O'Leary and AS Payne. Philadelphia, PA.
- 049 **An IgE monoclonal antibody to BP180-NC16A replicates the effects of bullous pemphigoid IgE *in vitro*.** KA Messingham, AL Onoh, EA Vanderah, GJ Giudice and JA Fairley. Iowa City, IA.
- 050 **Norepinephrine (NE) and adenosine-5'-triphosphate (ATP) synergize in inducing IL-6 production by human dermal microvascular endothelial cells (HDMECs).** LL Stohl, J Zang, M Schierl, W Ding, M Manni, JA Wagner and RD Granstein. New York, NY.
- 051 **Laser-capture microdissection of psoriasis vulgaris suggested potential for self-organizing lymphoid tissue in lesional dermis.** H Mitsui, J Fuentes-Duculan, I Coats, I Cardinale and JG Krueger. New York, NY.
- 052 **Efficacy and safety of Canakinumab (ILARIS®) in Cryopyrin-Associated Periodic Syndrome (CAPS): Interim results of an ongoing phase III study.** KS Leslie, JB Kuemmerle-Deschner, HJ Lachmann, E Hachulla, J Hoyer, J Smith, I Kone-Paut, J Braun, A Widmer, N Patel, R Preiss and PN Hawkins. San Francisco, CA; Tübingen, Germany; London, United Kingdom; Lille Cedex, France; Marburg, Germany; Madison, Wisconsin; Kremlin Bicetre, France; Herne, Germany; Basel, Switzerland and East Hanover, NJ.
- 053 **Biomimetic electricity generated by an elemental bi-mineral complex produces anti-inflammatory activity.** P Lyte, M Garay, S Kaur, F Liebel, S Bhattacharyya and MD Southall. Skillman, NJ.
- 054\* **Passive transfer of dermatitis herpetiformis serum high in IgA anti-TG3 produces granular IgA deposition in the papillary dermis of human skin engrafted on SCID mice.** JJ Zone, LA Schmidt, T Taylor, C Hull, M Sotiriou, T Jaskowski, H Hill and LJ Meyer. Salt Lake City, UT.
- 055\* **A xenograft model of human skin to study the role of dendritic cells in inflammatory skin disease.** J Wegner-Kops, J Hemmerling, D Wolff, S Grabbe, E von Stebut, RG Meyer and RE Schopf. Mainz, Germany.
- 056 **AIM2 is overexpressed in psoriasis and an AIM2 inflammasome is active in human epidermal keratinocytes.** Y Dombrowski, M Peric, S Koglin, C Kammerbauer, T Ruzicka, R Besch and J Schauber. Munich, Germany.
- 057\* **The TLR4 ligands Mrp8/14 play a critical role in the development of autoreactive CD8+ T cells.** K Loser, T Vogl, TA Luger, J Roth and S Beissert. Muenster, Germany.
- 058 **Gene expression, cytokine profiling and pharmacological evaluation of IL-23 induced skin inflammation in mice-an animal model of psoriasis.** J Lindroos, L Svensson, GM Olsen, P Lovata, H Norsgaard and T Labuda. Ballerup, Denmark.
- 059 **Characterization of photosensitivity and poor quality of life in lupus.** K Foering, J Okawa, M Rose, R Goreshi, J LoMonico and V Werth. Philadelphia, PA.
- 060 **Novel secosteroids inhibit collagen and hyaluronan synthesis by human fibroblasts.** AE Postlethwaite, W Li, J Chen, D Miller and AT Slominski. Memphis, TN.
- 061 **Cutaneous regulatory T cells can produce IL-17: A possible source of autoreactive Th17 cells in human skin.** M Lichtman, J Teague, Y Jiang, R Watanabe, TS Kupper and R Clark. Boston, MA.
- 062\* **Systems level high-throughput and multiparametric analyses to elucidate cell death associated molecules involved in pemphigus vulgaris.** N Cirillo, A Lanza and SS Prime. Bristol, United Kingdom and Napoli, Italy.
- 063\* **Human IgG1 mAb against human COL17 NC16A developed from BP patients induces blisters in experimental bullous pemphigoid model.** A Shibaki, Q Li, H Ujiie, G Wang, R Moriuchi, H Qiao, H Morioka, S Shinkuma, K Natsuga, HA Long, W Nishie and H Shimizu. Sapporo, Japan and Kumamoto, Japan.
- 064 **Systemic epinephrine alters neutrophil trafficking and prolongs their persistence in wounds: Implications for stress-mediated impairment of wound healing.** M Kim, SI Simon and RR Isseroff. Davis, CA.
- 065\* **Targeted depletion of IL-23 by IL-4 *in vivo* impairs T cell mediated DTHR.** E Guenova, W Hoetzenecker, N Hamdi, T Volz, Y Boettcher, M Schaller, M Röcken and T Biedermann. Tuebingen, Germany.
- 066 **Spatiotemporal progression of tissue death surrounding burns.** S Lanier, S McClain, F Lin, MG Tonnesen, AJ Singer and RA Clark. Stony Brook, NY and Northport, NY.
- 067 **Effector T cells and local innate immunity need to act in concert for development of autoimmune myositis.** N Okiyama, T Sugihara, H Yokozeki, N Miyasaka and H Kohsaka. Tokyo, Japan and Kanagawa, Japan.
- 068 **IL-17-producing dendritic epidermal T cells represent a subset of murine T cells involved in cutaneous immunity and wound healing.** AS Büchau, S Hemmers, S von Vietinghoff, K Mowen, K Ley, D Witherden and WL Havran. La Jolla, CA.
- 069 **Identification and regulation of specific chondroitin sulfate species in discoid lupus erythematosus and dermatomyositis.** J Kim and V Werth. New York, NY and Philadelphia, PA.
- 070 **Atomic force microscopy-based investigation of autoimmune pathology.** K Seiffert-Sinha, CK Fung, R Yang, AS Payne, N Xi and AA Sinha. East Lansing, MI and Philadelphia, PA.
- 071\* **Plasmin is involved in the pathogenesis of psoriasis by inducing CCL20 expression in macrophages.** Q Li, F Ke and H Wang. Shanghai, China.
- 072 **Protective effects of quercetin on oxidation-induced damage of cultured human keratinocytes.** J Zhang, X Wang, J Du and P He. Beijing, China.
- 073\* **Effects of defensameide, a newly synthesized epidermal AMP stimulating molecule, on oxazolone-induced atopic dermatitis animal model.** S Jeong, J Bae, M Kwon, H Kim, T Mauro, A Celli and S Lee. Daejeon, South Korea; Seoul, South Korea and San Francisco, CA.
- 074\* **Ketoconazole activates nuclear factor-erythroid 2-related factor-2 (Nrf2) via aryl hydrocarbon receptor signaling pathway: A possible mechanism of anti-inflammatory effect.** G Tsuji, M Takahara, H Uchi, S Takeuchi, C Mitoma, Y Moroi and M Furue. Fukuoka, Japan.
- 075\* **Distinct roles of IL-23 and IL-17 in the development of psoriasis-like lesion in a mouse model.** K Nakajima, T Kanda, M Takaishi, K Miyoshi, JM Benson, MM Ellosio, Y Iwakura, J DiGiovanni and S Sano. Kochi, Japan; Radnor, PA; Tokyo, Japan and Smithville, TX.
- 076 **An environmental contaminant, benzo(a)pyrene induces inflammatory responses in human keratinocytes via aryl hydrocarbon receptor signaling pathway.** M Takahara, G Tsuji, H Uchi, S Takeuchi, C Mitoma, Y Moroi and M Furue. Fukuoka, Japan.
- 077 **Antimicrobial peptide-DNA complexes are implicated in initial pathogenesis of rosacea.** AA Navarini, P Dziunycz, S Meller, M Gilliet and C Conrad. Zurich, Switzerland and Houston, TX.
- 078 **Triggering of psoriasis-like disease by PPARI $\gamma$ / $\gamma$  in the epidermis involves activation of STAT3.** M Romanowska, L Reilly, CN Palmer and JN Foerster. Dundee, United Kingdom.
- 079 **ATP: A tissue site specific activator of naïve regulatory T cells during contact hypersensitivity reactions.** S Ring, AH Enk and K Mahnke. Heidelberg, Germany.
- 080 **Proteomic analyses for probing biomarkers of atopic dermatitis from the serum-derived samples.** J Cho, D Lee, Y Park and J Yang. Seoul, South Korea.
- 081 **IL-21 in the pathogenesis of psoriasis.** E Botti, R Caruso, M Sarra, L Diluvio, F Pallone, S Chimenti, G Monteleone and A Costanzo. Rome, Italy.
- 082 **Endothelial cells augment the suppressive function of CD4+CD25+Foxp3+ regulatory T cells: Involvement of PD-1 and IL-10.** T Bedke, S Karakhanova, AH Enk and K Mahnke. Heidelberg, Germany.

- 083** **Detection of IgE by direct immunofluorescence in a large cohort of bullous pemphigoid patients.** JR Vu, J Deng, T Patton and E Abell. Pittsburgh, PA.
- 084** **Pharmacological levels of staphylococcal protein A are found in infected atopic dermatitis lesions.** JB Travers, Y Yao, A Kozman and N Mousdicas. Indianapolis, IN.
- 085** **A role for the novel pro-inflammatory cytokine IL-17C in the pathogenesis of psoriasis.** PM Al-Attar, JE Gudjonsson, NL Ward, M Riblett, X Xing, JJ Voorhees, JT Elder and A Johnston. Ann Arbor, MI and Cleveland, OH.
- 086** **Myeloperoxidase as a marker to assess the propensity of psoriasis patients to develop cardiovascular disease in relation to systemic inflammation, lipids and disease severity.** ME Rodriguez, J Ohtola, H Sugiyama, L Cao, D Kast, DC Babineau, KD Cooper, TS McCormick and NJ Korman. Cleveland, Oh.
- 087** **A systems biology approach to evaluate psoriasis as a systemic disease.** C Ryan, R Banchereau, G Obermoser, B Lemoine, V Pascual, J Banchereau, D Chaussabel and A Menter. Dallas, TX.
- 088** **Molecular and morphometric characterization of neuroinflammatory and neurovascular changes in the development of rosacea.** M Steinhoff, M Sulk, V Schwab, P Nowak, J Aubert, H Hinte, J Buddenkotte and JJ Voegel. Muenster, Germany; San Francisco, CA and Sophia Antipolis, France.
- 089** **Constitutively active inflamasome in human melanoma cells mediating autoinflammation via caspase-1 processing and secretion of interleukin-1 $\beta$ \***. M Okamoto, W Liu, Y Luo, A Tanaka, X Cai, DA Norris, CA Dinarello and M Fujita. Aurora, CO.
- 090** **Clinical and experimental evidence that psoriasis is exacerbated by tobacco smoke via an enhanced generation of Th17 cells.** K Torii, C Saito, T Furuhashi, A Nishioka, Y Shintani and A Morita. Nagoya, Japan.
- 091** **Development of alopecia areata may be associated with heart disease.** E Wang, M Yu, J Shapiro and K McElwee. Vancouver, Canada.
- 092** **Comparison of index values of Dsg3-ELISA and those of EDTA-treated Dsg3-ELISA is a reliable monitor for pathogenic autoantibody in pemphigus.** Y Aoyama, K Kamiya, K Hisada, K Fujii, T Yamamoto and K Iwatsuki. Okayama, Japan.
- 093** **The majority of patients with Neumann type pemphigus vegetans show IgG autoantibodies to human desmocollins 1-3, particularly desmocollin 3.** N Ishii, T Hamada, S Fukuda, H Koga, K Teye, T Ishikawa, S Sakaguchi, T Dainichi, T Karashima, T Nakama, S Yasumoto and T Hashimoto. Kurume, Japan.
- 094** **Anti-epiplakin autoantibodies are present in paraneoplastic pemphigus.** Y Natsuaki, H Koga, S Fukuda, N Ishii, T Dainichi, T Hamada, T Karashima, T Ishikawa, S Yasumoto, M Goto, S Fujiwara and T Hashimoto. Kurume, Japan and Oita, Japan.
- 095** **Granzyme B is a novel interleukin-18 converting enzyme.** Y Omoto, K Yamanaka, K Tokime, S Kitano, M Kakeda, I Kurokawa, EC Gabazza, H Tsutsui, N Katayama, K Yamanishi, K Nakanishi and H Mizutani. Tsu, Japan and Nishinomiya, Japan.
- 096** **Cross-reactivity at the T-cell level between human and Malassezia sympodialis thioredoxin(s) in adult patients with atopic dermatitis.** H Venkatanarayanan, A Heratizadeh, K Wichmann, A Scheynius, R Crameri and T Werfel. Hannover, Germany; Stockholm, Sweden and Davos, Switzerland.
- 097** **Anti-inflammatory effect of rocket seed isothiocyanates on cultured macrophages and inflamed skin *ex vivo*.** Y Hephuda, Y Soroka, I Sussan, L Verkhovsky, M Frušić-Zlotkin, Y Milner and S Tamir. Kiryat-Shmona, Israel; Jerusalem, Israel; Kfar Vradim, Israel and Upper Galilee, Israel.
- 098** **Erlotinib stimulates epidermal hyperplasia in KC-Tie2 mice and human skin organ culture.** NL Ward, N Bhagavathula, CM Matheny, W Fu, JE Gudjonsson, A Johnston, J Varani and JT Elder. Cleveland, OH and Ann Arbor, MI.
- 099** **Substance P modifies antigen presentation in skin draining lymph nodes in a mouse model of stress and allergic dermatitis.** C Liezmann, S Pavlovic, N Romani, J Kruse, BF Klapp and EM Peters. Berlin, Germany; Innsbruck, Austria and Giessen, Germany.
- 100** **Peptide protection of the pinna: a model for studying the role of CD8+ T cells in mice.** S Paek, F Miyagawa and SI Katz. Bethesda, MD.
- 101** **Nerve growth factor partially recovers inflamed skin from stress-induced worsening.** EM Peters, C Liezmann, K Spatz, M Daniltchenko, R Joachim, A Gimenez, J Kruse, V Botchkarev, JM Brandner and BF Klapp. Berlin, Germany; Boston, MA; Giessen, Germany and Hamburg, Germany.
- 102\*** **Modifying the heavy chain third complementarity determining region (H-CDR3) of pemphigus antibody to prevent pathogenicity but not binding suggests a novel approach to targeted therapy.** J Yamagami, AS Payne, S Kacir, K Ishii, DL Siegel and JR Stanley. Philadelphia, PA and Tokyo, Japan.
- 103** **Possible pathogenic role of CD4+CD25highFoxp3+ and CD4+IL-10+ regulatory T cells in patients with pemphigus vulgaris.** H Zhu, M Pan, Y Chen, Y Wang and J Zheng. Shanghai, China.
- 104** **The cathelicidin response to wounding in psoriatic lesional and non-lesional skin.** J Miller, T Hata, P Kotol, M Jackson, D Alexandrescu, F Kabigting, M Gerber, Y Lai and R Gallo. La Jolla, CA.
- 105** **IL-23-mediated epidermal hyperplasia is dependent on IL-17A in mice.** H Rizzo, S Kagami, K Phillips, S Kurtz, S Jacques and A Blauvelt. Portland, Oregon.
- 106** **Cytokine and chemokine protein levels of dorsal skin in the C3H model of alopecia areata.** FJ Duncan, JP Sundberg, LE King and HB Everts. Columbus, OH; Bar Harbor, ME and Nashville, TN.
- 107** **A subpopulation of CD163 positive macrophages is classically activated in psoriasis.** J Fuentes-Duculan, M Suarez-Farinás, LC Zaba, KE Nogales, H Mitsui, KC Pierson, CA Pensabene, J Khyshkowska, JG Krueger and MA Lowes. New York, NY and Mannheim, Germany.
- 108** **Myeloid cells, and not T cells, are the main source of TNF- $\alpha$  in plaque-type psoriasis.** PM Brunner, F Koszik, M Kalb and G Stingl. Vienna, Austria.
- 109** **Signal transduction triggered by IgE class autoantibodies in bullous pemphigoid.** KN Messingham, M Jay and JA Fairley. Iowa City, IA.
- 110** **Identification of cell-restricted gene expression profiles or cellular "barcodes" to de-code complex skin pathology.** M Suárez-Fariñas, E Billlick, H Mitsui, J Fuentes-Duculan, MA Lowes, KE Nogales and JG Krueger. New York, NY.
- 111** **Development of protein microarrays to investigate autoantibody profiles in pemphigus vulgaris.** M Patel, G Furstenberg, J Hazelton, S Tiagi, K Seiffert-Sinha, BB Haab, WH Robinson and AA Sinha. East Lansing, MI; Grand Rapids, MI and Palo Alto, CA.
- 112** **Analysis of anti-desmoglein 1 autoantibodies in 76 healthy mother/neonate pairs from a highly endemic region of Fogo Selvagem in Brazil.** J Hilario-Vargas, IB Vitorio, P Prisayanh, EA Rivitti, V Aoki, G Hans Filho, V dos Santos and LA Diaz. Trujillo, Peru; Campo Grande, Brazil; Chapel Hill, NC and Sao Paulo, Brazil.
- 113** **Therapeutic removal of amyloid deposits by anti amyloid antibodies.** A Clos, C Lasagna-Reeves, R Wagner, M Pettit, B Kelly, M Wilkerson, G Jackson and R Kayed. Galveston, TX.
- 114** **Neutrophil elastase cleaves BP180 and its degradation products are chemotactic and therapeutic in skin autoimmune blistering disease in mice.** L Lin, T Betsuyaku, L Heimbach, N Li, D Rubenstein, S Shapiro, L An, L Diaz, R Senior and Z Liu. Dalian, China; Chapel Hill, NC; St. Louis, MO and Pittsburgh, PA.
- 115** **Human 6-Sulfo LacNAc+ (slan) dendritic cells are powerful inducers of Th17/Th1 T cells and prevail among inflammatory dermal dendritic cells in psoriatic skin.** A Hänsel, C Günther, J Ingwersen, EP Rieber, M Meurer and K Schäkel. Heidelberg, Germany and Dresden, Germany.
- 116** **Mechanisms of pruritus: Potential relationship between IL-31, IFN- $\gamma$ , cathepsins and protease-activated receptors.** Y Sun, VB Reddy and EA Lerner. Charlestown, MA.
- 117\*** **IgG and IgE anti-Dsg1 auto-antibodies recognize *Lutzomyia longipalpis* salivary gland antigens.** Y Qian, JG Valenzuela, G Flores, EA Rivitti, V Aoki, G Hans-Filho and LA Diaz. Chapel Hill, NC; Rockville, MD; Sao Paulo, Brazil and Campo Grande, Brazil.
- 118** **Isoprenylcysteine (IPC) analogs suppresses 12-O-tetradecanoylphorbol-13-acetate (TPA)-induced cytokine production in primary human keratinocytes and mouse skin *in vivo*.** JR Fernández, X Feng, K Rouzard, A González, S Chen, J Chen, S Lee, E Pérez, M Stock and JS Gordon. Monmouth Junction, NJ.
- 119\*** **The psoriasis associated IL12B risk haplotype influences IL-12 and IL-23 expression and secretion.** JE Gudjonsson, X Xing, RP Nair, JJ Voorhees, A Johnston and JT Elder. Ann Arbor, MI.
- 120\*\*** **Generation of a hyper iNOS-expressing macrophage leads to a severe delay in wound healing.** BW Doreian, J Rosenjack, KD Cooper and KQ Lu. Cleveland, OH.
- 121** **A non-redundant role for HSP70i in autoimmune depigmentation.** J Mosenson, J Klarquist, J Guevara-Patino and I Le Poole. Chicago, IL.
- 122** **Epidermal depigmentation in a mouse model of vitiligo is IFNy-dependent and associated with local chemokine expression.** JE Harris, EJ Wherry, CA Hunter and LA Turka. Philadelphia, PA.

- 123 Abnormal DNA methylation in peripheral blood mononuclear cells and skin lesions from patients with psoriasis vulgaris. P Zhang, Y Su, H Chen, M Zhao and Q Lu. Changsha, China.
- 124 CD 161+ NKT or NKT-like cells are major producers of IL-17 in psoriasis skin and blood. CJ Rubin, M Riblett, AM Lin and AT Bruce. Ann Arbor, MI.
- 125 IL-1F5, F6, F8, and F9 represent a novel IL-1 signaling system which is active in psoriasis and promotes keratinocyte antimicrobial peptide expression. A Johnston, X Xing, NL Ward, CM Matheny, M Riblett, AM Guzman, JJ Voorhees, JT Elder and JE Gudjonsson. Ann Arbor, MI and Cleveland, OH.
- 126 Partial evaluation of pemphigus vulgaris (PV) autoantibody profile using the protein array technology. M Kalantari, DM Molina, M Farhadieh, A Vigil, WJ Morrow, X Liang, PL Felgner and SA Grando. Irvine, CA.
- 127 Therapeutic efficacy of defensamide in atopic dermatitis. H Kim, S Jeong, J Bae, M Kwon and S Lee. Seoul, South Korea and Daejeon, South Korea.
- 128 Prevalence of cardiovascular risk factors and obstructive sleep apnea in patients with psoriasis and psoriatic arthritis. J Woodcock, B Wong, J Walsh, R Simpson, G Rodway, T Downing-Hayes, A Johnston, J Gudjonsson, GG Krueger and K Callis Duffin. Salt Lake City, UT and Ann Arbor, MI.
- 129 Withdrawn.
- 130  $\alpha$ E $\beta$ 7 promotes skin inflammation, but is not necessary for leukocyte trafficking, in a mouse model of atopic dermatitis. J Yoo, J McGuire, A Manicone and W Parks. Seattle, WA.
- 131 Non invasive *in vivo* small animal Positron Emission Tomography (PET) imaging of Th1 cell trafficking in mouse models for asthma and contact allergy using [64Cu]PTSM labelling. C Griessinger, D Bukala, S Wiehr, W Ehrlichmann, G Reischl, BJ Pichler, M Röcken and M Kneilling. Tübingen, Germany.
- 143 Balanced 9p22q translocation in a patient with melanoma, deafness and DNA repair deficiency disrupts p14arf and down-regulates TBX1. X Tan, S Anzick, SG Khan, T Ueda, G Stone, JJ DiGiovanna, D Tamura, D Wattendorf, C Brewer, C Zalewski, R Walker, JA Butman, A Griffith, P Meltzer, P Bergstresser and KH Kraemer. Bethesda, MD; Tokyo, Japan; Providence, RI; Washington, DC and Dallas, Texas.
- 144\* mtDNA changes in fibroblasts alter intracellular ROS levels resulting in enhanced cellular proliferation, migration and invasion. J Jandova, SP Gottesman and J Sligh. Tucson, AZ.
- 145\* Aberrant cell proliferation by enhanced mitochondrial biogenesis through mtTFA in arsenical skin cancers. C Lee, S Wu, C Hong, W Liao, G Chen, Y Wei and H Yu. Kaohsiung, Taiwan and Taipei, Taiwan.
- 146 Human Numb regulates spindle pole maturation through localization of Plk1 in melanoma cells. TL Schmit, V Setaluri, VS Spiegelman and N Ahmad. Madison, WI.
- 147 Promoter methylation profiling of cancer/testis genes in human malignant peripheral nerve sheath tumor associated with neurofibromatosis type 1. Y Nobeyama, M Ikegami and H Nakagawa. Tokyo, Japan.
- 148 Upregulation of inflammatory cytokines and STAT3 characterizes the tumor microenvironment leading to tumor formation in a murine model of cutaneous lymphoma. X Wu, R Sells and ST Hwang. Milwaukee, WI.
- 149 Hypovitaminosis D and non-melanoma skin cancer. M Skelsey, N Janicic, R Mendu, A Moshell, M Colombo and S Soldin. Washington, DC.
- 150 Inhibition of human papilloma virus-31 in human keratinocytes by the phosphatidylcholine specific phospholipase C-inhibitor LMV-601. E Amtmann, FK Mayer, H Pink and W Baader. Basel, Switzerland; Heidelberg, Germany and Frankfurt, Germany.
- 151 Mapping toll-like receptor activity in different stages of cutaneous T-cell lymphoma. JA Kado and DR Mehregan. Detroit, MI and Monroe, MI.
- 152 CXCR3 ligand CXCL11 promotes proliferation of primary basal cell carcinoma cells *in vitro*. BK Lo, M Yu, D Zloty, B Cowan, J Shapiro and K McElwee. Vancouver, Canada.
- 153 Aldehyde dehydrogenase activity contributes to tumorigenesis of human melanoma. Y Luo, K Dallaglio, M Okamoto, DR Roop and M Fujita. Aurora, CO.
- 154 Induction of Fyn via the Ras/PI3K pathway is necessary and sufficient for enhanced migration and invasion. V Yadav and MF Denning. Maywood, IL.
- 155 PTEN regulation of cutaneous SCC. Y He, M Ming, CR Shea and K Soltani. Chicago, IL.
- 156 SOD3 expression is up-regulated by PKC- $\delta$  and inhibits cell proliferation in melanoma via the Stat1-p21 pathways. H Yoo, Y Lee, B Jeon and T Kim. Seoul, South Korea.
- 157 Carcinoma *in-situ* of the penis and  $\beta$ -HPV types. SK Krishna, R Meys, KJ Purdie, MN de Koning, A Bardhan, FM Gotch, WG Quint, C Harwood and CB Bunker. London, United Kingdom and Voorburg, Netherlands.
- 158\* Epidermal expression of a mutant CYLD promotes skin carcinogenesis and metastasis. P Miliani de Marval, S Lutfeali, JY Jin, B Leshin and JY Zhang. Durham, NC.
- 159\* Akt inhibition suppresses the growth of basal cell carcinomas (BCCs) in Ptc1+/-/SKH-1 mice by blocking Akt and sonic hedgehog (Shh)-dependent pathways. Y Zhu, JH Back, X Tang, M Athar, AL Kim and DR Bickers. New York, NY and Birmingham, AL.
- 160 p38 MAPK regulates oxidative stress in UVB-induced squamous cell carcinoma by blocking NADPH NOX2. X Tang, Y Zhu, JH Back, M Athar, AL Kim and DR Bickers. New York, NY and Birmingham, AL.
- 161 Merkel cell polyomavirus impairs repair of UV radiation-induced DNA damage. SK Demetriou, TK Dong and DH Oh. San Francisco, CA.
- 162\* XPC silencing in normal human keratinocytes induces AKT activation and triggers metabolic alterations that drive the formation of squamous cell carcinomas. HR Rezvani, F Mazurier, AL Kim, N Ali, M Daly, H de Verneuil, A Taieb and DR Bickers. Bordeaux, France and New York, NY.
- 163 Elucidation of hair follicle differentiation patterns in human basal cell carcinoma. I Siciliano, PE Bowden and GK Patel. Cardiff, United Kingdom.
- 164 Specific T cells prevent oncogene-driven malignant transformation. I Wieder, H Braumüller, N Bauer, S Fischer, F Essmann, K Schulze-Osthoff and M Röcken. Tübingen, Germany.
- 165 mTOR-dependent Sirtuin 1 phosphorylation regulates DNA damage-induced cancer cell survival in UVB-induced skin carcinogenesis. JH Back, Y Zhu, M Athar, DR Bickers and AL Kim. New York, NY and Birmingham, AL.

## Carcinogenesis and Cancer Genetics

All orals [designated with an asterisk (\*)] listed below are presented in the Carcinogenesis and Cancer Genetics Minisymposium on Friday, May 7, 2010 from 2:00-5:30 p.m. in Room 206-207, Hilton Atlanta. Orals designated by two asterisks (\*\*) will be presented during a Plenary Session.

- 132 A cohort study of skin cancer risk by immunosuppressive drug type in solid organ transplant patients. CD Schmults. Boston, MA.
- 133\* The tumour suppressor gene BRM is downregulated in human skin cancer. GM Halliday, JG Lyons, VL Bock, FJ Moloney, PW Sou, Y Zhou, AM Jones, LA McDonald, XX Huang and RA Scolyer. Sydney, Australia.
- 134\* ERB-041, an estrogen receptor beta agonist inhibits skin photocarcinogenesis in SKH-1 hairless mice. T Singh, P Kapur, SC Chaudhary, CA Elemts, L Kopelovich and M Athar. Birmingham, AL and Bethesda, MD.
- 135 Nucleotide excision repair is inhibited by Cyclosporin A via calcineurin-mediated downregulation of the xeroderma pigmentosum group A and G proteins. C Kuschal, K Thoms, L Boeckmann, P Laspe, A Apel, MP Schön and S Emmert. Goettingen, Germany.
- 136\* Inflammation blocks carcinogenesis in skin with severe barrier defect. S Demehri, M Turkoz, A Turkoz and R Kopan. St. Louis, MO.
- 137 Increased twist expression in advanced stage Mycosis Fungoides (MF)/Sézary Syndrome (SS). X Ni, M Goswami, L Shiue, A Dougherty and M Duvic. Houston, TX.
- 138 The vitamin D receptor, Hedgehog signaling and epidermal carcinogenesis. A Teichert, V Bul and DD Bickle. San Francisco, CA.
- 139 MicroRNA-211 regulates melanoma metastasis by inhibiting migration and invasion abilities of melanoma cells. S Jee, C Chu, S Cha, W Lin, H Chiu and M Kuo. Taipei, Taiwan.
- 140 TAT-mediated delivery of a DNA repair enzyme to skin cells rapidly catalyzes repair of UV-induced DNA damage. JL Johnson, BC Lowell, OP Ryabinina, S Lloyd and AK McCullough. Portland, OR.
- 141 Merkel cell polyomavirus is present in Merkel cell cancer (MCC) but absent in gastrointestinal neuroendocrine carcinomas and trichodysplasia spinulosa. RC Wang, MR Matthews, L Matthews, R Law, JS Susa, G Hosler, J Browning, CJ Cockerell and KB Yancey. Dallas, TX and San Antonio, TX.
- 142 Remarkable tumor disruption induced by anti-angiogenic receptor tyrosine kinase inhibitor in a novel experimental model of human angiosarcoma. D Hoshina, R Abe, H Hata, Y Fujita, S Aoyagi and H Shimizu. Sapporo, Japan.

- 166 Comparison of the squamous cell carcinoma transcriptome with normal skin by ultra-high-throughput sequencing (RNAseq): Detailed maps of changes associated with malignancy. T Andl and L Luan. Nashville, TN.
- 167 The role of cancer stem cells in the initiation and propagation of human cutaneous squamous cell carcinoma in an *in vivo* model. GK Patel, CL Yee, A Montemorano, K Maggio and JC Vogel. Cardiff, United Kingdom; Bethesda, MD and Washington DC.
- 168 Chronic exposure to nanosized titanium dioxide negatively effects DNA replication. M Marek, S Wang, L Hunter, J Lester, M Wilkerson and J Wickliffe. Galveston, TX and New Orleans, LA.
- 169 Lack of novel merkel cell polyomavirus in mycosis fungoides tumors. ED Mirvish, RG Pomerantz and LJ Geskin. Pittsburgh, PA.
- 170 A novel approach to gene expression profiling in Sezary Syndrome. RG Pomerantz, ED Mirvish, G Erdos, LD Falo and LJ Geskin. Pittsburgh, PA.
- 171\* Dysregulated ΔNp63α modulates p16 expression, blocks senescence, and promotes malignant conversion of keratinocytes. WC Weinberg, RM Ponnampuruma, S Jay, S Ricci and L Ha. Bethesda, MD and Frederick, MD.
- 172 Therapeutic potential of dermal rejuvenation for treating non-melanoma skin cancer: Restoring an appropriate UVB response in geriatric skin. DA Lewis, JB Travers, C Machado, A Somani and DF Spandau. Indianapolis, IN.
- 173 Restoring FAS expression by reversing FAS promoter methylation: A novel approach to CTCL therapy. J Wu and GS Wood. Madison, WI.
- 174 Protein Kinase D protects keratinocytes from UVB-induced apoptosis. SN Arun, L Olala, BA Shapiro and WB Bollag. Augusta, GA.
- 175\* Deregulated hedgehog signaling in the pathogenesis of Barrett's disease and gastric adenocarcinoma. AN Ermilov, J Ferris, J Pero, D Hong and AA Drugosz. Ann Arbor, MI.
- 176 Srcasm biology-a potential link between Notch 1 and senescence. L Zhao, X Yang, V Ratushny, C Marshall, T Dentchev, W Pear and J Seykora. Philadelphia, PA.
- 177 Hairless gene confers resistance to nonmelanoma skin cancer development. J Xu, Z Weng, H Kim, C Li, L Kopelovich, AM Christiano, DR Bickers and M Athar. Birmingham, AL; New York, NY and Bethesda, MD.
- 178 Epigenetic mechanisms regulate the T-Plastin (PLS3) gene, a gene highly expressed in Sezary T cells. H Gibson, H Wong and P Porcu. Detroit, MI and Columbus, OH.
- 179 High-resolution characterization of the cutaneous T-cell lymphoma genome. WM Lin, C Kacie, S Reddy, A Thornberg, G Saksena, S Westman, G Getz, S Mane, C Berger, R Edelson and M Girardi. New Haven, CT and Cambridge, MA.
- 180\* Novel ATM/ATR pathway inhibitors sensitize p53-deficient cells to DNA-damaging agents *in vitro* and *in vivo*. M Kawasumi, H Sloan, J Bradner and P Nghiem. Seattle, WA and Boston, MA.
- 181\* Identification of rare skin cancer stem cells using a syngeneic mouse model. BJ Kubick, K Murao and DR Roop. Aurora, CO.
- 182\* PAF receptor knockout mice exhibit increased chemical carcinogenesis and an increase in chronic PMA-induced inflammation. RL Konger, A Kozman, RP Sahu, S DaSilva and JB Travers. Indianapolis, IN.
- 183 Further characterization of C-KIT and PDGFR-alpha expression and mutational status in Merkel cell carcinoma: Implications for treatment with imatinib mesylate. BL Swick, RN Srikantha, K Messingham and JA Fairley. Iowa City, IA.
- 184 Polo like kinase 1 (Plk1) is expressed by Cutaneous T-cell lymphoma (CTCL) and its down-regulation promotes cell cycle arrest and apoptosis. M Nihal, NC Stutz, TL Schmit, N Ahmad and GS Wood. Madison, WI.
- 185 Defining composite cancer vulnerabilities by genetic engineering of human melanoma. HR Widlund. Boston, MA.
- 186\* New cancer models assessed via quantitative transcriptome analysis. TW Ridky, JM Chow, DJ Wong and PA Khavari. Palo Alto, CA and Stanford, CA.
- 187 Rho-associated Kinase (ROCK) promotes primary and v-ras transformed mouse keratinocyte differentiation. L Li, S Lutfeali, A Lee and SH Yuspa. Bethesda, MD.

## Cell Adhesion and Matrix Biology

All orals [designated with an asterisk (\*)] listed below are presented in the Cell Adhesion and Matrix Biology Minisymposium on Saturday, May 8, 2010 from 2:00-5:30 p.m. in Salon B, Hilton Atlanta. Orals designated by two asterisks (\*\*) will be presented during a Plenary Session.

- 188 Low expression of desmoglein 3 protein, revealed with quantitative digital morphometry, in basal cell carcinomas: An impact on pemphigus vulgaris pathogenesis? M Dmochowski, J Gornowicz, A Seraszek, E Kaczmarek and M Bowszczyk-Dmochowska. Poznan, Poland.
- 189 Heart autoantibodies in El Bagre endemic pemphigus foliaceus. AM Abreu-Velez, J Zhe, LF Arias Restrepo, MS Howard, HE Grossniklaus, SC Dudley and W Gao. Atlanta, GA; Medellin, Colombia and Chicago, IL.
- 190\* Keratinocyte cell surface heparan sulfate proteoglycans are required for uptake of double-stranded RNA prior to toll-like receptor 3 activation. DT MacLeod and RL Gallo. La Jolla, CA.
- 191 A C-Xylopyranoside derivative is a potent stimulus for increased synthesis of chondroitin sulfate by keratinocytes. J Muto, L Breton, K Yamasaki and RL Gallo. San Diego, CA and Clichy, France.
- 192 UVA irradiation following treatment with 8-methoxysoralen suppressive the sclerosis in a mouse model for scleroderma through the decrease of gene expression of collagen. S Hayashi, Y Kitamura, Y Hamasaki, S Yamazaki and A Hatamochi. Mibu, Japan.
- 193 Transcriptional regulation of the human type I collagen alpha1(I) chain gene: Function analysis of the promoter gene and analysis of DNA binding factors in the transcriptional enhancement region. A Hatamochi, T Yoshida, S Hayashi, Y Hamasaki and S Yamazaki. Mibu, Japan.
- 194 Platelets interact with B16 melanoma cells to augment integrin-mediated tumor cell adhesion and promote lung metastasis formation. AS Lonsdorf, AH Enk and HF Langer. Heidelberg, Germany and Tübingen, Germany.
- 195\* Novel role for human desmoglein 3 in regulating E-cadherin mediated adherens junctions through Src family kinase activation. S Tsang, L Liu, M Teh, A Wheeler, K Piper, R Grose, I Hart, D Garrod, F Fortune and H Wan. London, United Kingdom and Manchester, United Kingdom.
- 196 Defective laminin-332 expression, secretion, and processing by squamous carcinoma cells and premalignant keratinocytes. M Degen, P Barron and JG Rheinwald. Boston, MA.
- 197\* The desmosomal armadillo protein plakoglobin regulates keratinocyte motility through extracellular matrix modification. V Todorovic, BV Desai, MJ Schroeder Patterson, E Amargo, AD Dubash, JC Jones and KJ Green. Chicago, IL.
- 198 Dynamic relationship of focal contacts and hemidesmosome protein complexes in live cells. T Ozawa, H Kobayashi, J Jones, M Ishii, K Ikeda, T Harada, Y Aoyama, A Kawada and D Tsuruta. Osaka, Japan; Chicago, IL; Aichi, Japan and Okayama, Japan.
- 199 Cotinus coggygria extracts enhance the elastic network and reduce pigment deposition. N Chen, D Rossetti, Y Hu, R Zhao, E Bruning, V Lotsova-Stone, C Lin and M Seiberg. Skillman, NJ.
- 200\* The role of the receptor tyrosine kinase Axl in cell-cell adhesion and signaling in cancer. MA Cichon, IC Mackenzie and EA O'Toole. London, United Kingdom.
- 201 Optimization of human skin explant cultures as an *in vitro* alternative to animal testing. Y Hu, N Chen, A Pappas, W Li, D Rossetti, L Zhang, CB Lin, D Cavender and M Seiberg. Skillman, NJ.
- 202 Retinol induces dermal elastin synthesis and elastin fiber formation. D Rossetti, MG Kielmanowicz, S Vigodman, Y Hu, N Chen, A Nkengne, T Oddos, D Fischer, M Seiberg and CB Lin. Skillman, NJ; Rehovot, Israel and Val de Reuil, France.
- 203 Elemental bi-mineral complex increases extracellular matrix production in human skin explants. N Chen, Y Hu, D Rossetti, J Chantalat, Y Sun, E Bruning, M Seiberg and CB Lin. Skillman, NJ.
- 204 GM6001, a broad spectrum metalloproteinase inhibitor, has multiple efficacies against skin aging. X Lin, K Tian, N Sinha, B Costello, R Carver, V André, L Dryer and L Lamy. Stony Brook, NY and Lyon, France.
- 205 Genomic study of fibroblasts links mtDNA changes to alterations in MMP and collagen expression affecting migration and invasion. J Jandova, J Janda, JZ Boyer and JE Slight. Tucson, AZ.
- 206 Critical role of Paxillin in aging of human skin. Q Zheng, S Chen, J Lyga and U Santhanam. Suffern, NY.

- 207\* The p65 subunit of NF- $\kappa$ B inhibits COL1A1 gene transcription in human dermal fibroblasts through protein interaction with hc-KROX, SP1 and SP3. G Beauchef, N Bigot, M Kypriotou, E Renard, B Porée, R Widom, A Dompierre-Blanchere, T Oddos, F Maquart, M Demoor, K Boumediene and P Galéra. Caen, France; Boston, MA; Val de Reuil, France and Reims, France.
- 208\* Plakoglobin rescues adhesive defects induced by desmoglein 1 truncation: Implications for exfoliative toxin-mediated blistering. CL Simpson, S Kojima, S Getsios and KJ Green. Chicago, IL.
- 209 ENaC mediates keratinocyte galvanotaxis by promoting lamellipodial protrusion at the cathodal side. H Yang and R Isseroff. Davis, CA.
- 210\* Therapeutic implications of EGFR transactivation in pemphigus acantholysis. P Jolly, M Bektas and DS Rubenstein. Chapel Hill, NC.
- 211 Discovery of novel ingredients which stimulate the expression of the focal adhesion protein, paxillin, in human skin and skin cells. JW Lyga, D Ptchelintsev, U Santhanam, Q Zheng and S Chen. Suffern, NY.
- 212\*\* p38 alpha MAPK is not required for the loss of intercellular adhesion in pemphigus vulgaris. X Mao, Y Sano, JM Park and AS Payne. Philadelphia, PA and Boston, MA.
- 213 Gottron's papules exhibit accumulation of CD44 variant 7 (CD44v7) and its binding partner osteopontin: A unique molecular signature. JS Kim and V Werth. New York, NY and Philadelphia, PA.
- 214 The role of Dermatopontin in the human skin: Histological and ultrastructural studies. A Perrin, G Menon, C Plaza, G Bressier, M Bonnans, N Garcia, C Gondran, C Dal Farra and N Domloge. Sophia Antipolis, France and Wayne, NJ.
- 215\* Non-muscle myosin II isoform roles and regulation during *in vivo* wound closure in the mouse epidermis. JF Crish and T Egelhoff. Cleveland, OH.
- 216\* Polyclonal nature of pemphigus vulgaris IgG contributes to desmosomal disassembly by causing clustering and endocytosis of Dsg3. M Saito, M Kaufman, DK Tucker and AP Kowalczyk. Atlanta, GA.
- 217 Mariponics® SCF-1 has anti-aging activity by stimulating collagen production and promoting fibroblast proliferation. K Tian, X Lin, C Judd, B Costello, N Sinha, L Dryer and RS Carver. Stony Brook, NY.
- 218 Both bullous pemphigoid antigens regulate signaling to Rac and cofilin and thereby determine the motility behavior of keratinocytes. KJ Hamill, SB Hopkinson and JC Jones. Chicago, IL.
- 219 A novel function for  $\alpha$ 6 integrin as a translational regulator of  $\alpha$ 3 $\beta$ 1 integrin expression. KR Kligys, Y Wu, SB Hopkinson and JC Jones. Chicago, IL.
- 220\* Role of protease-activated receptors-1 and -2 in murine skin fibrosis and human scleroderma. F Cevikbas, S Seeliger, M Fastrich, H Robenek, B Homey and M Steinhoff. San Francisco, CA; Goettingen, Germany; Muenster, Germany and Duesseldorf, Germany.
- 221\* Elucidation of the structural and functional abnormalities of type VII collagen RDEB mutants created by site-directed mutagenesis. Y Hou, J Cogan, E Ahdoot, A Ng, E Cua, D Woodley and M Chen. Los Angeles, CA.
- 222\* Down-regulation of desmocollin-2 induces epithelial cell proliferation through activation of Akt/beta-catenin signaling. K Kolegraff, P Nava and A Nusrat. Atlanta, GA.
- 223 Inactive extracellular superoxide dismutase disrupts the secretion and function of active extracellular superoxide dismutase. B Jeon, H Yoo, Y Lee and T Kim. Seoul, South Korea.
- 224 Loss of Ras suppressor 1 induces skin aging through increased generation of reactive oxygen species. J Noh, S Oh, J Lee, Y Lee, S Jin, D Byamba and K Lee. Seoul, South Korea.
- 225 Wound healing delay in HIF-1alpha knockdown keratinocytes. N Ali, HR Rezvani, C Varon, H de Verneuil, A Taieb and F Mazurier. Bordeaux, France.
- 226 An *ex vivo* human skin model for the study of (photo)ageing repair ingredients. H Corstjens, L Declercq and DB Yarosh. Oevel, Belgium and Melville, NY.
- 227 Expression of active Matrix Metalloproteinase-1 in human skin fibroblasts causes morphological and functional alterations that mimic aged human skin. W Xia, JJ Voorhees and GJ Fisher. Ann Arbor, MI.
- 228 Characterization of dermal interstitial proteoglycans in human skin. Y Li, Y Liu, W Xia, Y Shao, JJ Voorhees and GJ Fisher. Ann Arbor, MI.
- 229 Human facial and abdominal subcutaneous preadipocytes are distinguished by their differentiation potential and responsiveness to lipolytic agents. A Pappas, S Chon and D Cavender. Skillman, NJ.
- 230 Retinoid suppresses CYR61/CCN1, a negative regulator of collagen homeostasis, in chronologically aged and photoaged human skin *in vivo* and reconstructed human skin. Z Qin, Y Shao, Y Xu, JJ Voorhees, GJ Fisher and T Quan. Ann Arbor, MI.
- 231 A conditional knockout of the  $\alpha$ 3 laminin subunit. SB Hopkinson, KJ Hamill and JC Jones. Chicago, IL.
- 232 Development of a 3D reconstructed psoriatic tissue model. S Ayehunie, D Jones, M Child, R Clark, T Kupper and M Klausner. Ashland, MA and Boston, MA.
- 233 *In vitro* cleavage of desmoglein 1 by matrix metalloproteinases-2. N Li, M Park, Z Liu and LA Diaz. Chapel Hill, NC.
- 234\* Caveolin-1 interacts with desmogleins and modulates desmosome homeostasis. D Brennan, S Peltonen, W Medhat, KJ Green, F Del Galdo and MG Mahoney. Philadelphia, PA; Turku, Finland and Chicago, IL.
- 235\* DSC3 in skin tumor development and progression. J Chen, C O'Shea, JE Fitzpatrick and PJ Koch. Aurora, CO.
- 236\* Desmosome assembly and dynamics in migrating epithelial cells. JK Wahl, B Roberts and A Pashaj. Lincoln, NE.
- 237 A dermal equivalent developed from fibroblast culture alone: Effect of serum. D Lee, J Park and J Yang. Seoul, South Korea.

## Clinical Research and Therapeutics

All orals [designated with an asterisk (\*)] listed below are presented in the Clinical Research and Therapeutics Minisymposium on Saturday, May 8, 2010 from 2:00-5:30 p.m. in Salon E, Hilton Atlanta. Orals designated by two asterisks (\*\*) will be presented during a Plenary Session.

- 238 Treatment of the severe photodamage. G Giuliani, F Rinaldi and A Benedusi. Milan, Italy.
- 239 *x*CT expression within KS lesions correlates with histopathologic staging. R Sullivan, E Freitas, S Mohan, G Burges, R Bacelieri, D Branch, M Romano, D Hazen-Martin, J Maize and C Parsons. Charleston, SC and Mount Pleasant, SC.
- 240 Toll-like receptor signaling increases kallikrein in rosacea and affect skin barrier function. K Yamasaki, AW Brakowski, DT Macleod, T Nakatsuji and RL Gallo. San Diego, CA.
- 241 Broad defects in epidermal cornification in atopic dermatitis (AD) identified through genomic analysis. E Guttman-Yassky, M Suárez-Fariñas, A Chiricozzi, KK Nogales, J Fuentes-Duculan, AM Bowcock and JG Krueger. New York, NY and Saint Louis, MO.
- 242 Modulatory effect of platelet-rich plasma on human fibroblasts. Y Lee, D Kim, M Kim and J Lee. Daejeon, South Korea; Chonnan, South Korea and Chungju, South Korea.
- 243 Antibacterial and antiviral activity of a new non-alcoholic hand sanitizer. JJ Wille. Chesterfield, NJ.
- 244 Correlation of livedo racemosa, cutaneous inflammatory plaque, and antiphospholipid antibodies in patients with cutaneous polyarteritis nodosa. T Kawakami, M Yamazaki and Y Soma. Kawasaki, Japan and Kanazawa, Japan.
- 245 Non invasive study for the detection of advanced glycated end products within the skin and nails in patients with diabetes mellitus. C Castillo-Martínez, M Gherbe, B Torres-Álvarez, B Moncada and FJ Gonzalez. San Luis Potosí, Mexico.
- 246 An effusion of blood and phlegmon secondary to anakinra. JJ Wu, AE Ortiz and CM Fulwider. Los Angeles, CA and Irvine, CA.
- 247 The dermatologic manifestation of hyperandrogenism: A retrospective chart review. CM Clark, J Rudolph, S Glick, AR Shalita and E Lowenstein. Brooklyn, NY.
- 248\* Results of a phase 2b clinical trial of valomaciclovir versus valacyclovir for treating herpes zoster. L Morrison and S Tyring. Houston, TX.
- 249 (-)-Epigallocatechin-3-gallate reactivates silenced tumor suppressor gene by modifying DNA methylation and histone acetylation patterns in human epidermoid carcinoma cells. M Vaid, V Nandakumar, CA Elmets and SK Katayir. Birmingham, AL.
- 250 Modification of skin discoloration by an anti-oxidant. T Mammona, N Muizzuddin, L Declercq, D Clio, H Corstjens, I Sente, K Van Rillaer, M Matsui, Y Niki, M Ichihashi, PU Giacomoni and D Yarosh. Melville, NY; Belgium; Stony Brook, NY; Kobe, Japan and Kyoto, Japan.
- 251 Cutaneous T cell lymphoma utilizes distinct syndecan-4 moieties to bind DC-HIL avidly and to trap TGF- $\beta$ : Novel mechanisms that may blunt host anti-tumor responses. J Chang, P Cruz and K Ariizumi. Dallas, TX.
- 252\* A phase I/II trial of photoactivated tissue bonding ("nanosuturing") for excisional wound closure. S Tsao, M Yao, FP Henry, H Tsao, Y Zhao, J Kochevar, R Redmond and I Kochevar. Boston, MA.

- 253 **Infant skin is similar in New Jersey and Mumbai and markedly different in Beijing in winter.** M Chu, M Mack, N Tierney, E Ruvolo, G Stamatias, N Kollias, K Martin, K Bhagat and L Ma. Skillman, NJ; Mumbai, India and Beijing, China.
- 254 **A clinical study on herpes zoster meningoencephalitis.** J Byun, B Yang, S Han, H Song, H Lee, G Choi and J Shin. Incheon, South Korea.
- 255 **Anti-tumor effects of sapacitabine in cutaneous T-cell lymphoma (CTCL) cells.** X Zhang, S Noorudien, A Huen, M Duvic and C Zhang. Houston, TX.
- 256 **Green tea extract protects normal human skin fibroblasts from hydrogen peroxide-induced necrosis *in vitro*.** J Silverberg, J Jagdeo, M Patel, J Sieminska, J Michl, D Siegel and NI Brody. Brooklyn, NY.
- 257 **Caffeine protects normal human skin fibroblasts from hydrogen peroxide-induced necrosis *in vitro*.** J Jagdeo, J Silverberg, M Patel, J Sieminska, J Michl, D Siegel and NI Brody. Brooklyn, NY.
- 258 **Cure rate, duration required for complete cure and recurrence rate in onychomycosis according to clinical factors.** J Ko, H Lee, J Hur, D Oh, J Kim and H Yu. Seoul, South Korea.
- 259\*\* **Micronized sunscreen particles were not shown to penetrate beyond the stratum corneum in adults and children.** M Mack, GN Stamatias and P Horowitz. Skillman, NJ; Issy-les-Moulineaux, France and Valencia, CA.
- 260\* **NVP-LDE225 inhibits the formation and induces the regression of murine basaloid tumor nests in embryonic and newborn murine skin organ cultures derived from *Ptch<sup>+/−</sup>* LacZ heterozygous mice.** X Wu, Y Wang, R Javed, S Pan, A Stuetz and FS Kalthoff. Vienna, Austria and San Diego, CA.
- 261\* **Novel mechanism for topical treatment of plaque psoriasis—Results of a randomized, double blind, concentration ranging, vehicle controlled 12 week study with JAK 1/2 inhibitor INCBO18424 cream.** K Callis Duffin, M Luchi, R Fidelus-Gort, R Newton, J Fridman, T Burn, P Haley, P Scherle, R Flores, N Punwani, R Levy, W Williams and A Gottlieb. Wilmington, DE; Salt Lake City, UT and Boston, MA.
- 262 **A cross-sectional study of skin carotenoid levels in adult patients with psoriasis.** X Lima, HC Lima and AB Kimball. Boston, MA.
- 263 **Low-dose UVA1 phototherapy sustains antifibrotic response *in vivo* by minimizing photoadaptation.** F Wang, N Smith, JJ Voorhees, S Kang and GJ Fisher. Ann Arbor, MI and Baltimore, MD.
- 264 **High clinical response rate of Sezary syndrome with immune modifying therapies: Prognostic markers of response.** B A Raphael, DB Shin, KR Suchin, K Morrissey, C Vittorio, E Kim, J Gardner, K Evans, C Introcaso, JM Gelfand and AH Rook. Philadelphia, PA.
- 265 **Extramammary Paget's Disease of the vulva: A case report of clinical and reflectance confocal microscopy features.** KC Nelson, JY Tcheung, E Do, C Pipkin, L Havrilesky and MA Selim. Durham, NC.
- 266 **Self-treatment is common and does not correlate with severity of hair loss or quality of life in women with non-scarring alopecia.** E Reid, AC Haley, DP West and H Wickless. Chicago, IL.
- 267 **Quality of life correlates more closely with patient-rated versus physician-rated hair loss severity in women with non-scarring alopecia.** EE Reid, AC Haley, JH Borovicka, DP West and H Wickless. Chicago, IL.
- 268 **Inducible hyaluronan macropinocytosis by melanoma cells: A useful endocytic route for bioconjugate drug delivery.** L Zhang, HJ Greyner and ME Mumment. Fort Worth, TX and Dallas, TX.
- 269 **Psoriasis prevalence among the 2009 melanoma/skin cancer screening patients.** XT Lima, R Minnillo and AB Kimball. Boston, MA and Cleveland, OH.
- 270 **Topical turmeric extract in a moisturizing cream formula reduces the appearance of cheek texture and fine lines and wrinkles on human facial skin.** CL Swanson, J Kaczvinsky, J Li, S Pepple, P Raleigh and L Robinson. Cincinnati, OH.
- 271 **Immature autoreactive B cells may predict treatment response of chronic graft-versus-host disease.** R Knobler, Z Kuzmina, R Weigl, U Körömczi, A Rottal, C Zielinski, W Pickl and H Greinix. Vienna, Austria.
- 272 **Development of a new dendritic cell (DC)-based screening assay for contact allergens.** M Miyazawa and A Takashima. Toledo, OH.
- 273\* **Blockade of the IL-17R with AMG 827 leads to rapid reversal of gene expression and histopathologic abnormalities in human psoriatic skin.** CB Russell, K Kerkof, J Bigler, M Timour, AA Welcher, I Novitskaya, A Khatcherian, J Krueger, H Rand and DA Martin. Seattle, WA and New York, NY.
- 274 **Association of autologous sweat allergy and metal allergy with the intrinsic type of atopic dermatitis.** T Bito, R Kabashima, S Fukamachi, R Yoshiki, R Hino, T Mori, C Nishigori and Y Tokura. Kitakyushu, Japan and Kobe, Japan.
- 275 **Topical treatment of NVP-LDE225 potently and dose-dependently inhibits anagen induction and Hedgehog target gene expression in mice.** B Wolff-Winiski, FS Kalthoff, L Mudde-Boer, N Schoefmann, A Stuetz and JM Meingassner. Vienna, Austria.
- 276 **NVP-LDE225 is a potent antagonist of both human and murine smoothened and blocks pathway activation by sonic hedgehog ligand and synthetic agonists.** J Kelleher, M Dorsch, X Wu, S Pan, A Stuetz and F Kalthoff. Vienna, Austria; Cambridge, MA and San Diego, CA.
- 277 **The smoothened inhibitor NVP-LDE225 has favorable skin penetration/permeation properties *in vitro* and *in vivo*.** A Billich, FS Kalthoff, H Aschauer, P Stuchlik, H Fahrngruber, E Kowalsky, JM Meingassner and A Stuetz. Vienna, Austria.
- 278 **Low dose alemtuzumab (LDA) depletes malignant central memory T cells but spares normal skin resident effector memory T cells in leukemic CTCL.** R Clark, R Watanabe, DC Fisher, M Walsh, M Tawa, J Campbell, E Martin, N Adams and TS Kupper. Boston, MA.
- 279 **The clonal malignant T cells in leukemic CTCL have diverse functionalities and cytokine production profiles.** R Watanabe, J Teague, M Lichtman, Y Jiang, TS Kupper, J Campbell, M Tawa, E Martin, N Adams and R Clark. Boston, MA.
- 280 **Th2 cytokines enhance tissue kallikreins and serine protease activity of keratinocytes in atopic dermatitis.** S Morizane, K Yamasaki, A Kajita, M Zhan, RL Gallo and K Iwatsuki. Okayama, Japan and San Diego, CA.
- 281 **The impact of pyruvate and cell density on oxidative stress assays.** D Kim, M Sperandeo, S Palat and RA Clark. Stony Brook, NY.
- 282 **Loss of membrane E-cadherin and expression of p53 are molecular markers of progression of sun-damaged skin to actinic keratoses.** J Turnham, W Cantrell, A Andea, R Shafi, M Athar and CA Elmets. Birmingham, AL.
- 283\* ***In vitro* release of interferon-gamma from peripheral blood lymphocytes in cutaneous adverse drug reactions.** I Goldberg, M Hanson, E Sprecher, G Chodick, I Shirazi and S Brenner. Tel Aviv, Israel.
- 284 **Effect of polyurushiol containing paint on an indoor air condition and atopic dermatitis.** J Kim, K Lee, S Koh, S Kim and E Choi. Wonju, South Korea.
- 285 **Expression of survivin and other anti-apoptotic biomarkers in extramammary Paget's disease.** S Ohe, F Yamazaki, H Tanimura, H Iwasaka, I Ueda, K Mizuno and H Okamoto. Osaka, Japan.
- 286\* **The intrinsic type of atopic dermatitis shows normal barrier function, lack of filaggrin mutations, high percentage of Th1 cells, and high frequency of metal allergy.** R Kabashima, M Nakamura, M Kobayashi, T Bito, K Kabashima, Y Nomura, M Akiyama, H Shimizu and Y Tokura. Kitakyushu, Japan and Sapporo, Japan.
- 287 **Effect of a novel supplemented drink on skin aging: A double-blind, placebo-controlled study.** L Wainwright, KE Barrett, J Casey and G Jenkins. Sharnbrook, United Kingdom.
- 288 **Skin improvement and protection by circadian rhythm restitution. *In vivo* study.** Y Guérif-Ferreira, G Oberto, A Berghi, K Cucumel, C Dal Farra and N Domloge. Sophia Antipolis, France and Wayne, NJ.
- 289 **Evaluation of the features of normal and dry skin using *in vivo* confocal microscopy.** A Berghi, Y Guérif-Ferreira, G Oberto, K Cucumel, C Dal Farra and N Domloge. Sophia Antipolis, France and Wayne, NJ.
- 290 **Evaluation of cytotoxicity with a non-animal sourced hyaluronic acid (HA) and an *in vitro* model.** B Hardas, M Kaur, S Grundy and E Pappert. Greensboro, NC.
- 291 ***In vivo* study of age-related skin change through *in vivo* confocal microscopy.** Y Guérif-Ferreira, G Oberto, A Berghi, K Cucumel, C Dal farra and N Domloge. Sophia Antipolis, France and Wayne, NJ.
- 292 **Fibroblasts in early striae gravidarum display a biosynthetic phenotype that reflects increased mechanical tension.** F Wang, Y Helfrich, N Smith, P Sharaf, S Kang, J Voorhees and G Fisher. Ann Arbor, MI and Baltimore, MD.
- 293 **Methicillin-resistant *Staphylococcus aureus* and childhood atopic dermatitis.** CB Green, AM Schotthoefer and JB Travers. Aurora, CO and Indianapolis, IN.
- 294 **Increasing HMGCoA reductase in skin improves its barrier structure and resistance to stress. *In vivo* study.** G Oberto, Y Guérif-Ferreira, A Berghi, K Cucumel, C Coquet, C Dal Farra and N Domloge. Sophia Antipolis, France and Wayne, NJ.
- 295 **Effect of taxifolin glycoside on atopic dermatitis-like skin lesions in NC/Nga mice.** M Jeong, E Kim, D Kim, J Lee, K Li, C Hong, S Choi, M Lee and S Seo. Seoul, South Korea.

- 296 **The topical antimicrobial zinc pyrithione is a potent inducer of heat shock response gene expression and TUNEL positivity in reconstructed human epidermis.** SD Lamore, CM Cabello and GT Wondrak. Tucson, AZ.
- 297 **Atopic dermatitis-like skin lesions reduced by topical application and intraperitoneal injection of hirsutene in NC/Nga mice.** M Jeong, E Kim, D Kim, J Lee, K Li, C Hong, S Choi, M Lee and S Seo. Seoul, South Korea.
- 298\* **Determining the extent to which clinically effective treatment, ustekinumab or etanercept, reverses the molecular disease profile of psoriatic skin: Comparisons of lesional, non-lesional and normal skin.** J Krueger, K Li, F Baribaud, M Suarez-Farinis and C Brodmerkel. New York, NY and Malvern, PA.
- 299 **Quantitative assessment of disease severity in dermatomyositis.** M Chock, R Goreski, E Keiser, VP Werth, L Chung and D Fiorentino. Stanford, CA and Philadelphia, PA.
- 300 **Differences in photo-protected and photo-exposed skin of caucasians: A wrinkle biopsy study.** R Noffsinger, C Sasik, D Rossetti, M Anthonavage, P Bargo and S Tucker-Samaras. Skillman, NJ.
- 301\* **Molecular tumor characteristics and pharmacodynamic (PD) responses of patients (pts) with advanced basal cell carcinoma (BCC) in a phase I trial of the hedgehog (Hh)pathway inhibitor GDC-0449.** JL Caro, RL Yauch, W Darbonne, CA Callahan, HM Mackey, CM Rudin, PM LoRusso, JC Reddy, JA Low and DD Von Hoff. San Francisco, CA; Baltimore, MD; Detroit, MI and Scottsdale, AZ.
- 302 **Evaluation of dermal contact sensitization in a guinea pig model using a non-animal sourced hyaluronic acid (HA).** E Pappert, M Kaur, S Grundy and B Hardas. Greensboro, NC.
- 303 **Evaluation of subacute systemic toxicity using a non-animal sourced hyaluronic acid (HA) in a rat model.** K Mandeep, E Pappert, S Grundy and B Hardas. Greensboro, NC.
- 304 **Blood-based biomarker study of human malignant melanoma using gene expression profiling of peripheral whole blood.** Y Luo, WA Robinson, J Fujita, S Robinson, L Siconolfi, K Storm, D Bankaitis-Davis, K Wassmann, CK Edwards, DA Norris and M Fujita. Aurora, CO and Boulder, CO.
- 305 **Gene profiling of side population identifies ABCB1 as a chemoresistant factor in human melanoma.** Y Luo, M Takeda, K Dallaglio, DR Roop and M Fujita. Aurora, CO.
- 306 **Minimizing the immunosuppressive effects of histone deacetylase inhibitors (HDACi): Implications for therapy of cutaneous T-cell lymphoma (CTCL).** A Anshelevich, M Wysocka, BM Benoit and AH Rook. Philadelphia, PA.
- 307 **Bone mass, compression fractures, and associated risk factors in patients with epidermolysis bullosa.** AL Bruckner, E Keiser, B Laleh, C Doernbrack, A Arbuckle, S Berman, K Kent and LK Bachrach. Stanford, CA; Cleveland, OH and Denver, CO.
- 308 **A potent and selective CRTh2 antagonist is efficacious in a model of atopic dermatitis.** LE Burgess, M McVean, C Napier, LL Carter, C Eberhardt, D Wright, N Klopfenstein and A Cook. Boulder, CO.
- 309 **Fractional photothermolysis treatment triggers a wound healing response and dermal remodeling in photoaged human skin *in vivo*.** L Ritté, JS Orringer, D Baker, JJ Voorhees and GJ Fisher. Ann Arbor, MI.
- 310 **Combination treatments for psoriasis: A systematic review.** EE Bailey, A Ali Khan and AW Armstrong. Boston, MA; New York, NY; Berwyn, IL and Davis, CA.
- 311 **Cytologic "touch preparation" analysis of skin biopsies for rapid evaluation of malignant skin diseases.** B Sun, R Ohgami, U Sundram, E Schwartz and J Tang. Stanford, CA.
- 312 **Effects of cosmetic ingredients as anti-cellulite agents: Synergistic action of actives with *in vitro* and *in vivo* efficacy.** T Al-Bader, A Byrne, J Gillbro, A Mitarotonda, AV Rawlings and A Laloeuf. Stockholm, Sweden; Bray, Ireland and Northwich, United Kingdom.
- 313 **Cosmetic ingredients stimulate fibroblast contractile capabilities and procollagen-1 production resulting in skin anti-aging and skin lifting properties *in vivo*.** L Visdal-Johnsen, T Al-Bader, A Byrne, E Cahill, A Mitarotonda, AV Rawlings and A Laloeuf. Stockholm, Sweden; Bray, Ireland and Northwich, United Kingdom.
- 314 **Oral administration of carcinine improves Zucker diabetic fatty (ZDF) rats skin condition.** J Nicolaï, E Lomonte, M Ballester, P Markioli and L Valenti. Monaco, Monaco.
- 315 **Involvement of increased protease-activated receptor-2 expression in the pathogenesis of melasma.** E Lee, J Kim, S Lee and S Lee. Seoul, South Korea.
- 316 **Analysis of allergic triggers in adult and pediatric atopic dermatitis.** ML Alrich. Lenexa, KS.
- 317 **Development of a glycation evaluation method to support *in-vivo* ingredient screening.** RC Roth and MC DePauw. Ada, MI.
- 318 **A typical daily dose of ultraviolet radiation on human skin treated with an FDA-standardized sunscreen leaves a unique "UVA signature" on the transcriptome.** CL Tock, A Altiner, LR Turner, P Batra, JA Warner, J Therrien, ML Turner, SA Miller, JZ Beer, KH Kraemer, MC Udey, JC Vogel and A Terunuma. Bethesda, MD and Rockville, MD.
- 319 **Evaluating quality of life in dermatomyositis.** R Goreski, M Chock, D Fiorentino, R Feng, K Foering, J Okawa, M Rose and VP Werth. Philadelphia, PA and Stanford, CA.
- 320\* **Gadolinium deposition in disease affected versus unaffected skin of nephrogenic systemic fibrosis.** KN Christensen, CU Lee, MM Hanley, N Leung, TP Moyer and MR Pittelkow. Rochester, MN.
- 321 **Serial poly-L-lactic acid injections for the treatment of HIV-related facial lipoatrophy.** SF Ibrahim, H Lampiris, T Mauro, H Southwell, C Burt, P Tien and I Neuhaus. San Francisco, CA.
- 322 **Doxycycline modifies sebum production *in vitro*.** S Ni Raghallaigh, N Lacey, CC Zouboulis and FC Powell. Dublin, Ireland and Dessau, Germany.
- 323 **Poly-activated tumor-associated macrophages in cutaneous squamous cell carcinoma.** JS Pettersen, J Fuentes-Duculan, M Suarez-Farinis, KC Pierson, D Moussai, MJ Bluth, JG Krueger, MA Lowes and JA Carucci. New York, NY.
- 324 **Natural PPAR-alpha agonist and atopic dermatitis: From research to clinical efficacy.** P Msika, C De Belilovsky, F Menu, C Baudouin and B Chadoutaud. Epernon, France; Paris, France and Toulouse, France.
- 325 **Resveratrol protects keratinocytes cells against nitric oxide-induced toxicity.** S Bastianetto, Y Dumont, A Duranton, R Quirion and L Breton. Montreal, Canada and Clichy, France.
- 326\* **Visualization of untreated premature atherosclerosis in a US psoriasis cohort.** D Kast, I Grozdev, L Cao, D Carlson, R Feig, P Pujari, D Babineau, E Kern, C Orringer, T McCormick, K Cooper and N Korman. Cleveland, OH.
- 327 **Treatment of hypovitaminosis D in veteran patients with psoriasis.** CN Young and L Savoy. Detroit, MI.
- 328\* **A long-term study of safety and allergic comorbidity development in a randomized trial of pimecrolimus cream in infants with atopic dermatitis.** JM Hanifin, M Boguniewicz, LF Eichenfield, LC Schneider, AS Paller, JA Preston, F Kieranfard, J Nyirady, RK Zeldin, M Figliomeni and JM Spergel. Portland, OR; Denver, CO; San Diego, CA; Boston, MA; Chicago, IL; East Hanover, NJ and Philadelphia, PA.
- 329\* **Epidermal growth factor receptor inhibitors do not suppress the expression of the antimicrobial peptide human  $\beta$ -defensin 3 in the skin of treated patients.** TV Cartee, K White, B Pollack, M Newton-West and RA Swerlick. Atlanta, GA.
- 330 **Identification of risk factors in the development of central centrifugal cicatricial alopecia in African American women.** AO Kyei and WF Bergfeld. Cleveland, OH.
- 331 **Perioral wrinkles are associated with female gender, aging, and smoking.** A Chien, T Do, M Mesfin, R Egbers, W Xie, C Chow, D Sachs, J Voorhees and S Kang. Baltimore, MD and Ann Arbor, MI.
- 332 **Modulation of pruritus by visual stimuli. Atopic eczema patients display intensified itch perception and scratching in comparison to healthy controls when exposed to visual imagery of itch.** AD Papoiu, H Wang, RC Coghill and G Yosipovitch. Winston-Salem, NC.
- 333 **Patient-specific dendritic cell immunization against tumor in Sézary syndrome.** LJ Geskin, OE Akilov, L Butterfield, TL Whiteside and LD Falo. Pittsburgh, PA.
- 334 **The relationship of PAR2 and pruritus in end stage renal disease patients and the clinical effectiveness of soybean extracts containing moisturizer on epidermal permeability barrier in end stage renal disease patients.** H Kim, S Jeong, M Jeong, J Ahn, S Moon and S Lee. Seoul, South Korea and Daejeon, South Korea.
- 335 **A comparative fMRI study of brain activation patterns induced by cowhage and histamine itch in atopic eczema patients vs. healthy subjects.** G Yosipovitch, AD Papoiu, RC Coghill, H Wang and RA Kraft. Winston-Salem, NC.
- 336 **Long-term outcomes in a cohort of 1263 Mycosis Fungoides (MF) and Sézary Syndrome (SS) patients.** R Talpur, S Daulat, P Liu and M Duvic. Houston, TX.
- 337 **ABT-737 synergizes with bortezomib to kill melanoma cells by neutralizing multiple anti-apoptotic defenses.** YG Shellman, KA Partyka, S Reuland, Y Luo, NB Goldstein, S Smith, M Fujita, R Gonzalez, K Lewis and DA Norris. Aurora, CO.

- 338 Documentation of skin responses in rhytidectomy with spectral imaging.** E Ruvolo, P Bargo, T Dietz, R Scamuffa, K Shoemaker, B DiBernardo and N Kollias. Skillman, NJ; Cincinnati, OH and Montclair, NJ.
- 339\* Dermatoproteome arrays — a novel immunoassay method for stratification of systemic and cutaneous lupus erythematosus phenotypes.** BF Chong, AB Pazandak, HB Prather, Q Li, NJ Olsen and C Mohan. Dallas, TX.
- 340 Engineering of murine Basal Cell Carcinoma (BCC) allograft as hedgehog (HH) inhibitor screening platform.** GY Wang, P So, E Libove and EH Epstein. Oakland, CA and Berkeley, CA.
- 341 Reducing the pain of lidocaine administration by controlling angle of injection.** KJ Martires, CG Malbasa and JS Bordeaux. Cleveland, OH.
- 342 Stem cell transplantation rare genetic disease consortium for allogeneic transplantation in RDEB.** A Christiano, J McGrath, A Paller, A Arbuckle, D Norris, D Roop, R Hall, N Prose, K Morel, M Geyer, E Morris, L Baxter-Lowe, J Kurtzberg, S Chaudhury, R Gillier, A Shah, A Ishida-Yamamoto, D Keene, J Uitto, M Chen, D Woodley and M Cairo. New York, NY; London, United Kingdom; Chicago, IL; Aurora, CO; Durham, NC; San Francisco, CA; Los Angeles, CA; Asahikawa, Japan; Portland, OR and Philadelphia, PA.
- 343 Computer-assisted alignment and tracking of comedones in patients with predominantly comedonal acne indicate that most resolve within 4 weeks and do not become inflammatory lesions.** R Eggers, T Do, J Voorhees, D Sachs and S Kang. Ann Arbor, MI and Baltimore, MD.
- 344\* Atrophic acne scars may arise from both inflammatory and non-inflammatory acne lesions.** MJ Patel, A Antony, T Do, G Hinds, D Sachs, J Voorhees and S Kang. Baltimore, MD and Ann Arbor, MI.
- 345 Regulatory T cells are associated with the human cutaneous SCC microenvironment and suppress activation of naïve T cells stimulated by CD3/28.** MJ Bluth, J Pettersen, M Suárez-Fariñas, D Moussai, J Fuentes-Duculan, JG Krueger and JA Carucci. New York, NY.
- 346 T4 endonuclease V liposome (T4N5) treatment ameliorates inflammation-related biomarkers and enhances apoptosis in both sun-exposed skin and AKs in chronically immune suppressed renal transplant patients (RTPS).** R Shafi, W Cantrell, WE Grizzle, M Athar and CA Elmets. Birmingham, AL.
- 347 Malignancies in ustekinumab-treated psoriasis patients: Observations with up to 3yrs of follow-up & comparisons to the general US population.** K Papp, V Ho, N Yeilding, PO Szapary, MC Hsu, Y Poulin, R Langley and K Reich. Waterloo, Canada; Vancouver, Canada; Malvern, PA; Quebec City, Canada; Halifax, Canada and Hamburg, Germany.
- 355\* Prevalence of psoriasis severity and predictive value of psoriasis codes in The Health Improvement Network (THIN) — a population based study.** N Seminara, K Abuabara, D Shin, S Kimmel, DJ Margolis, AB Troxel and JM Gelfand. Philadelphia, PA.
- 356 The relationship between neurological disease and bullous pemphigoid-a population-based case-control study.** SM Langan, RW Groves and J West. London, United Kingdom and Nottingham, United Kingdom.
- 357 The role of nutrition in acne pathogenesis: Youtube as a reflection of current popular thought.** N Qureshi, D Gerber and E Lowenstein. Brooklyn, NY.
- 358 Gender in examination and counseling of patients in primary care.** A Markova, MA Weinstock, P Risica, U Kirtania and H Ombao. Providence, RI.
- 359 Genetic polymorphisms and gene-environment interactions influence extrinsic skin aging.** A Vierkötter, T Schikowski, U Krämer, U Ranft, D Sugiri, M Matsui and J Krutmann. Düsseldorf, Germany and Melville, NY.
- 360 Nutritional antioxidants and extrinsic skin aging in Japanese and German women.** J Krutmann, A Vierkötter, D Perner, U Ranft, D Sugiri, M Matsui, R Goralczyk, N Kaneko, A Morita and U Krämer. Düsseldorf, Germany; Melville, NY; Basel, Switzerland and Nagoya, Japan.
- 361 A systematic review investigating whether healthy adults require exposure to ultraviolet radiation in order to maintain adequate vitamin D levels.** SA Rice, M Carpenter, LM Vearncombe, J Baird and E Healy. Southampton, United Kingdom.
- 362 Identification of patients at increased risk of amelanotic melanoma.** W Waxweiler, P Dillon, M Berwick, L From, K Busam, A Kricker, BK Armstrong, LD Marret, SB Gruber, RC Millikan, H Anton-Culver, R Zanetti, S Rosso, RP Gallagher, T Dwyer, CB Begg, H Wilcox and NE Thomas. Augusta, GA; Chapel Hill, NC; Albuquerque, NM; Toronto, Canada; New York, NY; Sydney, Australia; Ann Arbor, MI; Irvine, CA; Torino, Italy; Vancouver, Canada; Melbourne, Australia and Trenton, New Jersey.
- 363 Risk factors for lymphedema: The Iowa Women's Health Study.** RL Ahmed, KH Schmitz, A Prizment and AR Folsom. Minneapolis, MN and Philadelphia, PA.
- 364 39-year follow-up of xeroderma pigmentosum: Skin cancer, neurologic degeneration and mortality.** PT Bradford, AM Goldstein, JJ DiGiovanna, D Tamura, SG Khan, MA Tucker and KH Kraemer. Bethesda, MD and Providence, RI.
- 365 Utility of relaxing music and guided imagery in reducing intraoperative pain and anxiety during Mohs surgery.** M Alam, J Wang, S Kakodkar, N Kim, J Havey, N Kohli, D Fife, A Butani, R Trela, D West, A Rademaker and S Yoo. Chicago, IL.
- 366 ABO blood group and incidence of skin cancer.** J Xie, AA Qureshi, Y Li and J Han. Boston, MA.
- 367\* Obesity and the risk of skin cancer.** SZ Pothiawala, AA Qureshi, Y Li and J Han. Boston, MA.
- 368\* How do sun protective habits (SPH) relate to vitamin D? A cross-sectional study using NHANES.** SC Chen, E Veledar, A Soman and M Saraiya. Atlanta, GA.
- 369\* Second primary melanomas have similar characteristics to the initial primary melanoma on the same patient.** ME Ming and DB Shin. Philadelphia, PA.
- 370\* Effect of sun protective behaviors on vitamin D levels in the US population: NHANES 2003-2006.** E Linos, E Keiser, M Kanzler, K Sainani, W Lee and JY Tang. Stanford, CA and San Jose, CA.
- 371\*\* Lifetime UV exposure and risk for lentigo maligna melanoma.** E Linos, J Han and A Qureshi. Stanford, CA and Boston, MA.
- 372\* Vitamin D and nonmelanoma skin cancer in a cohort of Caucasian health maintenance organization osteoporosis patients.** MJ Eide, D Johnson, R Krajenta, G Jacobsen, DS Rao, HW Lim and CC Johnson. Detroit, MI.
- 373\* High-dose topical tretinoin for reducing multiplicity of actinic keratoses.** MA Weinstock, SF Bingham and . VATTC Trial Group. Providence, RI and Perry Point, MD.
- 374 Incidence of melanoma in coastal versus inland counties of California.** KC Lee and MA Weinstock. Providence, RI.
- 375\* The compact SF-12 can detect both physical and mental impacts of psoriasis severity.** I Grozdev, D Kast, L Cao, D Carlson, K Kavlick, R Feig, P Pujari, B Schmotzer, D Babineau, E Kern, T McCormick, K Cooper and N Korman. Cleveland, OH.
- 376 Prevalence of vitiligo in China: A population-based study in six provinces.** J Zhang, T Wang, X Wang, C Zhou, J Du, X Ding, S Tian, Y Shen and Y Liu. Beijing, China.

## Epidemiology and Health Services Research

All orals [designated with an asterisk (\*)] listed below are presented in the Epidemiology and Health Services Research Minisymposium on Friday, May 7, 2010 from 2:00-5:30 p.m. in Room 204, Hilton Atlanta. Orals designated by two asterisks (\*\*) will be presented during a Plenary Session.

- 348\* Association of prediagnostic serum Vitamin D levels with the development of basal cell carcinoma.** M Asgari, J Tang, M Warton, M Chren, C Quesenberry, D Bikle, R Horst, N Orentreich, J Vogelman and G Friedman. Oakland, CA; San Francisco, CA; Stanford, CA; Ames, IA and Cold Spring-on-Hudson, NY.
- 349 Health outcome measures in atopic dermatitis: A systematic review of trends in disease severity and quality-of-life instruments 1999-2009.** B Rehal and A Armstrong. Sacramento, CA.
- 350 The safety of tumor necrosis factor antagonists in psoriasis: A systematic review and meta-analysis of randomized controlled trials.** ED Dommasch, K Abuabara, J Nguyen, AB Troxel and JM Gelfand. Philadelphia, PA.
- 351 Incidence, survival, and geographical distribution of classic and AIDS-related Kaposi's Sarcoma from 1975-2005.** K Lam and A Armstrong. Sacramento, CA.
- 352 Independent and significant association between severity of hypertension and psoriasis.** AW Armstrong, SW Lin, CJ Chambers and DL Chin. Sacramento, CA.
- 353 The Africa Teledermatology Project: Clinicopathologic correlation of skin specimens.** MW Tsang and CL Kovarik. Minneapolis, MN and Philadelphia, PA.
- 354\* Effect of tetracycline antibiotics for acne on the development of inflammatory bowel disease.** MJ Fanelli, JD Lewis, O Hoffstad and DJ Margolis. Philadelphia, PA.

- 377 Usage of indoor tanning beds and risk of melanoma, squamous cell carcinoma and basal cell carcinoma.** Y Li, AA Qureshi and J Han. Boston, MA.
- 378 Cause-specific mortality in severe psoriasis: A cohort study using the general practice research database.** K Abuabara, RS Azfar, DB Shin, AL Neimann, AB Troxel and JM Gelfand. Philadelphia, PA and Bronx, NY.
- 379 Forming standards for informed consent.** B Stoff, J Shih, E Veledar and S Chen. Atlanta, GA.
- 380 Prevalence of cutaneous manifestations in POEMS syndrome patients.** RY Nemgar, NI Comfere, A Dispensier, CM Lohse and R el-Azhary. Rochester, MN.
- 381 Predictors of biologic therapy, phototherapy, and traditional systemic therapy use among individuals with moderate to severe plaque psoriasis.** JH Lofland, O Tunceli, T Yu and H Waters. Horsham, PA and Wilmington, DE.
- 382 Skin cancer risk perceptions among African-Americans.** K Buster, C Elmets, M Fouad and Z You. Birmingham, AL.
- 383 Classification of skin manifestations of adult T-cell leukemia/lymphoma useful for staging and predictive for prognosis.** Y Sawada, R Hino, K Hama, M Nakamura and Y Tokura. Kitakyushu, Japan.
- 384 The epidemiology of adolescent acne in North East China.** C He, B Wei, Y Pang, H Wei and H Chen. Shenyang, China; Shanghai, China and New York, NY.
- 385\* Methods to account for actinic keratoses (AK) burden.** SC Chen, N Hill, E Veledar, M Weinstock and CVA AK Raters Group. Atlanta, GA; Providence, RI and Washington DC.
- 386 Risk for multiple non-melanoma skin cancers among US women and men.** AA Qureshi, Y Li and J Han. Boston, MA.
- 387\* Evidence of reliability, reproducibility, and validity of the ItchyQoL in the veteran population.** SP Kini, S Coleman King, E Veledar, LK DeLong, Z Rice, J Kamalpour and SC Chen. Atlanta, GA.
- 388\* Depression and risk of incident psoriasis in US women: A prospective study.** PL Dominguez, J Han, G Curhan, HK Choi and AA Qureshi. Boston, MA.
- 389 Cancer worry (CW) in Atypical Mole Syndrome (AMS) patients utilizing Total Body Digital Photography(TBDP): Does previous history of melanoma (MM) matter?** S Coleman King, E Veledar, Z Rice, A Seidler, C Curiel-Lewandrowski and S Chen. Atlanta, GA and Tuscon, AZ.
- 390 HIV+ patients in Botswana find mobile teledermatology an acceptable method for receiving dermatologic care.** R Azfar, J Weinberg, G Cavric, I Lee-Keltner, W Bilker, J Gelfand and C Kovarić. Philadelphia, PA; Gaborone, Botswana and Washington, DC.
- 391 Vitamin D levels and oral supplementation update in patients with skin cancer.** L DeLong, S Wetherington, N Hill, M Kumari, V Tangpricha and SC Chen. Atlanta, GA.
- 392 Getting to burden of disease: Willingness-to-pay (WTP) and Dermatology Life Quality Index (DLQI) in psoriasis and psoriatic arthritis.** S Kumar, P Dominguez, J Han and A Qureshi. Boston, MA.
- 393 Skin color in the US population: An analysis of the distribution and validity of dermatologist-assessed Fitzpatrick skin type.** E Keiser, E Linos, M Kanzler, W Lee, K Sainani and J Tang. Palo Alto, CA.
- 394\* Association of IgE levels and eczema in the US population: Results from NHANES 2005-2006.** T Fu, E Keiser, E Linos, M Kanzler, K Sainani, A Lane and J Tang. Palo Alto, CA.
- 395 Identifying persons at highest risk of melanoma using self-assessed risk factors: Results from a case-control study in Washington State.** LH Williams, WE Barlow, AR Shors, C Solomon and E White. Seattle, WA.
- 396 Screening for psoriatic arthritis and psoriasis phenotypes in the nurses' health study 2.** P Dominguez, H Choi, G Curhan, J Han and A Qureshi. Boston, MA.
- 397 Characteristics and survival of Kaposi sarcoma patients in the pre-AIDS, AIDS epidemic, and HAART eras.** KJ Martires and JS Bordeaux. Cleveland, OH.
- 398 Rate of positive Sentinel Lymph Node Biopsy (SLNB) in shave vs. punch biopsies of thin (<1mm) melanomas.** N Hill, A Page, P Bonaccorsi, K Delman, E Veledar and SC Chen. Boston, MA and Atlanta, GA.
- 399 Skin cancer risk perception in renal transplant recipients.** TW Chang, M DeMara, B Vasudev and EB Olasz. Milwaukee, WI.
- 400 2009 US tanning and sun protection magazine images.** RG Gamble, PM Federczyk, BJ Walkosz, JD Jensen, JK Duke and RP Dellavalle. Aurora, CO and Denver, CO.
- 401\* Cumulative ultraviolet radiation flux and risk for incident skin cancer in the United States.** A Qureshi, R Vleugels, R Puett, TR Fears, F Laden and J Han. Boston, MA and Bethesda, MD.

## Epidermal Structure and Function

All orals [designated with an asterisk (\*)] listed below are presented in the Epidermal Structure and Function Minisymposium on Thursday, May 6, 2010 from 2:00-5:30 p.m. in Room 206-207, Hilton Atlanta. Orals designated by two asterisks (\*\*) will be presented during a Plenary Session.

- 402 Synthetic mechanisms of various ceramides in differentiated keratinocytes.** S Ito, J Ishikawa, A Naoe, N Kondo, Y Masukawa, T Kitahara and Y Takema. Tochigi, Japan.
- 403 Dermatoremédiation of iron overload: Sequestering iron in epidermis ameliorates hepatic accumulation of iron in mice with hemochromatosis.** LM Milstone, J Zhou, R Hu and C Blain. New Haven, CT.
- 404 Topical hesperidin improves epidermal permeability barrier function in murine model.** M Hou, J Fang and W Zhu. Nanjing, China and Nantong, China.
- 405 Ultraviolet B irradiation induces the expression of hornein, a member of the S100 fused-type protein family in human skin.** T Makino, T Yamakoshi, M Furuiichi, N Huh and T Shimizu. Toyama, Japan and Okayama, Japan.
- 406 A topical Chinese herbal mixture improves epidermal permeability barrier function in normal murine skin.** M Man, M Hupe, D Mackenzie, H Kim, Y Uchida, Y Oda, D Crumrine, S Lee, G Martin-Ezquerra, C Trullas, TM Mauro, KR Feingold, PM Elias and M Man. San Francisco, CA; Seoul, South Korea and UAB, Spain.
- 407 Different characteristics of reactive oxygen species produced by HaCaT cells treated with DNCB and BKC.** D Kim, D Byamba, J Je and M Lee. Seongnam, South Korea and Seoul, South Korea.
- 408\* Essential roles of the calcium-sensing receptor in epidermal differentiation and barrier function.** C Tu, D Crumrine, M Man, W Chang, H Elalieh, PM Elias and DD Bickle. San Francisco, CA.
- 409 Identification and characterization of trichohyalin-like1 (TCHHL1), a novel S100 fused-type protein in human skin.** T Yamakoshi, T Makino, C Ueda and T Shimizu. Toyama, Japan.
- 410\*\* Regulation of asymmetric cell divisions in developing epidermis.** N Poulsou and T Lechner. Durham, NC.
- 411 Assessment of corneocyte desquamation and determination of cellular vs. extracellular dimensions in normal human stratum corneum by a novel fixation/embedding method.** D Crumrine, T Lin and PM Elias. San Francisco, CA.
- 412 Epidermal barrier abnormalities and pathogenesis of Ichthyosis Prematurity Syndrome.** D Khnykin, D Crumrine, Y Uchida, P Elias, F Johansen and F Jahnsen. Oslo, Norway and San Francisco, CA.
- 413 Effect of inducible misexpression of Dlx3 in basal keratinocytes on epidermal differentiation and hair development.** AK Bartels, NB Gentile, O Duverger and MI Morasso. Bethesda, MD.
- 414 Compositional differences between infant and adult stratum corneum determined by *in vivo* Raman confocal microscopy.** GN Stamatias, E Boireau and J Nikolovski. Issy-les-Moulineaux, France and Skillman, NJ.
- 415 Intracellular Ca<sup>2+</sup> release is the initial signal for epidermal differentiation after acute epidermal permeability barrier perturbation.** A Celli, DS Mackenzie, D Crumrine, C Tu, M Hupe, DD Bickle, PM Elias and T Mauro. San Francisco, CA.
- 416 Neutral lipid storage leads to acylceramide deficiency, likely contributing to the pathogenesis of Dorfman-Chanarin syndrome.** Y Uchida, Y Cho, S Moradian, J Kim, K Nakajima, D Crumrine, M Ujihara, M Akiyama, H Shimizu, PM Elias, W Holleran and S Sano. San Francisco, CA; Seoul, South Korea; Nankoku, Japan and Sapporo, Japan.
- 417 Characterization of normal "keratinocyte gene expression."** E Billick, H Mitsui, H Fujita, M Suárez-Fariñas and JG Krueger. New York, NY.
- 418 Activation of Toll-like receptor2 enhances barrier function of tight junctions in normal human keratinocytes.** T Yuki, H Yoshida, Y Akazawa, Y Sugiyama and S Inoue. Odawara, Japan.
- 419 Endoplasmic reticulum (ER) stress upregulates human cathelicidin expression via NF-κB, but not via a vitamin D receptor-mediated pathway in keratinocytes.** K Park, D Mackenzie, Y Oda, PM Elias, T Mauro, WM Holleran and Y Uchida. San Francisco, CA.

- 420\* **PKC $\delta$  and  $\eta$ , MEKK1, MEK6, MEK3 and p38 $\delta$  are essential mediators of normal keratinocyte differentiation.** G Adhikary, Y Chew, EA Reece and RL Eckert. Baltimore, MD.
- 421\* **Multiple mechanisms regulate expression of the p21<sup>Cip21</sup> cyclin-dependent kinase inhibitor leading to cessation of proliferation during keratinocyte differentiation.** Y Chew and RL Eckert. Baltimore, MD.
- 422\* **TIG3, a retinoid-regulated suppressor of psoriatic phenotype, suppresses keratinocyte cell division by inhibiting daughter centrosome separation in mitosis.** H Jiang, CA Kraft, T Scharadin, X Wen, EA Rorke and RL Eckert. Baltimore, MD.
- 423 **Type I transglutaminase inactivation via misfolding and accumulation in the endoplasmic reticulum is a cause of ichthyosis.** H Jiang, R Jans, CA Kraft, W Xu, EA Rorke and RL Eckert. Baltimore, MD.
- 424\* **AP1 factor inactivation in suprabasal epidermis causes increased epidermal hyperproliferation and hyperkeratosis but reduced carcinogen-dependent tumor formation.** EA Rorke, R Jans, G Adhikary, JF Crish, Q Li, D Berman and RL Eckert. Baltimore, MD.
- 425 **The polycomb group proteins are key regulators of keratinocyte survival.** S Balasubramanian, G Adhikary and RL Eckert. Baltimore, MD.
- 426 **Skin barrier dysfunction with aberrant lamellar bodies in mice lacking keratinocyte-specific Golgi pH regulator.** M Tarutani, Y Maeda, K Nakajima, M Takaishi, T Kinoshita and S Sano. Nankoku, Japan and Suita, Japan.
- 427 **Histological differences in skin architecture and matrix protein expression in photo-protected and photo-exposed skin of Caucasians, East Asians and African Americans.** J Fantasia, R Sur, S Kaur, A Vorobyeva-Schiano, T Chen and MD Southall. Skillman, NJ.
- 428 **Advanced glycation end products in the human stratum corneum and their relationship to physical properties of the skin.** A Tada, K Nishikawa and T Gomi. Yokohama, Japan.
- 429 **Differential expression of ABO antigens in normal and altered skin conditions.** D Lee, J Oh, I Kwon, S Lee, Y Kim, H Yoon, E Seo and J Chung. Seoul, South Korea.
- 430 **Effects of hypoxia upon differentiation and proliferation of epidermal keratinocytes.** L Weir, D Robertson, IM Leigh and AA Panteleyev. Dundee, United Kingdom.
- 431 **A novel function for TApx63 $\alpha$  in the epidermis.** D Dai and DR Roop. Houston, TX and Aurora, CO.
- 432 **Caspase-14 is required for filaggrin degradation to natural moisturizing factors in the skin.** G Denecker, E Hoste, P Kemperman, M Devos, S Kezic, N Yau, B Gilbert, S Lippeens, P Van Damme, K Gevaert, RB Presland, P Caspers, P Vandenebeele and W Declercq. Ghent, Belgium; Rotterdam, Netherlands; Amsterdam, Netherlands and Seattle, WA.
- 433 **Investigation of the effect of extracts of South East Asian medicinal plants on the expression of extracellular matrix proteins in human skin and skin cells.** D Ptchelintsev, S Cheng, J Lyga, P Limtrakul, U Santhanam and Q Zhang. Suffern, NY and Chiang Mai, Thailand.
- 434 **Insect bites selective upregulate skin's antimicrobial protein expression.** E Proksch, C Neumann, J Harder, J Schroeder, R Glaeser and K Ahrens. Kiel, Germany.
- 435\* **IGFBP7 plays a key role in the pathogenesis of psoriasis.** J Nousbeck, M Bidder, D Fuchs, A Gat, M Gini, H Matz, B Meilik, I Goldberg, C Enk, O Sarig, A Gilhar and E Sprecher. Tel Aviv, Israel; Haifa, Israel and Jerusalem, Israel.
- 436 **Regulatory mechanisms of a natural moisturizing factor-generating enzyme, bleomycin hydrolase—its relevance to atopic dermatitis.** Y Kamata, M Yamamoto, R Tsuboi, K Ishihara, A Takeda and T Hibino. Yokohama, Japan; Sagamihara, Japan and Tokyo, Japan.
- 437 **Environmental stimuli up regulate IL-33 in normal human keratinocytes.** J Meephansan, M Komine, K Wakatabi, S Tominaga and M Ohtsuki. Shimotsuke, Japan.
- 438 **Endo- $\beta$ -D-glucuronidase disturbs epidermal proliferation and differentiation.** S Iriyama, K Umishio, M Tsunenaga and S Amano. Yokohama, Japan.
- 439 **Morphological study of penetration pathways via hair follicles using nano-sized iron oxide.** K Choi, S Park, S Lee, S Lee, K Lee and T Yi. Yongin, South Korea; Seoul, South Korea and Seongnam, South Korea.
- 440 **Improving epidermal lipid barrier by enhancing HMG-CoA reductase expression.** C Plaza, C Gondran, C Rachel, P Frederique, G Noelle, G Menon, C Dal Farra and N Domloge. Sophia Antipolis, France and Wayne, NJ.
- 441 **Enhancing Caspase-14 expression in the epidermis improves protection and repair against UVB irradiation.** L Bergeron, A Amoyel, C Gondran, N Garcia, C Dal Farra and N Domloge. Sophia Antipolis, France and Wayne, NJ.
- 442 **Genotoxicity evaluation by comet assay following long-term treatment of THP1 cells.** L Garcia, M Brulas, E Bauza and N Domloge. Sophia Antipolis, France.
- 443 **Assessment of THP1 subacute cytotoxicity in order to evaluate long-term innocuity of soluble cosmetic ingredients.** I Garcia, C Pouzet, M Arcioni, E Bauza and N Domloge. Sophia Antipolis, France.
- 444 **Survivin, a protein member of the chromosomal passenger complex, helps protect the integrity of somatic stem cells of the epidermis.** J Botto, F Labarrade, L Bergeron, C Meyrignac, A Plantivaux, C Serre, A Lebleu, C Dal Farra and N Domloge. Sophia Antipolis, France and Wayne, NJ.
- 445 **Chemical modification and physical stabilization of papain — development of stabilized high molecular weight crosslinked enzyme polymer with skin exfoliation activity.** M Chavan and L Dryer. Stony Brook, NY.
- 446 **The stem cell factor/c-kit receptor signaling pathway is implicated in the regulation of epidermal melanocyte migration and homogenization of skin pigmentation.** C Serre, A Lebleu, C Plaza, C Meyrignac, F Labarrade, A Plantivaux, J Botto, C Dal Farra and N Domloge. Sophia Antipolis, France and Wayne, NJ.
- 447 **The control of epidermal differentiation gene expression by ARNT through EGFR- and HDAC-dependent pathways.** D Robertson, L Weir, IM Leigh and AA Panteleyev. Dundee, United Kingdom.
- 448 **2-photon-imaging of skin: Single- vs. multi-beam fluorescence lifetime imaging detection systems.** CA Boernchen, JL Rinnenthal, I Moll, R Niesner and MJ Behne. Berlin, Germany and Hamburg, Germany.
- 449\* **Zebrafish type XVII collagen/the 180-kDa bullous pemphigoid antigen: Gene structures, expression profiles, and morpholino "knock-down" phenotypes.** S Kim, H Choi, J So, C Kim, S Ho, M Frank, Q Li and J Utto. Koyang, South Korea; Seoul, South Korea; Daejeon, South Korea and Philadelphia, PA.
- 450 **A surinam quassia extract boosts lysyl oxidase expression in keratinocytes and improves epidermal differentiation in a skin equivalent model.** V Cenizo, G Le Provost, V André and P Sommer. Lyon, France.
- 451 **Microarray profiling of gene expression response to modulation of the stem cell factor/c-kit receptor signalisation pathway in human skin keratinocytes.** C Serre, C Plaza, A Lebleu, A Plantivaux, C Meyrignac, F Labarrade, J Botto, C Dal Farra and N Domloge. Sophia Antipolis, France and Wayne, NJ.
- 452 **In vitro percutaneous absorption of salicylic acid from three distinct topical formulations.** S Khan and P Lehman. Newtown, PA and Fargo, ND.
- 454 **UCP2 is associated with differentiation in human epidermal keratinocytes via regulation of ATP production.** M Yoshida, Y Niki, H Ando, MS Matsui, DB Yarosh and M Ichihashi. Kyoto, Japan; Kobe, Japan and Melville, NY.
- 455 **A decline of TRPV6 function derives from a decrease of vitamin D activation and accounts for disturbed epidermal calcium gradient followed by skin barrier alteration in aged skin.** M Jung, Y Lee, B Yeh, S Lee and E Choi. Wonju, South Korea and Seoul, South Korea.
- 456 **EC-SOD induces apoptosis through COX-2 and galectin-7 in skin.** J Lee, Y Lee and T Kim. Seoul, South Korea.
- 457\* **Role of podoplanin in human epidermis.** M Honma and H Iizuka. Asahikawa, Japan.
- 458 **The histone demethylases LSD1 is differentially regulated the expression of the differentiation markers during the calcium-induced differentiation of human keratinocytes.** H Yang, H Kim, S Sim, J Yang and G Park. Seoul, South Korea and Providence, RI.
- 459 **Expression of the homeobox gene, HOPX, is modulated by PKC dependent signaling pathways and is involved in the expression of differentiation markers during the differentiation of human keratinocytes.** J Yang, S Sim, H Kim and G Park. Seoul, South Korea.
- 460 **Ability to Achillea millefolium and Prunus spinosa to increase the expression of MC-2R and MOR-1 in keratinocytes and improve epidermal differentiation.** S Pain, C Altobelli and V André-Frei. Lyon, France.
- 461 **Genetic over-expression of protease-activated receptor-2 in mouse epidermis leads to skin inflammation, pruritus and neurotrophin release *in vivo*.** A Ikoma, F Cevikbas, V Fong, E Camerer, SR Coughlin and M Steinhoff. San Francisco, CA; Paris, France and Muenster, Germany.

- 462** **Nummular eczema is highly associated with diminished innervation of the epidermis.** B Maddison, A Parsons, O Sangueza, D Maruziva and G Yosipovitch. Winston Salem, NC and Sharnbrook, United Kingdom.
- 463** **Regulation of epidermal tight junction proteins, claudin-1 and -4, by T-helper 1(Th1)- and Th2-type cytokines.** S Lee, J Baek, M Jeong and S Lee. Seoul, South Korea.
- 464** **Caspase-14 participates in the processing of prosaposin during the terminal differentiation.** M Yamamoto, A Motoyama, R Tsuboi and T Hibino. Yokohama, Japan and Tokyo, Japan.
- 465** **The effect of protease activated receptor-2 on the expression of epidermal tight junction protein, claudin-1.** M Jeong, S Lee, J Baek and S Lee. Seoul, South Korea.
- 466** **EGFR, caspases and PI3K but not apoptosis are involved in pemphigus vulgaris pathogenesis.** C Luyet, D Howald, EJ Mueller and A Galichet. Bern, Switzerland.
- 467** **Serglycin in keratinocytes.** AI Nwaneshiudu, B Werth, M Bashir and VP Werth. Philadelphia, PA.
- 468** **Cavitation effects: Ultrastructural exchanges and enhancement of epidermal permeation by the low-frequency ultrasound in hairless mice.** K Choi, S Park, S Lee and S Lee. Yongin, South Korea; Seoul, South Korea and Seongnam, South Korea.
- 469** **Serum response factor (SRF) controls transcriptional network regulating epidermal function and hair follicle morphogenesis.** C Lin, A Hindes, CJ Burns, Y Yin, AC Koppel, L Ma, M Blumenberg, SD Crosby, N Ramanan and T Efimova. St. Louis, MO and New York, NY.
- 470** **The effects of change in epidermal calcium gradient on the expression of tight junction protein, claudin-1.** J Baek, S Lee, E Choi, J Koh and S Lee. Seoul, South Korea and Wonju, South Korea.
- 471** **Upregulation of elastogenesis in the skin and its potential for skin aging benefits.** M Kizoulis, M Southall, C Lee, S Cochran and S Tucker-Samaras. Skillman, NJ.
- 472** **Chemical and biological compatibility of calcipotriene and clobetasol foam formulations.** E Hsia, J Therrien, B Millerman, R Ye, D Luu and H Hofland. Palo Alto, CA and Rowville, Australia.
- 473** **Epidermal ablation of Dlx3 is linked to a disruption of barrier formation and a skin inflammatory response.** J Hwang, R Kita, S Lee, S Lee and MI Morasso. Bethesda, MD and Seoul, South Korea.
- 474** **Regulation of skin barrier function and inflammation by patented natural peptides.** D Naaimi, S Brédif, C Baudouin, S Garnier, A Saunois and P Msika. Epuron, France.
- 475\*** **A novel neuroendocrine control of human mitochondrial activity and biogenesis *in situ*: TRH and TSH power mitochondria in human epidermis.** J Knüver, B Poeggeler, E Gáspár, T Bíró, T Hellwig-Bürgel, E Bodó, M Klinter and R Paus. Lübeck, Germany; Debrecen, Hungary; Nyíregyháza, Hungary and Manchester, United Kingdom.
- 476** **Effects on proliferation, migration and cytoskeleton of keratinocytes and fibroblasts of a secretion of the mollusk *cryptomphalus aspersa*.** A Juarranz, M Iglesias de la Cruz, F Sanz-Rodriguez, M Calvo, E Reyes and S Gonzalez. Madrid, Spain and New York, NY.
- 477\*** **Inactivation of autophagy in murine epidermal keratinocytes is associated with hair loss and sebaceous gland abnormalities.** H Rossiter, C Barresi, M Buchberger, M Ghannadan, C Stremnitzer, R Gmeiner, M Komatsu, L Eckhart and E Tschachler. Vienna, Austria; Tokyo, Japan and Neuilly, France.
- 478\*** **Plakophilin-1 protects keratinocytes from pemphigus vulgaris IgG by promoting desmosome assembly.** DK Tucker, M Saito and AP Kowalczyk. Atlanta, GA.
- 479\*** **CD133 enriches for murine epidermal stem cell *in vivo*.** A Charruyer, LR Strachan, AS Toth, L Yue, ML Mancianti and R Ghadially. San Francisco, CA and Berkeley, CA.
- 480** **Assessment of ammonium-ions of the skin surface and its relation to skin surface-pH: A potential basis for further investigation of the hydrolipid film of the skin surface.** T Reuther, S Hollnack and M Kerscher. Hamburg, Germany.
- 481** **Novel mechanisms for keratinocyte specification.** A Tadeu and V Horsley. New Haven, CT.
- 482** **A novel neuroendocrine control of keratin expression: Cannabinoid receptor (CB) 1-mediated signaling inhibits the expression of keratins K6 and K16 in human keratinocytes *in situ* and *in vitro*.** Y Ramot, K Sugawara, T Bíró, S Tieke and R Paus. Jerusalem, Israel; Luebeck, Germany; Debrecen, Hungary and Manchester, United Kingdom.
- 483** **ALDH<sup>+</sup>CD44<sup>+</sup> and α6<sup>hi</sup>CD71<sup>lo</sup> keratinocyte populations are enriched for human epidermal stem cell *in vivo*.** A Szabo, S Fong, K Zhang, ML Mancianti and R Ghadially. San Francisco, CA and Berkeley, CA.
- 484** **Ozone-induced lipid peroxidation and inhibition by antioxidants.** E Pelle, D Yarosh and N Pernodet. Melville, NY and New York, NY.
- 485** **Involucrin-claudin-6 tail deletion mutant (CA206) transgenic mice: A model of delayed epidermal permeability barrier formation and repair.** A Enikanolaiye, N Lariviere, T Troy, A Arabzadeh, E Atasoy, T Omar and K Turksen. Ottawa, Canada.
- 486** **Analysis by capillary electrophoresis of epidermal tryptase-like activity of stratum corneum layers obtained by tape stripping.** Z Shihabi, AD Papoiu and G Yosipovitch. Winston-Salem, NC.
- 487** **Permeability barrier function under physiological and stress conditions: Evidence for impaired barrier integrity in filaggrin-related eczema.** I Angelova-Fischer, A Mannheimer, TW Fischer and D Zillikens. Lübeck, Germany.
- 488** **The regulation of NHE1 by cytokines and calcium ions related to the epidermal permeability barrier homeostasis.** H Kim, S Jeong, M Jeong, J Ahn and S Lee. Seoul, South Korea and Daejeon, South Korea.
- 489** **Traction force microscopy reveals the mechanical heterogeneity of stratum corneum.** GK German, E Pashkovski, V Horsley and ER Dufresne. New Haven, CT.
- 490** **Identification of Sirt4 in normal human epidermal keratinocytes.** K Dong, E Pelle, D Yarosh and N Pernodet. Melville, NY.
- 491\*** **Loricrin deficient mice as a model for atopic dermatitis.** AJ Huebner, Y Refaeli and DR Roop. Aurora, CO.
- 492** **The effect of truncating the c-terminal domain of the Cldn6 tail in an aging phenotype of transgenic mice.** NM Larivière, A Enikanolaiye, T Troy, A Arabzadeh, T Omar and K Turksen. Ottawa, Canada.
- 493\*** **Differentiation of human induced pluripotent stem (iPS) cells into keratinocytes.** M Itoh and AM Christiano. New York, NY.
- 494\*** **Outside-in signaling through non-junctional Dsg3: A key switch in keratinocyte proliferation and differentiation.** K Berard, A Galichet, D Howald, MM Suter and EJ Müller. Bern, Switzerland.
- 495** **"Bathing suit ichthyosis" — A unique phenotypic variant of lamellar ichthyosis observed in a Jamaican female.** ML Shelling, JM Vega and EA Connelly. Miami, FL.
- 496** **An unexpected role of transcription factor Ovol2 in epidermal integrity.** B Lee and X Dai. Irvine, CA.
- 497** **The role of Pecanex, a novel member of Notch pathway, in epidermal and hair follicle morphogenesis.** C Cela and AM Christiano. New York, NY.
- 498** **Heat-inactivated fetal bovine serum inhibits human keratinocyte differentiation.** T Yoshida, I Kuo, A De Benedetto, M Behrendt, M Bolognino and LA Beck. Rochester, NY.
- 499** **Epidermal gene expression in atopic dermatitis compared to psoriasis and nonatopic controls.** LA Beck, AE Berger, LY McGirt, C Cheadle and A De Benedetto. Rochester, NY and Baltimore, MD.
- 500** **Inositol polyphosphate-5-phosphatase (INPP5A) expression is associated with increased differentiation and decreased proliferative capacity of normal human keratinocytes.** A Sekulic, M Pittelkow, S Shack, L Alla, M Bittner and J Trent. Scottsdale, AZ; Rochester, MN and Phoenix, AZ.
- 501** **Improved dermal responsiveness and reproducibility in the human 3D *in vitro* skin model AccuSkin.** C Tapia, C Goecke and W Hoeffler. Sausalito, CA and San Rafael, CA.

### Genetic Disease, Gene Regulation and Gene Therapy

All orals [designated with an asterisk (\*)] listed below are presented in the Genetic Disease, Gene Regulation and Gene Therapy Minisymposium on Thursday, May 6, 2010 from 2:00-5:30 p.m. in Room 208-209, Hilton Atlanta. Orals designated by two asterisks (\*\*) will be presented during a Plenary Session.

- 502\*** **Gene suppression in skin through topical delivery of polyvalent siRNA-gold nanoparticles.** AS Paller, D Giljohann, D Zheng, H Lordanov, X Wang and CA Mirkin. Chicago, IL and Evanston, IL.
- 503** **Different immunosuppressive strategies are required to control immune responses to antigenic fibroblasts and keratinocytes: Implications for cutaneous gene/cell therapy.** W Zhang, C Kuscu and S Ghazizadeh. Stony Brook, NY.

- 504 Regulating the expression of genes responsible for the synthesis and maintenance of dermal hyaluronan and barrier lipids via topical treatment of salicin- an *in vitro* analysis. R Gopaul and HE Knaggs. Provo, UT.
- 505 Salicin reduces the expression of genes associated with skin inflammation — An *in vitro* analysis. R Gopaul and HE Knaggs. Provo, UT.
- 506 LIPH-prevalent founder mutations lead to loss of P2Y5 activation ability of PA-PLA1 $\alpha$  in autosomal recessive hypotrichosis. S Shinkuma, M Akiyama, A Inoue, J Aoki, K Natsuga, T Nomura, K Arita, R Abe, W Nishie and H Shimizu. Sapporo, Japan; Sendai, Japan and Dundee, United Kingdom.
- 507 Combination therapy of Rapamycin and Imatinib synergistically inhibits tuberous sclerosis tumors *in vivo*. B Govindarajan, L Willoughby, H Band and JL Arbiser. Atlanta, GA and Omaha, NE.
- 508 Genomewide association study of generalized vitiligo identifies specific and shared autoimmunity susceptibility genes. RA Spritz. Aurora, CO.
- 509 Redirecting adult human skin keratinocytes into smooth muscle cells via temporary reprogramming. DM Racila and JR Bickenbach. Iowa City, IA.
- 510 Increased lysyl hydroxylase2(long) mRNA in scleroderma skin correlates with formation of pyridinoline collagen crosslinks. LA McClellan, LC Walker, M Yamauchi, H Nagaoka, RP Hall, WE St. Clair and HN Yeowell. Durham, NC and Chapel Hill, NC.
- 511 Filaggrin mutation study and clinical characterization of patients with ichthyosis vulgaris and atopic dermatitis in Kyushu area, the most southern part of Japan. K Teye, T Hamada, S Sakaguchi, S Fukuda, N Ishii, S Yasumoto and T Hashimoto. Kurume, Japan.
- 512 Distribution of mitochondrial DNA deletions in Csb m/m and Csa -/- mice of different ages. Y Kamenisch, A von Thaler, R Kuiper, H van Steeg, M Röcken, LH Mullenders and M Berneburg. Tuebingen, Germany; Leiden, Netherlands and Utrecht, Netherlands.
- 513 Connecting base excision repair (BER) and nucleotide excision repair (NER) within mitochondria: Cockayne syndrome A and B interact in complexes with mitochondrial (mt)DNA repair associated proteins 8-oxo-guanosine glycosylase (hOGG)-1 as well as mt single strand binding protein (SSBP)-1. Y Kamenisch, J Knoch, A von Thaler, M Schaller, H van Steeg, M Röcken and M Berneburg. Tuebingen, Germany and Utrecht, Netherlands.
- 514 A survey of c-Kit mutations in adult-onset and childhood-onset mastocytosis patients. L Chan and MD Tharp. Chicago, IL.
- 515 Identification and characterization of zebrafish orthologues of SAMD9 - the gene mutated in familial tumoral calcinosis. Q Li, M Frank, E Sprecher, S Ho and J Utton. Philadelphia, PA and Tel Aviv, Israel.
- 516\* The abca12 gene is required for normal zebrafish skin development - a model system for harlequin ichthyosis. M Frank, Q Li, M Akiyama, H Shimizu, S Ho and J Utton. Philadelphia, PA and Sapporo, Japan.
- 517 The rate of wound healing is increased in psoriatic skin. VB Morhenn, SR Smith, EY Huang and D Grull. San Diego, CA and La Jolla, CA.
- 518 Novel mutation of COL7A1 gene in a family with epidermolysis bullosa pruriginosa. AD Lee, N Almaani, JA McGrath and G Yosipovitch. Winston Salem, NC and London, United Kingdom.
- 519\* DNMT1 maintains epidermal progenitor function. GL Sen, JA Reuter, DE Webster, L Zhu and P Khavari. Palo Alto, CA and Stanford, CA.
- 520 Follow up study identifies six novel susceptibility loci for psoriasis in Chinese Han population. X Zhang, L Sun, H Cheng, Z Wang and P Wang. Hefei, China.
- 521 Follow up study identifies two novel susceptibility loci for systemic lupus erythematosus in Chinese Han population. S Yang, Y Li, Z Zhang, J Han, L Sun and X Zhang. Hefei, China.
- 522 A genome-wide association study of vitiligo identifies two independent associations within MHC region and one novel susceptibility locus on 6q27. L Sun, S Yang and X Zhang. Hefei, China.
- 523 Meta-GWAS of psoriasis reveals genetic heterogeneity between Chinese and European populations and identifies two new susceptibility loci. J Liu, C Theng, Sanche, Stahle, T Toh, T Rick Ong, Y Li, M Seielstad, C Zhang and X Zhang. Singapore, Singapore; Stockholm, Sweden and Hefei, China.
- 524 A double-blind, randomized, vehicle-controlled proof of concept study to evaluate the safety, local tolerability, pharmacokinetics and pharmacodynamics of multiple topical administrations Of LDE225 (a specific smoothed inhibitor) on skin basal cell carcinomas in Gorlin Syndrome patients. MA de Rie, H Skvara, L Mickel, C Schuster, G Stary, A Stuetz, F Kalthoff, AM Costa Antunes, OJ David, K Rose, AP Bertolino and G Stigl. Basel, Switzerland; Vienna, Austria and East Hanover, NJ.
- 525\* Pemphigus vulgaris: A genome-wide association study. O Sarig, S Bercovic, L Zoller, M Indelman, I Goldberg, R Bergman, S Israeli, N Sagiv, S Rosenberg, A Darvazi, D Geiger and E Sprecher. Tel Aviv, Israel; Haifa, Israel and Jerusalem, Israel.
- 526 Clericuzio-type poikiloderma with neutropenia resulting from a homozygous internal deletion mutation, c.179delC, in the C16orf57 gene. A Tanaka, F Morice-Picard, HR Rezvani, M Hide, A Taieb and JA McGrath. London, United Kingdom; Hiroshima, Japan and Bordeaux, France.
- 527 Association of single nucleotide polymorphisms in the IL-12 and IL-12 receptor genes and gene-gene interactions with atopic dermatitis in Koreans. E Kim, J Lee, J Namkung, S Kim, S Kim, E Shin, E Cho and J Yang. Seoul, South Korea and Cleveland, OH.
- 528 Association of single nucleotide polymorphisms and haplotype in SPINK5 gene with atopic dermatitis in Koreans. J Namkung, J Lee, E Kim, J Byun, S Kim, E Shin, E Cho and J Yang. Cleveland, OH and Seoul, South Korea.
- 529 Molecular, clinical and functional characterization of a large pedigree with generalized peeling skin disease. KM Eckl, V Oji, K Aufenvenne, M Nätebus, T Walker, K Ackermann, N Seller, D Metze, G Nürnberg, M Schäfer-Korting, I Haussler, H Traupe and HC Hennies. Cologne, Germany; Muenster, Germany; Berlin, Germany and Heidelberg, Germany.
- 530 Magnesium carbonate-containing phosphate binder prevents connective tissue mineralization in Abcc6<sup>-/-</sup> mice - Potential for treatment of pseudoxanthoma elasticum. Q Li, J LaRusso, A Grand-Pierre and J Utton. Philadelphia, PA.
- 531 Mutation analysis of ABCC6 in a family with pseudoxanthoma elasticum - Presymptomatic testing with prognostic implications. Q Li, L Török and J Utton. Philadelphia, PA and Kecskemet, Hungary.
- 532 Angioid streaks in pseudoxanthoma elasticum - Role of p.R1268Q in the ABCC6 gene. Q Li, S Sadowski and J Utton. Philadelphia, PA.
- 533 Correction of a mutant keratin 6a gene in HEK293 cells using small oligonucleotides. H Zambrano, J Zhou, PM Glazer, W McLean, RE Leube and LM Milstone. New Haven, CT; Dundee, United Kingdom and Aachen, Germany.
- 534 Mutations in the Zinc transporter gene SLC39A13 do not account for the phenotype of Ehlers-Danlos syndrome type VIB in cell lines from 15 patients. LC Walker, EM Ju and HN Yeowell. Durham, NC.
- 535 A splicing enhancer element in exon 13A of the lysyl hydroxylase2 (LH2) gene promotes expression of the fibrosis-associated, alternatively-spliced long form of LH2. P Seth, LC Walker and HN Yeowell. Durham, NC.
- 536 Global transcriptional analysis in psoriasis skin and blood highlights several genomic hotspots for differentially expressed genes. M Icen, JR Smith and AA Sinha. East Lansing, MI.
- 537\* Topical application of type VII collagen for wound healing and treatment of DEB. P Gharsri, X Wang, A Ng, D Woodley and M Chen. Los Angeles, CA.
- 538 Polymorphisms in the obesity related FTO gene are associated with psoriasis. R Soltani-Arabshahi, B Feng, K Callis Duffin, DE Goldgar, SC Hunt, RP Nair, JT Elder, GR Abecasis, AM Bowcock and GG Krueger. Salt Lake City, UT; Ann Arbor, MI and Saint Louis, MO.
- 539 Altered DNA methylome in patients with atopic dermatitis. J Han, K Shin and T Kim. Seoul, South Korea.
- 540\* Delineation of the mode of action of SAMD9, a protein deficient in the normophosphatemic subtype of familial tumoral calcinosis. D Hershkovitz, A Aronheim, Y Gross, O Sarig, A Salzberg, N Avidan, J Utton and E Sprecher. Haifa, Israel; Tel Aviv, Israel and Philadelphia, PA.
- 541\* Tolerance induction towards type XVII collagen. M Ettinger, IK Gratz, D Peckl-Schmid, C Gruber, T Johnson, K Mahnke, H Hintner and J Bauer. Salzburg, Austria and Heidelberg, Germany.
- 542 Cylindrospiradenomas may arise from immunoprivileged hair follicle stem cells and are vulnerable to anti-inflammatory treatment. NT Meier, KC Meyer, C Rose and R Paus. Luebeck, Germany and Manchester, United Kingdom.
- 543\*\* A milieu of regulatory elements in the epidermal differentiation complex (EDC) syntenic block: Implications for atopic dermatitis and psoriasis. C de Guzman Strong, S Conlan, CB Deming, J Cheng, K Sears and JA Segre. Bethesda, MD and Urbana, IL.
- 544\* A large mutational study in pachyonychia congenita. NJ Wilson, SA Leachman, PR Hull, LM Milstone, ME Schwartz, CD Hansen and FJ Smith. Dundee, United Kingdom; Salt Lake City, UT; Saskatoon, Canada and New Haven, CT.
- 545 The mouse Samd9L gene: Developmental and tissue-specific expression. Q Jiang, B Quaynor, A Sun, Q Li, H Matsui, H Honda, T Inaba, E Sprecher and J Utton. Philadelphia, PA; Hiroshima, Japan and Tel Aviv, Israel.

- 546 Mutation-specific siRNA therapy for epidermolysis bullosa simplex.** VE McGilligan, S Atkinson, H Liao, T Moore and I McLean. Dundee, United Kingdom and Coleraine, United Kingdom.
- 547 Microarray analysis of CoffeeBerry® extract effects on human epidermis.** JP Therrien, E Millerman, HE Hofland and E Hsia. Palo Alto, CA.
- 548\* Aminoglycosides restore type VII collagen function by overcoming premature stop mutations: Implications for DEB therapy.** J Weinstein, J Cogan, Y Hou, S Martin, X Wang, P Ghasri, A South, D Woodley and M Chen. Los Angeles, CA and Dundee, United Kingdom.
- 549 Linking alopecia areata to atopy: Evaluation of transcriptionally regulated genes in patient subsets suggests a shared basis for genetic susceptibility.** A Coda and AA Sinha. East Lansing, MI.
- 550 A comparison of Type VII collagen levels, mmp1 promoter polymorphism and clinical severity in a Mexican cohort of patients with recessive dystrophic epidermolysis bullosa.** J Garza-Gomez, J Salas-Alanis, J Ocampo-Candiani, M Gómez-Flores, J McGrath and AP South. Monterrey, Mexico and Dundee, United Kingdom.
- 551\* Genome-wide association study in alopecia areata implicates both innate and adaptive immunity.** L Petukhova, M Duvic, M Hordinsky, D Norris, V Price, Y Shimomura, H Kim, P Singh, A Lee, WV Chen, KC Meyer, R Paus, C Jahoda, CI Amos, PK Gregersen and AM Christiano. New York, NY; Houston, TX; Minneapolis, MN; Denver, CO; San Francisco, CA; Manhasset, NY; Lubeck, Germany; Manchester, United Kingdom and Durham, United Kingdom.
- 552 A review of the clinical findings in 231 patients with pachyonychia congenita.** MJ Eliason, SA Leachman, D Goldgar, M Schwartz and C Hansen. Salt Lake City, UT.
- 553\* Hairless and the polyamine putrescine form a negative feedback loop in keratinocytes.** C Luke, C Alex, H Kim, S Gilmour and AM Christiano. New York, NY and Wynnewood, PA.
- 554\* Requirement of the VDR coactivator SRC3 in the induction of innate immune genes and permeability barrier formation.** Y Oda, V Bul, Y Uchida, M Man, PM Elias, Y Lai, RL Gallo and DD Bikle. San Francisco, CA and San Diego, CA.
- 555 Whole-genome transcriptional profiling for the evaluation of psoriasis-like mouse models.** WR Swindell, A Johnston, E Baerveldt, JT Elder, EP Prens, NL Ward and JE Gudjonsson. Ann Arbor, MI; Rotterdam, Netherlands and Cleveland, OH.
- 556 Tumour necrosis factor alpha promoter -308g/a (tnfa -308g/a) polymorphism in Mexican patients with alopecia areata.** CS Salinas-Cantu, M Salinas-Santander, A Lagos-Rodriguez, C Sanchez-Domínguez, C Rios-Ibarra, R Ortiz-Lopez and J Ocampo-Candiani. Monterrey, Mexico.
- 557\* Promoter elements and protein function of TNIP1 indicate a regulatory feedback loop.** C Zhang, P Encarnacao, I Gurevich and B Aneskevich. Storrs, CT.
- 558\* High efficiency exogenous gene expression in primary human skin cells using Bacmam technology.** S Gopinath, R Newman, D Kuninger, L Wilson and GD Shipley. Eugene, OR.
- 559 A nonsense mutation in the SCN9A gene in congenital insensitivity to pain.** M Kiuru, M Kurban, M Wajid, Y Shimomura and AM Christiano. New York, NY.
- 560 Evaluation of functional siRNA delivery in a human epidermal skin equivalent model.** RP Hickerson, D Leake and RL Kaspar. Santa Cruz, CA and Lafayette, CO.
- 561 Silencing of reporter gene expression in skin using siRNAs delivered by a soluble protrusion array device (PAD).** E Gonzalez-Gonzalez, TJ Speaker, R Hickerson, R Spitzer, M Flores, D Leake, CH Contag and RL Kaspar. Stanford, CA; Santa Cruz, CA and Lafayette, CO.
- 562 Increased interstitial pressure improves nucleic acid delivery to skin enabling a comparative analysis of constitutive promoters.** E Gonzalez-Gonzalez, H Ra, R Spitzer, RP Hickerson, CH Contag and RL Kaspar. Stanford, CA and Santa Cruz, CA.
- 563\* Differentiation of induced pluripotent stem cells into a multipotent keratinocyte lineage.** G Bilousova, J Chen and DR Roop. Aurora, CO.
- 564 A wide spectrum of filaggrin mutations contribute to ichthyosis vulgaris and atopic dermatitis in the Singaporean Chinese population.** H Chen, J E. A. Common, RL Haines, A Balakrishnan, C S. M. Goh, D M. L. Goh, M B. Y. Tang, HP Van Bever, Y C. Giam, W H. I. McLean and E B. Lane. Singapore, Singapore and Dundee, United Kingdom.
- 565 Copy number variations upstream of SOX9 gene are associated with hypertrichosis.** M Kurban, M Kiuru, Y Shimomura, J Salas, K Fantauzzo, B Levy and AM Christiano. New York, NY and Monterrey, Mexico.
- 566 The first Asian case of Dowling Degos Disease described with a recurrent keratin 5 mutation.** RL Haines, JE Common, D Lunny, K Chong, E Lane and B Goh. Singapore, Singapore.
- 567 MicroRNAs in the epidermis and dermis are associated with skin and hair follicle morphogenesis.** M Tavazoie, C Higgins, K Inoue, K Fantauzzo, H Bazzi, GD Richardson, C Jahoda and AM Christiano. New York, NY and Durham, United Kingdom.
- 568 Gene-breaking mutagenesis in zebrafish identifies the novel epidermal mutant wicked witch of the Midwest.** SE Westcot, D Balciunas, S Sivasubbu, KJ Clark, AM Petzold, G Moulder, TM Greenwood and SC Ekker. Minneapolis, MN; Rochester, MN; Philadelphia, PA and New Delhi, India.

## Growth Factors and Signal Transduction

All orals [designated with an asterisk (\*)] listed below are presented in the Growth Factors and Signal Transduction Minisymposium on Friday, May 7, 2010 from 2:00-5:30 p.m. in Salon D, Hilton Atlanta. Orals designated by two asterisks (\*\*) will be presented during a Plenary Session.

- 569 Pitavastatin suppresses lipid peroxidation-induced VEGF expression in the skin of KKAy metabolic syndrome mice.** K Nakai, K Yoneda, Y Ishihara, K Ohmori, T Morie, J Igarashi, M Kohno, H Kosaka and Y Kubota. Kita, Japan.
- 570 Calcium-induced epidermal differentiation is a reversible process regulated by PKD.** A Jadali and S Ghazizadeh. Stony Brook, NY.
- 571 Upregulation of nuclear factor- $\kappa$ B (NF- $\kappa$ B) expression by SLURP-1 via Keratinocyte  $\alpha$ 7 Nicotinic Acetylcholine Receptor (nAChR) involves both ionic events and activation of protein kinases.** A Chernyavsky, J Qian and SA Grando. Irvine, CA.
- 572\* Role of Smad-interacting protein 1 (SIP1) in collagen synthesis of dermal fibroblasts.** M Teraishi, M Takaishi, M Ikeda, T Furukawa, T Fukada, S Shimoda, Y Asada and S Sano. Nankoku, Japan; Suita, Japan and Yokohama, Japan.
- 573\* ErbB2 interacting protein (Erbin) binds unique domains of the desmoglein 1 C-terminus to form a complex that cooperatively promotes epidermal differentiation.** CL Simpson, R Harmon, S Getsios and KJ Green. Chicago, IL.
- 574 Neurotrophins stimulate human fibroblast differentiation, migration and contractile strength.** K Dallaglio, E Palazzo, A Marconi, C Viennet, M Dumas, P Humbert and C Pincelli. Modena, Italy; Saint Jean de Braye, France and Besancon, France.
- 575\* Targeted inducible expression of wnt5a in adult mouse epidermis.** L Reilly, M Romanowska and J Foerster. Dundee, United Kingdom.
- 576 Opposing actions of insulin and arsenite converge on PKC $\delta$  to alter keratinocyte proliferative potential and differentiation.** TV Reznikova, MA Phillips, TJ Patterson and RH Rice. Davis, CA.
- 577 Endogenous galectin-3 positively regulates keratinocyte migration by controlling EGFR intracellular trafficking through Alix.** W Liu, DK Hsu, H Chen, R Yang, L Larsen, RR Isseroff and F Liu. Sacramento, CA and North Chicago, IL.
- 578\* STA-21, a stat3 inhibitor, induces differentiation of normal human epidermal keratinocytes and human keratinocyte derived cell lines.** M Takaishi, M Yokogawa, K Miyoshi, K Nakajima, J DiGiovanni and S Sano. Nankoku, Japan and Austin, TX.
- 579 Spermidine stimulates hair follicle elongation and anagen prolongation, accompanied by increased keratin K15 expression.** Y Ramot, S Tiege, G Giuliani and R Paus. Jerusalem, Israel; Lübeck, Germany; Milan, Italy and Manchester, United Kingdom.
- 580\* EphA2 negatively regulates epidermal Erk1/2-MAPK signaling and growth.** S Lin, K Gordon and S Getsios. Chicago, IL.
- 581\* Th2 cytokines-induced dual oxidase 1 in human epidermal keratinocytes makes a positive feedback loop for IL-4/IL-13 signaling by augmenting STAT6 phosphorylation via oxidative inactivation of protein tyrosine phosphatase 1B.** S Hirakawa, R Saito, H Ohara, R Okuyama and S Aiba. Sendai, Japan and Yokohama, Japan.
- 582 Vegetable peptide SP005 promotes activation of mTOR pathway through ERK/MAPK signal in stem cell proliferation.** J Lee, E Jung, S Huh, K Roh, Y Kim, D Park and J Lee. Gunpo-City, South Korea.
- 583 Etoxatin-CCR3 interaction promotes survival of anaplastic large cell lymphoma cells via ERK1/2 activation.** T Miyagaki, M Sugaya, T Kadono, T Murakami, H Okochi, K Tamaki and S Sato. Tokyo, Japan and Tochigi, Japan.

- 584 Adipose-derived stem cell-cultured media improves oxazolone induced atopic dermatitis skin lesions. H Lee, M Jung and E Choi. Wonju, South Korea.
- 585\* Molecular regulation of neuropeptide receptors by peptidase endothelin-converting enzyme-1: Impact on inflammation and pruritus. D Roosterman, GS Cottrell, M Feld, NW Bennett and M Steinhoff. San Francisco, CA and Muenstein, Germany.
- 586 Genetic deletion of *Egfr* results in delayed catagen associated with defective cell cycle progression. KJ Bichsel, DA Porto, E Forney, C Foote and LA Hansen. Omaha, NE.
- 587 Unravelling RIP4 signalling in the skin. S Lippens, P De Groote, B Gilbert, R De Rycke, C Guerin, P Holland, P Vandenabeele and W Declercq. Ghent-Zwijarde, Belgium and Seattle, WA.
- 588\* The T $\beta$ RII Expression Levels determine whether TGF $\beta$  activates or inhibits ERK without participation of T $\beta$ RI. A Han, B Bandyopadhyay, J Dai, J Fan, Y Li, M Chen, D Woodley and W Li. Los Angeles, CA.
- 589\* Receptor type protein tyrosine phosphatase beta directly regulates hepatocyte growth factor receptor function in human keratinocytes. Y Xu, D Baker, W Xia, J Zhou, B Cha, JJ Voorhees and GJ Fisher. Ann Arbor, MI.
- 590 UV irradiation reduces Type II TGF- $\beta$  receptor expression by transcriptional repression through a 38 base pair promoter sequence in human skin fibroblasts. T He, T Quan, Z Qin, JJ Voorhees and GJ Fisher. Ann Arbor, MI.
- 591\* Deacetylated ganglioside GM3 activates uPAR/p38 MAP kinase signaling in caveolar domains. X Wang, P Sun, J Liu, Q Yan and AS Paller. Chicago, IL.
- 592 p75NTR mediates apoptosis in transit amplifying (TA) cells and its overexpression restores cell death in psoriatic keratinocytes. F Truzzi, A Marconi, R Lotti, K Dallaglio, E Palazzo, R Borroni, C Vaschieri, R Tiberio and C Pincelli. Modena, Italy and Novara, Italy.
- 593\*\* Adipocytes and adiponectin secretion plays a major role in skin physiology and in diabetes wound healing pathology. L Braiman-Wiksman, R Mandil-Levin, M Ben-Hamo and T Tennenbaum. Rehovot, Israel.
- 594\* The role of the PLD2/AQP3/PG signaling module in keratinocyte proliferation and differentiation. H Qin and WB Bollag. Augusta, GA.
- 595\* Tissue inhibitor of metalloproteinase 1 is induced in th1 and th17 t-helper cell subsets in a stat-dependent manner. AS Adamson, A Laurence, K Ghoreschi, M Rittler, Y Kanno, L Wei, W Stetler-Stevenson and J O'Shea. Cambridge, MA and Bethesda, MD.
- 596 Withdrawn.
- 597 Irritant induced purine release mediates EGFR activation *in vitro*. KJ White, M Newton-West, VJ Maffei and RA Swerlick. Atlanta, GA and Decatur, GA.
- 598 Cathepsin S is a cysteine protease, elicits itch and signals via protease-activated receptors. EA Lerner, Y Sun, SG Shimada, P Sikand, RH LaMotte and VB Reddy. Charlestown, MA and New Haven, CT.
- 599\* Galectin-12 deficiency enhances lipolysis and reduces adiposity in mice. R Yang, L Yu, J Graham, DK Hsu, K Lloyd, PJ Havel and F Liu. Sacramento, CA and Davis, CA.
- 600 TGF- $\beta$  suppresses  $\beta$ -catenin-dependent response to mechanical stimulation in dendritic cells. B Vander Lugt, ZT Beck, RC Fuhrbrigge, N Hacohen, JJ Campbell and M Boes. Boston, MA; Charlestown, MA; Cambridge, MA and Utrecht, Netherlands.
- 601 A study of NGF levels in atopic dermatitis. NGF does not seem to be a reliable marker for severity of atopic dermatitis. H Wang, AD Papoiu, Y Ishiuji, G Yosipovitch and M Schmelz. Winston-Salem, NC and Mannheim, Germany.
- 602 The phospholipase D2-aquaporin-3-phosphatidylglycerol lipid signaling pathway in corneal epithelial proliferation and migration. D Xie and WB Bollag. Augusta, GA.
- 603 UVR induction of snail and slug is independent of lipid raft composition. SH Shirley, S George, S Wu and DF Kusewitt. Smithville, TX and Athens, OH.
- 604\* Slug modulates ultraviolet radiation induction of calprotectin in keratinocytes. J He and DF Kusewitt. Smithville, TX.
- 605 Modulation of signal transduction by (-)-epigallocatechin-3-gallate (EGCG) in sebocyte. J Kim, DM Thiboutot and D Suh. Seoul, South Korea and Hershey, PA.
- 606\* Amphiregulin carboxy-terminal domain regulates autocrine keratinocyte growth and differentiation. SW Stoll, L Rittié and JT Elder. Ann Arbor, MI.

## Hair and Cutaneous Development

- All orals [designated with an asterisk (\*)] listed below are presented in the Hair and Cutaneous Development Minisymposium on Friday, May 7, 2010 from 2:00-5:30 p.m. in Salon D, Hilton Atlanta or in the Hair and Cutaneous Development II: Hair Differentiation & Cycling Minisymposium on Saturday, May 8, 2010 from 2:00-5:30 p.m. in Salon D, Hilton Atlanta. Orals designated by two asterisks (\*\*) will be presented during a Plenary Session.
- 607 Rutin efficacy in hair loss. G Giuliani, B Marzani and A Benedusi. Milan, Italy.
- 608 Probiotic *Lactobacillus rhamnosus* LR-04 oral supplementation improves dandruff condition. G Giuliani, A Benedusi, B Marzani and A Mascolo. Milano, Italy.
- 609 A novel supplement for hair loss. G Giuliani and F Rinaldi. Milan, Italy.
- 610 Defective metabolic degradation of retinoic acid in mice lacking *Cyp26b1* alters skin development. J Okano, U Lichti, M Aronova, G Zhang, SH Yuspa, Y Sakai and MI Morasso. Bethesda, MD and Osaka, Japan.
- 611\* A two-step mechanism for stem cell activation during hair regeneration. V Greco, T Chen, M Rendl, M Schober, A Pasolli, N Stokes, J Dela Cruz-Racelis and E Fuchs. New Haven, CT and New York, NY.
- 612\* Dkk4 and Eda regulate distinctive developmental mechanisms for subtypes of mouse hair. C Cui, M Kunisada, Y Piao, V Childress, M Ko and D Schlessinger. Baltimore, MD and Kobe, Japan.
- 613 Gene expression profiling reveals similarities and distinct differences between lymphocytic and neutrophilic cicatricial alopecias. S Parameswara Panicker, L Xu, MC Consolo, VH Price, P Mirmirani and P Karnik. Cleveland, OH; San Francisco, CA and Vallejo, CA.
- 614 Expression of MPZL3 during mouse skin differentiation. J Weiss, R Rodriguez, P Racz, GY Nakamatsu, K Csiszar and T Cao. Miami, FL and Honolulu, HI.
- 615 The role of Prostaglandin D2 and its receptor DP-2 in promotion of androgenetic alopecia. LA Garza, B Alagesan, JA Lawson, SM Norberg, E Loy, T Zhao, DC Stanton, L Carrasco, SM Fischer, GA Fitzgerald and G Cotsarelis. Baltimore, MD; Philadelphia, PA and Smithville, TX.
- 616 Common mechanism of hair follicle formation from dissociated trichogenic epidermal and dermal cells. Y Zheng, W Chen, Y Homan, K Watkins, L Sergott, A Nace, J VandeBerg, J Hsieh, M Breen and K Stenn. Philadelphia, PA; San Antonio, TX and Raleigh, NC.
- 617\* *Fuz* is a PCP effector gene that controls the morphogenesis and differentiation of hair follicles. D Dai, H Zhu, B Wlodarczyk, L Zhang, AG Li, RH Finnell, DR Roop and J Chen. Aurora, CO; Houston, TX and Portland, OR.
- 618\* Dermal Sonic Hedgehog signaling is required for hair follicle morphogenesis and regeneration. W Woo, HH Zhen and AE Oro. Palo Alto, CA.
- 619\* Deletion of dermal integrin beta-1 leads to adhesion, but not hair follicle morphogenesis, defects. MC DeRouen, MP Marinkovich and AE Oro. Stanford, CA.
- 620\* Patterning dissociated heterotypic adult cells into functional folliculoid organ germs by substratum-facilitated self-assembly. J Hong, C Chan, C Yen and S Lin. Taipei, Taiwan.
- 621 VEGF stimulates proliferation of human outer root sheath cells through VEGF receptor-2 mediated ERK signal pathway. M Zheng, W Li, C Li, X Man, X Yang, S Cai and Z Lv. Hangzhou, China.
- 622 VEGF receptor-2 mediates proliferation of human dermal papilla cells through ERK pathway, but not through p38 MAPK, JNK, AKT pathways. W Li, C Li, J Zhou, J Chen, X Man, S Cai, Z Lv and M Zheng. Hangzhou, China.
- 623 Cholesterol enhances the dry skin relief benefits of some but not all lamellar bilayer-forming lipids. A Laloeuf, A Mitarotonda, D Kerrigan, AJ Byrne and L Visdal-Johnsen. Stockholm, Sweden and Dublin, Ireland.
- 624 The effect of environmental stresses on hair follicles in human scalp skin grafts. A Perrin, C Meyrignac, C Gondran, C Dal Farra and N Domloge. Sophia Antipolis, France and Wayne, NJ.
- 625 Modulation of hair follicle stem cell markers and hair growth. C Meyrignac, A Perrin, C Gondran, K Cucumel, C Dal Farra and N Domloge. Sophia Antipolis, France and Wayne, NJ.
- 626\*\* p63 and IRF6 are components of a common molecular pathway disrupted in ectodermal dysplasias. F Moretti, G Spallone, E Botti, A Giunta, N Lo Iacono, G Merlo, A Mills, S Alemà, S Chimenti, L Guerrini and A Costanzo. Rome, Italy; Milan, Italy; Turin, Italy; Cold Spring Harbor, NY and Monterotondo, Italy.

- 627 Effects of extracellular calcium on cultured sebocytes. J Kim, W Lee, H Kim, B Kim, S Lee and D Kim. Daegu, South Korea and Busan, South Korea.
- 628 Modulation of basement membrane components in the hair follicle of human scalp skin grafts. C Meyrignac, A Perrin, C Gondran, C Dal Farra and N Domloge. Sophia Antipolis, France and Wayne, NJ.
- 629 Withdrawn.
- 630 New pointers towards a role of perifollicular mast cells in alopecia areata. M Bertolini, P Kleditzsch, VU Emelianov, K Sugawara, KC Meyer and R Paus. Lübeck, Germany and Manchester, United Kingdom.
- 631 A Safe and effective new topical treatment for nail fungus (*Onychomycosis*). G Polson, N Skoulis, D Ciccognani, K Roberts, K DiNicola, K Lou and J Gruber. Cheshire, CT.
- 632 Inhibition of sebaceous gland differentiation and production of sebum-specific lipids by a melanocortin receptor 5 antagonist. M Eisinger, W Li, M Anthonavage, L Zhang, A Pappas, D Rossetti and M Seiberg. Skillman, NJ.
- 633\* Characterization of A20 epidermal-specific knockout mice. S Lippens, B Gilbert, M Sze, L Vereecke, C McGuire, P Vandenebelle, C Guerin, M Pasparakis, R Beyaert, W Declercq and G van Loo. Ghent, Belgium and Cologne, Germany.
- 634\*\* Genome organiser and special AT-rich binding protein Satb1 controls the establishing tissue-specific chromatin organization during development of the epidermis. MY Fessing, MR Gdula, AN Mardaryev, AA Sharov, TY Sharova, KB Gordon, T Kohwi-Shigematsu and VA Botchkarev. Bradford, United Kingdom; Boston, MA and Berkeley, CA.
- 635 Autoimmunity, skin morphology and hair cycling in a mouse model of systemic lupus erythematosus. T Parsons, E Hagen, L Xu, B Sakic and P Arck. Hamilton, Canada and Berlin, Germany.
- 636\* Dicer is required in adult skin for maintenance of rapidly proliferating hair follicle matrix cells, hair shaft formation, and catagen. M Teta, Y Choi, T Andl, EP Murchison, A Nagy, GJ Hannon and SE Millar. Philadelphia, PA; Cold Spring Harbor, NY and Toronto, Canada.
- 637 Clinical evaluation of embryonic-like fibroblast secreted proteins to induce hair growth in humans. G Naughton, M Zimber, C Ziering, M Hubka, R Kellar, K Hubka, D Perez-Mesa and J Mansbridge. San Diego, CA and Maitland, FL.
- 638 Endo- and phytocannabinoids differentially regulate biology of human epithelial skin cells. A Oláh, BI Tóth, AG Szöllösi, G Czifra, K Sugawara, CC Zouboulis, R Paus and T Bíró. Debrecen, Hungary; Lübeck, Germany and Dessau, Germany.
- 639 MicroRNA-31 regulates a complex program of gene expression during murine hair cycle and associated tissue remodeling. M Ahmed, A Mardaryev, N Vlahov, A Sharov and N Botchkareva. Bradford, United Kingdom and Boston, MA.
- 640\* Role of *Sostdc1* in hair follicle and mammary gland development. K Närhi, M Tummers, I Thesleff and ML Mikkola. Helsinki, Finland.
- 641 "Tonic inhibition" of human and mouse skin mast cell functions *in situ* by endocannabinoids and cannabinoid receptor 1 (CB1)-mediated signaling. K Sugawara, T Bíró, A Kromminga, A Zimmer, BF Gibbs, A Zimmer and R Paus. Luebeck, Germany; Debrecen, Hungary; Hamburg, Germany; Bonn, Germany; Kent, United Kingdom and Manchester, United Kingdom.
- 642\* Identification of human ABCB5<sup>+</sup> dermal progenitor cells with multipotent differentiation plasticity. S Kim, B Meier, T Schatton, B Wilson, Q Zhan, YH Loh, GQ Daley, MH Sayegh, Y Ziouta, C Ganss, K Scharfetter-Kochanek, GF Murphy, MH Frank and NY Frank. Boston, MA; Ulm, Germany and Heidelberg, Germany.
- 643\* Regulation of Shh and Sox9 by *Trps1* in the developing murine hair follicle. KA Fantauzzo and AM Christiano. New York, NY.
- 644\* *Dlx3* expression in neural crest-derived cells is required for normal hair and tooth development. O Duverger, NB Gentile, AK Bartels, KM Maddox, AD Lee, J Okano and MI Morasso. Bethesda, MD.
- 645\* The miRNA-processing enzyme *Drosha* is required for hair follicle regression, hair shaft differentiation, long-term maintenance of hair follicle stem cells, and epidermal homeostasis. Y Choi, A Nagy, O Tam, GJ Hannon and SE Millar. Philadelphia, PA; Toronto, Canada and Cold Spring Harbor, NY.
- 646 Effect of the Lexington LaserComb on hair regrowth in the C3H/HeJ model of alopecia areata. J Jimenez, T Cao, R Sevel, LM Mauro, K Nouri and LA Schachner. Miami, FL and Ann Arbor, MI.
- 647\* Inductive signaling from the dermal papilla of the hair follicle. D Enshell-Seijffers, M Kashiwagi and BA Morgan. Boston, MA.
- 648\* Adult human epithelial stem cells are a novel target for thyroid hormone regulation *in situ* and *in vitro*. K Bohm, S Tiege, N Meier and R Paus. Lübeck, Germany and Manchester, United Kingdom.
- 649\* The nude mutant gene *Foxn1* is a HOXC13 regulatory target during hair follicle and nail differentiation. CS Potter, ND Pruitt, MJ Kern, AR Godwin, JP Sundberg and A Awgulewitsch. Charleston, SC; Kansas City, KS and Bar Harbor, ME.
- 650\* The ΔNp63 isoform is an essential regulator of epithelial development and stem cell renewal. R Romano and S Sinha. Buffalo, NY.
- 651\* Important role of hair follicle stem cells for continuous sebaceous gland renewal. M Petersson, H Brylka, A Kraus, D Fehrenbach and C Niemann. Cologne, Germany.
- 652\* A novel, complex enzymatic control of mammalian pigmentation: UDP-N-GlcNAc 1-phosphotransferase regulates *POMC* gene expression, tyrosinase sorting and subsequent melanin synthesis *in situ* and *in vitro*. S Tiege, JE Kloepper, K Kollmann, T Bräulke and R Paus. Lübeck, Germany; Hamburg, Germany and Manchester, United Kingdom.
- 653 Endocannabinoids regulate proliferation, differentiation, and survival of human sweat gland epithelial cells. T Bíró, G Czifra, AG Szöllösi, BI Tóth, J Demadeu, C Bouez and L Breton. Debrecen, Hungary and Paris, France.
- 654\* Inducible deletion of β-Catenin reveals essential roles in adult hair follicle proliferation and maintenance, and epidermal homeostasis. Y Zhang, X Wu, A Nagy, T Andl and SE Millar. Philadelphia, PA and Toronto, Canada.
- 655\* Extrinsic regulation of hair follicle cycling. E Festa, M Rodeheffer, M Horowitz and V Horsley. New Haven, CT.
- 656\* Overexpression of microRNA miR-31 in mouse skin alters hair growth. L Luan, L Nanney, L King and T Andl. Nashville, TN.
- 657\* Negative regulation of Shh expression in a model of the RAS/MAPK syndromes. A Mukhopadhyay, S Kumar and BD Yu. San Diego, CA.
- 658\* Remodeling of hair-follicle associated lymphatic vessels is dependent on hair follicle development and hair cycle dependent changes in murine skin. B Posey, J Nugent, K Gupta and ME Ericson. St. Paul, MN and Minneapolis, MN.
- 659 Age, gender and ethnic variations in sebaceous lipids. A Pappas, J Fantasia and T Chen. Skillman, NJ.
- 660 Suppression of DNA degradation by inactivation of DNase1L2 leads to increased fragility of hair. H Fischer, S Szabo, J Scherz, K Jaeger, M Buchberger, H Rossiter, M Ghannadan, R Gmeiner, M Hermann, DJ Tobin, EF Wagner, E Tschachler and L Eckhart. Vienna, Austria; Bradford, United Kingdom; Madrid, Spain and Paris, France.
- 661\*\* Follicle stem cell compartments differ in responsiveness to oncogenic Hedgehog signaling. M Grachtchouk, J Pero, M Verhaegen, AN Ermilov, J Diener, J Ferris, LE Michael and AA Dlugosz. Ann Arbor, MI.
- 662\* The living wave: Self-organizing regenerative behavior of stem cells revealed in the cycling of large hair follicle populations. MV Plikus, RE Baker, C Chen, Fare, D de la Cruz, PK Maini, S Millar, RB Widelitz and CM Chuong. Los Angeles, CA; Oxford, United Kingdom and Philadelphia, PA.
- 663\* Generation of induced pluripotent stem cells by reprogramming human dermal papilla cells. CA Higgins, M Ito, K Inoue, GD Richardson, CA Jahoda and AM Christiano. New York, NY and Durham, United Kingdom.
- 664\* Wnt/β-catenin- and depilation-induced activation of hair follicle stem cells requires chromatin regulatory protein Pygo2. P Sun and X Dai. Irvine, CA.
- 665\* Defining BMP functions in hair follicle stem cells homeostasis by conditional ablation or activation of BMP receptor 1A. E Kandyba, Y Leung, Y Chen and K Kobielak. Los Angeles, CA.
- 666 Epigenetic organ regeneration: Development of a model using amputated mouse vibrissae follicles. K Inoue, CA Higgins, AM Christiano and CA Jahoda. New York, NY and Durham, United Kingdom.
- 667\* c-myb ablation affects hair follicle homeostasis. J Murphy, E Lustiger, JC Strange, J Frampton and A Engelhard. New York, NY and Edgbaston, United Kingdom.
- 668\* Keratin 74 is a novel determinant of human hair texture and is mutated in autosomal dominant woolly hair. Y Shimomura, M Wajid, L Petukhova, M Kurban and AM Christiano. New York, NY.
- 669 Differences in mean current intensity required to evoke sensation in c-fibers in the scalp of alopecia areata subjects and normal controls. R Farah, R Farah, A Junqueira, H Guo, N Gallus, M Ericson, C Boeck and M Hordinsky. Minneapolis, MN.
- 670 Reconstitution of human hair follicles using fetal epidermal and dermal cells. C Yang, D Gay and G Cotsarelis. Tainan, Taiwan and Philadelphia, PA.

- 671\*** Suppression of Wnt/β-catenin pathway maintains melanocyte stem cells. P Rabbani, W Chou, M Takeo, M Zhou, J Nguyen, P Myung, L Chin, M Taketo, T Andl, S Millar, G Cotsarelis and M Ito. New York, NY; Philadelphia, PA; Nashville, TN; Boston, MA and Kyoto, Japan.
- 672** Effects of fermented *Rhus verniciflua* Stokes extract (FRVE) on hair regeneration in cyclophosphamide-induced Alopecia model C57BL/6 mouse. K Lee, M Kim, H Shin, S Park and T Yi. Yongin-si, South Korea.
- 673** Impact of copy number variations in the human genome on hair patterns. GK Lefkowitz, A Mukhopadhyay, C Cowing-Zittron and BD Yu. La Jolla, CA.
- Immunology I: Adaptive Immunity**  
All orals [designated with an asterisk (\*)] listed below are presented in the Immunology 1: Adaptive Immunity Minisymposium on Thursday, May 6, 2010 from 2:00-5:30 p.m. in Salon B, Hilton Atlanta. Orals designated by two asterisks (\*\*) will be presented during a Plenary Session.
- 674** Different effects of active or IgE-dependent passive systemic anaphylaxis on endothelin-1. M Metz, B Schäfer, M Tsai, M Maurer and SJ Galli. Berlin, Germany and Stanford, CA.
- 675\*** Galectin-1 is a potent inducer of a regulatory phenotype on skin-resident memory T cells. F Cedeno-Laurent, SR Barthel, RA Clark and CJ Dimitroff. Boston, MA.
- 676** Cigarette smoking inhibits the acquisition of contact hypersensitivity (CHS) by immunization through oral mucosa. M Schierl, D Patel, K Adhami, B Du, W Ding, C Culjis, AJ Dannenberg and RD Granstein. New York, NY.
- 677** Exposure of Langerhans cells (LCs) to pituitary adenylate cyclase-activating peptide (PACAP) or vasoactive intestinal peptide (VIP) biases antigen presentation towards a CD4<sup>+</sup> T cell IL-17 response. W Ding, LL Stohl, M Manni and RD Granstein. New York, NY.
- 678** Muramyl dipeptide induces Th17 polarization through activation of endothelial cells. M Manni, W Ding, LL Stohl and R Granstein. New York, NY.
- 679\*** PD-1 expression is a marker of a tumor-reactive but functionally impaired lymphocyte population infiltrating human melanoma. T Inozume, K Hanada, J Wunderlich, S Rosenberg, S Shimada and Y James. Bethesda, MD and Chuo, Japan.
- 680** Mast cells are essential to establish contact hypersensitivity by stimulating cutaneous dendritic cells revealed by a newly generated mast cell-specific conditional depletion model. A Otsuka, M Kubo, Y Miyachi and K Kabashima. Kyoto, Japan and Yokohama, Japan.
- 681\*** Desmoglein 3-specific TCR transgenic CD4<sup>+</sup> T cells that escape from central tolerance induce autoreactive dermatitis. H Takahashi, S Koyasu, M Kuwana and M Amagai. Tokyo, Japan.
- 682** Both the elicitation phase of contact hypersensitivity response and irritant dermatitis are suppressed by administration of Thioredoxin. A Fukunaga, T Horikawa, K Ogura, K Taguchi, XYu, Y Funasaka, M Takeda, H Nakamura, J Yodoi and C Nishigori. Kobe, Japan.
- 683** A novel polyclonal peripheral B cell tolerance model (Liver specific Ig-k SuperAntigen). T Ota, M Aoki-Ota, B Duong and D Nemazee. La Jolla, CA.
- 684\*** Intratumoral injection of a novel STAT3 inhibitor elicited strong antitumor effects by provoking innate and acquired immunity. T Okamoto, N Shibagaki, K Harada and S Shimada. Chuo, Japan.
- 685** The effect of clonal mesenchymal stem cells on IgE production of activated B cells. H Lee, J Byun, G Choi and J Shin. Incheon, South Korea.
- 686\*** Discovery of a new dendritic cell subset, termed "gr-DC", derived from a granulocyte precursor. S Geng, H Matsushima and A Takashima. Toledo, OH.
- 687\*** *In vivo* immunomodulatory functions of Abcb5<sup>+</sup> dermal mesenchymal stem cells. T Schatton, J Yang, M Grimm, M Gasser, AM Waaga-Gasser, MH Sayegh and MH Frank. Boston, MA and Würzburg, Germany.
- 688** Abscopal effect in a patient with metastatic Merkel cell carcinoma following radiation therapy. SE Cotter, PM Devlin, KM Collins, D Sahni, AK Ng and LC Wang. Boston, MA.
- 689** Heat-killed BCG and *Mycobacterium kansasii* Ag85b combined vaccination ameliorates Th2 cytokine-mediated dermatitis in AD model mice by inducing regulatory T cells. M Kakeda, K Yamanaka, H Kitagawa, K Tsuda, T Akeda, I Kurokawa and H Mizutani. Tsu, Japan.
- 690\*** Immune evasion in human Merkel cell carcinoma: A case of T cell narcolepsy. Y Jiang, L Wang, J Teague, R Watanabe, M Lichtman, P Ngheim, TS Kupper and R Clark. Boston, MA and Seattle, WA.
- 691** Chemokine requirements for epidermal T cell trafficking. JJ Campbell and NJ Tubo. Boston, MA.
- 692** Abnormal barrier function and allergic skin inflammation in mice overexpressing Th2 cells via a constitutively active Stat6 gene. S Da Silva, S Sehra, MD Southall, MH Kaplan and JB Travers. Indianapolis, IN and Skillman, NJ.
- 693\*** Langerhans cells induce expansion of skin resident tregs in the absence of exogenous antigen, but activate T effector memory cells in the presence of microbial antigen. J Seneschal, RA Clark and TS Kupper. Boston, MA.
- 694** Comparison of flow cytometry and ELISA in the evaluation of the skin sensitization by non-radioactive murine local lymph node assay using bromodeoxyuridine. K Jung, J Lee, Y Chung, Y Park and K Lim. Youngin-si, South Korea and Seoul, South Korea.
- 695** A controlled aquaporin-3 expression in T lymphocytes regulate their migration and trafficking in cutaneous immune reaction. M Hara-Chikuma, S Chikuma, K Kabashima, K Nakahigashi, A Kamegawa, Y Fujiyoshi, AS Verkman, Y Sugiyama, S Inoue and Y Miyachi. Kyoto, Japan; Odawara, Japan and San Francisco, CA.
- 696** *Propionibacterium acnes* vaccination improves mouse atopic dermatitis inducing regulatory T cells and Th1 immune response. H Kitagawa, K Yamanaka, M Kakeda, H Inada, Y Imai, EC Gabazza, I Kurokawa and H Mizutani. Tsu, Japan and Nishinomiya, Japan.
- 697** Serum- and glucocorticoid-inducible kinase 1 is critical for early but dispensable for delayed type mast cell responses. F Wölbing, M Sobiesiak, E Shumilina, S Kaesler, RS Lam, N Matzner, IM Zemtsova, A Lupescu, N Zahir, D Kuhl, M Schaller, F Lang and T Biedermann. Tübingen, Germany and Hamburg, Germany.
- 698** Role of HERV-K dUTPase in immune dysregulation and psoriasis disease. M Ariza and MV Williams. Columbia, SC and Columbus, OH.
- 699** Modulation of CD86 expression in skin dendritic cells: what consequences on immune functions? B Nicolas, G Amandine, B Aurélie and A Valérie. Lyon, France.
- 700** Interleukin-31 directly regulates neuronal function in inflammation and itch. F Cevikbas, X Wang, S Seeliger, M Fischer, SR Dillon, B Homey, A Basbaum and M Steinhoff. San Francisco, CA; Goettingen, Germany; Seattle, WA; Erlangen, Germany; Duesseldorf, Germany and Muenster, Germany.
- 701\*** Sustained skin specific inflammation elicits increases in circulating Ly-6C monocytes and spontaneous atherosclerotic plaque formation in a murine model of psoriasis. Y Wang, H Gao, C Matheny, W Fu, D Diaconu, S Liu, KD Cooper, DL Simon, TS McCormick and NL Ward. Cleveland, OH.
- 702** Langerhans cells require cognate interaction with CD4 T cells and secrete IL-10 to suppress CHS responses. B Iggyarto, JC Dudda, A Roers, PA Koni, DJ Campbell and DH Kaplan. Minneapolis, MN; Seattle, WA; Dresden, Germany and Augusta, GA.
- 703** Acute ablation of epidermal Langerhans cells enhances skin immune responses. A Bobr, I Olvera-Gomez, BZ Iggyarto, KA Hogquist and DH Kaplan. Minneapolis, MN.
- 704** Homoisoflavanone prevents allergic responses by degranulation of mast cells through the inhibition of FcεRI signaling pathways. Y Lee, S Hur and T Kim. Seoul, South Korea.
- 705\*** The spatio-temporal analysis of T cell behavior in contact hypersensitivity response. G Egawa, T Honda, H Tanizaki, Y Miyachi and K Kabashima. Kyoto, Japan.
- 706** Murine beta defensin-14 induces regulatory T cells probably via interleukin-10. F Navid, K Ahrens, T Schwarz and A Schwarz. Kiel, Germany.
- 707** IRF8 as a potentially key determinant in the activation or death of CD8T cells. F Miyagawa, EA Nelson and SI Katz. Bethesda, MD.
- 708** Deletion of microRNAs mediated by Langerin-Cre impairs epidermal Langerhans cell development. H Wang, K Li, R Qi, K Seo, Z Zheng, D Kaplan, Q Mi and L Zhou. Detroit, MI and Minneapolis, MN.
- 709** Effect of extracorporeal photopheresis on dendritic cell populations in patients with Sézary syndrome and graft versus host disease. LH Shiue, M Goswami, A Alousi, M Duvic and X Ni. Houston, TX.
- 710\*** Retinoid Orphan Receptor-gamma (ROR-γ) deficient mice generate potent Th9 responses, but not Th17 responses, under Th17 polarizing conditions. R Purwar, AM Jetten and TS Kupper. Boston, MA and Research Triangle, NC.

- 711 **Deficiency of retinoid related orphan receptor-gamma (ROR-γ) results in impaired contact hypersensitivity (CHS) responses, but enhanced melanoma tumor immunity.** R Purwar, AM Jetten and T Kupper. Boston, MA and Research Triangle, NC.
- 712\*\* **Effector memory T cells persist long term in the skin, and their recirculation into blood is limited.** X Jiang, A Wagers, R Clark, L Liu, R Fuhlbrigge and T Kupper. Boston, MA.
- 713\* **Vaccination through epidermis with Vaccinia Virus (VACV) generates skin resident T cells, central memory T cells and lung resident T cells which protect the host independent of antibody.** L Lisa, T Tian and TS Kupper. Boston, MA.
- 714 **T-cell immunosenescence is associated with the presence of Kaposi's Sarcoma in antiretroviral treated human immunodeficiency virus infected persons.** P Unemori, P Hunt, KS Leslie, E Sinclair, JN Martin, SG Deeks and T Maurer. San Francisco, CA.
- 715 **Langerhans cells induce IL-10-/TGF-beta-producing regulatory T cells after glucocorticosteroid treatment *in vivo* and *in vitro*.** G Stary, I Klein, W Bauer, B Reininger, S Kohlhofer, K Gruber, H Skvara, T Jung and G Stingl. Vienna, Austria and Basel, Switzerland.
- 716 **A role for IL-5 in promoting increased IgM at the site of disease in leprosy.** MT Ochoa, R Teles, B Haas, D Zaghi, H Li, EN Sarno, TH Rea, RL Modlin and DJ Lee. Los Angeles, CA; Bronx, NY and Rio de Janeiro, Brazil.
- 717\* **Psoriasis lesions are enriched in IL-22+ and IL-17+ T cells with an associated increase in the IL-17+/IL-13+ T cell ratio.** CJ Rubin, M Riblett, A Lin, RJ Nair, JT Elder and AT Bruce. Ann Arbor, MI.
- 718\* **Topical genetic immunization and engineered dendritic cell-based vaccines raise CD8 T cell specific responses against a carcinogen-induced point mutation of the H-ras oncogene.** K Rudemiller, G Twitty, H Kim, A Rivera, J Roth, A Holzer, N Yusuf, C Elmets and L Timares. Birmingham, AL.
- 719 **Effect of local hyperthermia on Langerhans cells in normal and HPV infected skin.** H Chen and X Gao. Shenyang, China.
- 720 **The human T cell repertoire contains CD1a autoreactive T cells that home to the skin and modulate keratinocytes through interleukin-22.** A de Jong, V Peña-Cruz, T Cheng and B Moody. Boston, MA.
- 721\* **Platelet induction of monocyte-to-dendritic cell maturation.** TS Durazzo, CL Berger and RL Edelson. New Haven, CT.
- 730\* **Orchestration of atopic dermatitis inflammation by *Staphylococcus aureus*: Toll-like receptor 2 ligands exaggerate dermatitis and Th1 responses.** S Kaesler, Y Böttcher, K Chen, E Guenova, U Hein, T Volz and T Biedermann. Tuebingen, Germany.
- 731 **Heat-treated vaccinia virus induces type I IFN production in dendritic cells and macrophages through distinct pathways.** P Dai, H Cao, F Wang, T Merghoub, C Fang, P Pitha-Rowe, L Waggoner, KA Fitzgerald, A Rice, R Moyer, A Houghton, S Shuman and L Deng. New York, NY; Baltimore, MD; Worcester, MA and Gainesville, FL.
- 732 **UVB triggered induction of vitamin D3 metabolism differentially affects antimicrobial peptide expression in keratinocytes.** M Peric, B Lehmann, G Vashina, Y Dombrowski, S Koglin, M Meurer, T Ruzicka and J Schaubert. Munich, Germany and Dresden, Germany.
- 733 **Heat-treated vaccinia virus induces autophagy in macrophages and dendritic cells.** T Parikh, P Dai, I Ganley, S Shuman, X Jiang and L Deng. New York, NY.
- 734 ***Propionibacterium acnes* induces an inflammatory response in keratinocytes via crosstalk of the p38 MAPK and NF-κB pathways.** S Kaur, P Lyte, R Kharidia and MD Southall. Skillman, NJ.
- 735 **Reduced expression of dermicidin, a peptide active against *Propionibacterium acnes*, in the sweat of acne vulgaris patients.** T Yoshino, T Fujimura, A Mukuno, N Sato, T Nakano, M Takahashi, T Suzuki, S Matsukuma and K Katsuoka. Sagamihara, Japan and Yokohama, Japan.
- 736 **Long-term ICAM-1 and transient PDGF-B expression on PMA-activated THP-1 cells harboring early-onset sarcoidosis/Blau syndrome-associated NOD2 mutations.** N Kanazawa, M Nishiyama, H Li, I Okafuji, N Kambe and F Furukawa. Wakayama, Japan; Kyoto, Japan and Chiba, Japan.
- 737 **Antimicrobial and anti-inflammatory effects of newly designed synthetic Cecropin A (1-8)-Magainin 2 (1-12) hybrid peptide CA-MA analogue P5 against *Malassezia furfur*.** S Ryu, S Acharya, C Gurley, Y Park, CA Armstrong and PI Song. Little Rock, AR and Gwangju, South Korea.
- 738\* **Production of LL-37 during herpes simplex virus types 2 infection in human keratinocytes enhances HIV susceptibility in Langerhans cells.** Y Ogawa, T Kawamura, A Blauvelt and S Shimada. Yamanashi, Japan and Portland, OR.
- 739 **The contact allergen 2,4-dinitrochlorobenzene has minimal effects on microRNA-155 expression in human monocyte-derived dendritic cells and in a skin explant model.** E Vavatsikou, C Pickard, T Sanchez-Elsner and E Healy. Southampton, United Kingdom.
- 740\* **TLR2-activation turn mast cells in skin sentinels against viruses.** Z Wang, Y Lai, DT McLeod, AL Cogen and A Di Nardo. La Jolla, CA.
- 741 **Claudin-1 defect in atopic dermatitis may enhance susceptibility to HSV-1 infections.** A De Benedetto, M Dubois, M Bolognino, DC Johnson, MK Silfka, DY Leung and LA Beck. Rochester, NY; Beaverton, OR and Denver, CO.
- 742 **Activating Transcription Factor 3 (ATF3)-mediated protection against endotoxins causes severe susceptibility to bacterial infections.** W Hoetzenegger, E Guenova, F Woelbing, B Echtenacher, J Brueck, I Glocova, T Biedermann, K Ghoreschi and M Roecken. Tuebingen, Germany.
- 743\* **The Activating Transcription Factor 3 (ATF3) determines the state of postseptic immune suppression in humans.** W Hoetzenegger, B Echtenacher, E Guenova, J Brueck, K Hoetzenegger, T Biedermann, K Ghoreschi and M Roecken. Tuebingen, Germany; Regensburg, Germany and Vienna, Austria.
- 744\* **Survey of bacterial diversity on infant skin over the first year of life.** K Capone, SE Dowd, GN Stamas and J Nikolovski. Skillman, NJ; Issy-les-Moulineaux, France and Lubbock, TX.
- 745 **The HPV profile of cutaneous warts in HIV infected patients.** R Meys, KJ Purdie, MN de Koning, SK Krishna, M Kamp, M Nelson, D Asboe, DA Hawkins, WG Quint, FM Gotch, C Harwood and CB Bunker. London, United Kingdom and Voorburg, Netherlands.
- 746 **The HPV profile of genital warts in HIV infected patients.** R Meys, KJ Purdie, MN de Koning, SK Krishna, M Kamp, M Nelson, D Asboe, DA Hawkins, WG Quint, FM Gotch, C Harwood and CB Bunker. London, United Kingdom and Voorburg, Netherlands.
- 747\*\* **Langerhans cell dendrites penetrate through epidermal tight junction barrier during foreign antigen uptake.** A Kubo, K Nagao, M Yokouchi, K Yoshida, H Sasaki and M Amagai. Tokyo, Japan and Osaka, Japan.
- 748\* **Development of a *Staphylococcus aureus* superficial skin infection model in mice that uses advanced *in vivo* imaging to evaluate topical antimicrobial therapy and immune responses in real-time.** J Zussman, JS Cho, RI Ramos, NC Garcia, RL Modlin, J Kim and LS Miller. Los Angeles, CA.

## Immunology 2: Innate Immunity and Microbiology

All orals [designated with an asterisk (\*)] listed below are presented in the Immunology 2: Innate Immunity and Microbiology Minisymposium on Saturday, May 8, 2010 from 2:00-5:30 p.m. in Salon C, Hilton Atlanta. Orals designated by two asterisks (\*\*) will be presented during a Plenary Session.

- 722 **Antimycotics enhance the production of human β-defensin-3 in human keratinocytes: Another possible mechanism for antimicrobial effects.** N Kanda and S Watanabe. Tokyo, Japan.
- 723 ***Staphylococcus aureus* hijacks a skin commensal to intensify its virulence: Vaccination targeting β-hemolysin and CAMP factor.** C Lo, Y Lai, RL Gallo and C Huang. San Diego, CA and Hsinchu, Taiwan.
- 724 **N-acetyl-S-farnesyl-L-cysteine (AFC) suppresses ATPyS-induced CXCL8, CCL2 and CXCL1 production in a human dermal microvascular endothelial cell line (HMEC-1) and primary human dermal microvascular endothelial cells (pHMDECs).** K Adhami, J Wong, M Schierl, JS Gordon, JR Fernandez, E Perez, M Stock and R Granstein. New York, NY and Monmouth Junction, NJ.
- 725 ***Staphylococcal LTA* suppresses TLR3-dependent inflammation following skin injury.** Y Lai and R Gallo. San Diego, CA.
- 726\* **Dietary vitamin D3 protects against bacterial skin infection.** B Muehleisen, T Jaleel, K Radek and R Gallo. San Diego, CA; Birmingham, AL and Maywood, IL.
- 727 **Sustained and dose-dependent induction of cathelicidin and defensins in human skin following UV irradiation.** N Smith, F Wang, J Voorhees, S Kang and G Fisher. Ann Arbor, MI and Baltimore, MD.
- 728\* ***Staphylococcus aureus* derived monomeric peptidoglycan is a NOD2 ligand and aggravates TLR mediated inflammation by amplifying Th1 and Th17 responses.** T Volz, M Nega, J Buschmann, S Kaesler, E Guenova, M Röcken, F Götz and T Biedermann. Tübingen, Germany.
- 729\* **IL-23 and Th17 cytokines control cutaneous infection with *Candida albicans* as well as *C. albicans*-induced epidermal hyperplasia.** S Kagami, H Rizzo, S Kurtz and A Blauvelt. Portland, OR.
- 744\* **Survey of bacterial diversity on infant skin over the first year of life.** K Capone, SE Dowd, GN Stamas and J Nikolovski. Skillman, NJ; Issy-les-Moulineaux, France and Lubbock, TX.
- 745 **The HPV profile of cutaneous warts in HIV infected patients.** R Meys, KJ Purdie, MN de Koning, SK Krishna, M Kamp, M Nelson, D Asboe, DA Hawkins, WG Quint, FM Gotch, C Harwood and CB Bunker. London, United Kingdom and Voorburg, Netherlands.
- 746 **The HPV profile of genital warts in HIV infected patients.** R Meys, KJ Purdie, MN de Koning, SK Krishna, M Kamp, M Nelson, D Asboe, DA Hawkins, WG Quint, FM Gotch, C Harwood and CB Bunker. London, United Kingdom and Voorburg, Netherlands.
- 747\*\* **Langerhans cell dendrites penetrate through epidermal tight junction barrier during foreign antigen uptake.** A Kubo, K Nagao, M Yokouchi, K Yoshida, H Sasaki and M Amagai. Tokyo, Japan and Osaka, Japan.
- 748\* **Development of a *Staphylococcus aureus* superficial skin infection model in mice that uses advanced *in vivo* imaging to evaluate topical antimicrobial therapy and immune responses in real-time.** J Zussman, JS Cho, RI Ramos, NC Garcia, RL Modlin, J Kim and LS Miller. Los Angeles, CA.

- 749 **TRIF-mediated IgE isotype class switch which are inhibited by TLR9 and MyD88 activation.** E Lee, K Na, I Cheon, M Jeon and T Kim. Seoul, South Korea.
- 750 **An antimicrobial protein, lactoferrin is expressed in eccrine glands of the human skin and exists in the sweat.** J Park, I Cho, G Park, J Yang and D Lee. Seoul, South Korea.
- 751 **Exploration of requirements for the Wnt-signaling pathway in the development of murine epidermal Langerhans cells.** MR Becker, YS Choi, SE Millar and MC Udey. Bethesda, MD and Philadelphia, PA.
- 752 **Peptidoglycan and related molecules increase tight junction function and expression in human keratinocytes.** I Kuo, A De Benedetto, T Yoshida, MY Laura and LA Beck. Rochester, NY and Baltimore, MD.
- 753 **Sebum free fatty acids modulate skin innate immune responses by enhancing antimicrobial function of sebocytes and attenuating TLR2-mediated inflammatory response of keratinocytes.** T Nakatsuji, K Yamasaki, CC Zouboulis, RL Gallo and C Huang. San Diego, CA and Dessau, Germany.
- 754\* **Epidermal Langerhans cells act as negative regulators of a protective anti-Leishmania response, whereas dermal CD11chigh dendritic cells promote healing.** K Kautz-Neu, D John, S Dinges, M Noordegraaf, BE Clausen and E von Stebut. Mainz, Germany; Rotterdam, Netherlands and Amsterdam, Netherlands.
- 755\* **Leukotriene A4 Hydrolase (LTA4H) is expressed in leprosy lesions and variants are associated with susceptibility to mycobacterial diseases.** JC Vary, DM Tobin, SJ Dunstan, ND Bang, DA Hagge, S Khadge, M King, L Ramakrishnan and TR Hawn. Seattle, WA; Ho Chi Minh City, Viet Nam; Oxford, United Kingdom and Kathmandu, Nepal.
- 756\* **IL-22 contributes to disease progression in Leishmania major-infected mice.** S Brosch, S Haak, B Lorenz, B Becher and E von Stebut. Mainz, Germany and Zürich, Switzerland.
- 757 **Response to Toll-Like Receptor agonists in human neonatal foreskin.** BK Bonish. Chicago, IL.
- 758 **Aberrant TNF signaling in FAN-deficient mice leads to enhanced susceptibility to cutaneous leishmaniasis.** M Fischer, M Krönke and E von Stebut. Mainz, Germany and Cologne, Germany.
- 759 **Induction of specific immune response by single and mixed-species biofilms infection in porcine partial thickness wound healing model.** I Pastar, J Gil, J Valdes, O Stojadinovic, EA Lebrun, L Plano, M Tomic-Canic and SC Davis. Miami, FL.
- 760\* **Investigating the influence of Langerhans cells on keratinocyte proliferative response to chemical and ultraviolet B (UVB) exposure.** K Golubets, R Filler, J Lewis, DA Smith, W Zhang, DE Brash, MW Bosenberg, WE Damsky and M Girardi. New Haven, CT.
- 761\* **Isoprenylcysteine (IPC) analogs: A novel topical acne therapeutic possessing antimicrobial and anti-inflammatory activity against *Propionibacterium acnes*.** X Feng, JR Fernández, K Rouzard, AV González, E Perez, JB Stock, M Stock and JS Gordon. Monmouth Junction, NJ.
- 762\* **TNF $\alpha$ , a critical cytokine for cutaneous immunity to vaccinia virus.** T Tian, K Dubin, A Qureshi, L Liu, X Jiang, T Kupper and R Fuhlbrigge. Boston, MA.
- 768\* **Obesity exacerbates UVB radiation-induced inflammation and cell survival signals in UVB-irradiated mouse skin.** SD Sharma and SK Katiyar. Birmingham, AL.
- 769 **Silymarin, a plant flavonoid, suppresses UV radiation-induced apoptosis of epidermal cells by stimulating DNA repair.** SK Katiyar and SK Mantena. Birmingham, AL.
- 770 **Langerhans cells protect against acute UVB-induced epidermal oxidative stress.** DA Smith, J Lewis, R Filler, K Golubets and M Girardi. New Haven, CT.
- 771\* **Photodynamic therapy with the phthalocyanine Pc 4 for T cell mediated diseases: Activated T cells exhibit increased uptake of Pc 4 and increased susceptibility to PDT-mediated cell death.** J Ohtola, H Sugiyama, ME Rodriguez, NL Oleinick, M Lam, TS McCormick, KD Cooper and ED Baron. Cleveland, OH.
- 772 **CpG-ODN protects against UV-induced apoptosis via enhancement of AKT and mTORC1/mTORC2 activation in keratinocytes and dendritic cells.** S Lu, C Cao, J Li, F Ji, R Kivlin, M McCauley, A Nalbandian, G Brum, J Parisi, S Sarkisian, J Marshall, W Chu, A Xu and Y Wan. Providence, RI and Hangzhou, China.
- 773 **The novel role of G protein  $\alpha 1$  and  $\alpha 3$  in UV radiation-induced cell signaling.** C Cao, S Lu, J Li, F Ji, R Kivlin, M McCauley, A Nalbandian, G Brum, J Parisi, S Sarkisian, J Marshall, W Chu, A Xu and Y Wan. Providence, RI and Hangzhou, China.
- 774 **Resveratrol sensitizes keratinocytes to UVA-induced apoptosis through increased oxidative stress in mitochondria and mitochondrial permeability transition pore (MPTP) opening.** JZ Boyer, J Jandova, FR Vleugels and JE Sligh. Tucson, AZ.
- 775 **Resveratrol acts specifically with UVA and not with UVB to induce apoptosis in HaCaT cells.** FR Vleugels, JZ Boyer, J Jandova and JE Sligh. Tucson, AZ.
- 776 **No formation of DNA double strand breaks and no activation of recombination repair with UVA.** J Rizzo, J Dunn, A Rees and TM Ruenger. Boston, MA.
- 777 **p300 histone acetyltransferase inhibitor anacardic acid (6-nonadecyl salicylic acid) inhibits UV-induced MMP-13, COX-2, and TNF-alpha expression in hairless mice.** H Yoon, M Kim, J Lee, K Kong, S Lee, D Lee and J Chung. Seoul, South Korea.
- 778\* **Visualization of *in vivo* behavioral responses of Langerhans cells to UVB irradiation.** R Lu and A Takashima. Toledo, OH.
- 779 **Ginsenoside-Rg1 protects human dermal fibroblasts against 8-Methoxysoralen plus Ultraviolet A-induced photoaging through telomere mechanism.** G Yingying, L Dan, Z Bingrong, L Wei and M Wei. Nanjing, China.
- 780\* **Photosensitive and non-photosensitive trichothiodystrophy: Specific XPD protein regions play a major role in human photosensitivity.** SG Khan, X Zhou, KS Oh, J Boyle, T Ueda, D Tamura, C Nadem, A Mattia, JJ DiGiovanna and KH Kraemer. Bethesda, MD and Providence, RI.
- 781 **Proteomic identification of epigallocatechingallate on specific protein oxidation in human epidermal keratinocytes.** L Dan, M Wei and L Bingjiang. Nanjing, China.
- 782\* **Ultraviolet B radiation of human skin generates platelet-activating factor receptor agonists.** J Travers, Y Yao, RL Koniger and JB Travers. Indianapolis, IN.
- 783\* **Deficiency of xeroderma pigmentosum A results in an augmentation of UVB mediated oxidative stress and platelet-activating factor activity.** Y Yao, RL Koniger and JB Travers. Indianapolis, IN.
- 784 **Development and validation of a high frequency ultrasound-guided fluorescence tomography system to improve targeting of photodynamic therapy of skin tumors.** A Paliwal, JD Gruber, JA O'Hara, BW Pogue, T Hasan and EV Maytin. Cleveland, OH; Hanover, NH and Boston, MA.
- 785 **Role of neutrophil elastase in extracellular matrix damage and wrinkle formation in chronic low-dose ultraviolet irradiation.** H Takeuchi and T Gomi. Yokohama, Japan.
- 786 **MyD88 mediates UV-induced inflammatory responses and cell apoptosis in mouse skin *in vivo*.** Y Lee, K Kong, S Lee, H Yoon, K Kim and J Chung. Seoul, South Korea.
- 787 **Telomere shortening of cultured human dermal fibroblasts in association with acute photodamage induced by ultravioletA irradiation.** B Yin and X Jiang. Chengdu, China.
- 788 **Activators of peroxisome proliferator-activated receptor alpha (PPAR $\alpha$ ) protect UV-induced changes of MMP-1 and procollagen via catalase induction in human skin fibroblasts.** M Shin, H Yoon, D Lee, J Oh, E Seo and J Chung. Seoul, South Korea.

## Photobiology

All orals [designated with an asterisk (\*)] listed below are presented in the Photobiology Minisymposium on Saturday, May 8, 2010 from 2:00-5:30 p.m. in Salon A, Hilton Atlanta. Orals designated by two asterisks (\*\*) will be presented during a Plenary Session.

- 763 **Protective effects of platinum nanoparticles against UV-light-induced epidermal inflammation.** Y Yoshihisa, Q Zhao, T Makino, K Matsui, Y Miyamoto, T Kondo and T Shimizu. Toyama, Japan and Chiba, Japan.
- 764\* **Preventive effects of ultraviolet radiation on autochthonous murine mammary tumor carcinogenesis - Is sun avoidance killing patients?** P Davari, F Gorouhi and EH Epstein. Oakland, CA.
- 765 **Sun-induced changes in epidermal function vary with gender and extent of exposure.** S Song, Z Liu, J Fluhr, PM Elias and M Man. Dalian, China; Berlin, Germany and San Francisco, CA.
- 766 **The effect of UVB on cytokines, no production; Using *in vitro* co-culture system of monocyte/keratinocyte culture.** MK Watson, Y Ee, M Nowakowski, AR Shalita and W Lee. Brooklyn, NY.
- 767\* **Alteration of the migratory behavior of UV-induced regulatory T cells *in vivo*.** A Schwarz, BE Clausen and T Schwarz. Kiel, Germany and Rotterdam, Netherlands.

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- 768\* **Obesity exacerbates UVB radiation-induced inflammation and cell survival signals in UVB-irradiated mouse skin.** SD Sharma and SK Katiyar. Birmingham, AL.
- 769 **Silymarin, a plant flavonoid, suppresses UV radiation-induced apoptosis of epidermal cells by stimulating DNA repair.** SK Katiyar and SK Mantena. Birmingham, AL.
- 770 **Langerhans cells protect against acute UVB-induced epidermal oxidative stress.** DA Smith, J Lewis, R Filler, K Golubets and M Girardi. New Haven, CT.
- 771\* **Photodynamic therapy with the phthalocyanine Pc 4 for T cell mediated diseases: Activated T cells exhibit increased uptake of Pc 4 and increased susceptibility to PDT-mediated cell death.** J Ohtola, H Sugiyama, ME Rodriguez, NL Oleinick, M Lam, TS McCormick, KD Cooper and ED Baron. Cleveland, OH.
- 772 **CpG-ODN protects against UV-induced apoptosis via enhancement of AKT and mTORC1/mTORC2 activation in keratinocytes and dendritic cells.** S Lu, C Cao, J Li, F Ji, R Kivlin, M McCauley, A Nalbandian, G Brum, J Parisi, S Sarkisian, J Marshall, W Chu, A Xu and Y Wan. Providence, RI and Hangzhou, China.
- 773 **The novel role of G protein  $\alpha 1$  and  $\alpha 3$  in UV radiation-induced cell signaling.** C Cao, S Lu, J Li, F Ji, R Kivlin, M McCauley, A Nalbandian, G Brum, J Parisi, S Sarkisian, J Marshall, W Chu, A Xu and Y Wan. Providence, RI and Hangzhou, China.
- 774 **Resveratrol sensitizes keratinocytes to UVA-induced apoptosis through increased oxidative stress in mitochondria and mitochondrial permeability transition pore (MPTP) opening.** JZ Boyer, J Jandova, FR Vleugels and JE Sligh. Tucson, AZ.
- 775 **Resveratrol acts specifically with UVA and not with UVB to induce apoptosis in HaCaT cells.** FR Vleugels, JZ Boyer, J Jandova and JE Sligh. Tucson, AZ.
- 776 **No formation of DNA double strand breaks and no activation of recombination repair with UVA.** J Rizzo, J Dunn, A Rees and TM Ruenger. Boston, MA.
- 777 **p300 histone acetyltransferase inhibitor anacardic acid (6-nonadecyl salicylic acid) inhibits UV-induced MMP-13, COX-2, and TNF-alpha expression in hairless mice.** H Yoon, M Kim, J Lee, K Kong, S Lee, D Lee and J Chung. Seoul, South Korea.
- 778\* **Visualization of *in vivo* behavioral responses of Langerhans cells to UVB irradiation.** R Lu and A Takashima. Toledo, OH.
- 779 **Ginsenoside-Rg1 protects human dermal fibroblasts against 8-Methoxysoralen plus Ultraviolet A-induced photoaging through telomere mechanism.** G Yingying, L Dan, Z Bingrong, L Wei and M Wei. Nanjing, China.
- 780\* **Photosensitive and non-photosensitive trichothiodystrophy: Specific XPD protein regions play a major role in human photosensitivity.** SG Khan, X Zhou, KS Oh, J Boyle, T Ueda, D Tamura, C Nadem, A Mattia, JJ DiGiovanna and KH Kraemer. Bethesda, MD and Providence, RI.
- 781 **Proteomic identification of epigallocatechingallate on specific protein oxidation in human epidermal keratinocytes.** L Dan, M Wei and L Bingjiang. Nanjing, China.
- 782\* **Ultraviolet B radiation of human skin generates platelet-activating factor receptor agonists.** J Travers, Y Yao, RL Koniger and JB Travers. Indianapolis, IN.
- 783\* **Deficiency of xeroderma pigmentosum A results in an augmentation of UVB mediated oxidative stress and platelet-activating factor activity.** Y Yao, RL Koniger and JB Travers. Indianapolis, IN.
- 784 **Development and validation of a high frequency ultrasound-guided fluorescence tomography system to improve targeting of photodynamic therapy of skin tumors.** A Paliwal, JD Gruber, JA O'Hara, BW Pogue, T Hasan and EV Maytin. Cleveland, OH; Hanover, NH and Boston, MA.
- 785 **Role of neutrophil elastase in extracellular matrix damage and wrinkle formation in chronic low-dose ultraviolet irradiation.** H Takeuchi and T Gomi. Yokohama, Japan.
- 786 **MyD88 mediates UV-induced inflammatory responses and cell apoptosis in mouse skin *in vivo*.** Y Lee, K Kong, S Lee, H Yoon, K Kim and J Chung. Seoul, South Korea.
- 787 **Telomere shortening of cultured human dermal fibroblasts in association with acute photodamage induced by ultravioletA irradiation.** B Yin and X Jiang. Chengdu, China.
- 788 **Activators of peroxisome proliferator-activated receptor alpha (PPAR $\alpha$ ) protect UV-induced changes of MMP-1 and procollagen via catalase induction in human skin fibroblasts.** M Shin, H Yoon, D Lee, J Oh, E Seo and J Chung. Seoul, South Korea.

- 789 **Microarray analysis of differently expressed microRNA profiles induced by UVB irradiated in mice skin.** L Wei, H Lijuan and L Dan. Nanjing, China.
- 790 **TLR2 mediates UV-induced epidermal proliferation, inflammation and cell apoptosis in mouse skin *in vivo*.** Y Lee, K Kong, S Lee, D Lee, J Han, K Kim and J Chung. Seoul, South Korea.
- 791\* **Ultraviolet A radiation causes loss of subcutaneous fat.** M Majora, S Franke, S Grether-Beck, P Schroeder and J Krutmann. Duesseldorf, Germany.
- 792\*\* **Neuraminidase 3 (Neu3) is critically involved in the initiation of the UVA stress response.** S Grether-Beck, R Walli, Z Kohne, H Brenden, I Felsner, M Majora, J Füllekrug, T Kurzhalia and J Krutmann. Düsseldorf, Germany; Heidelberg, Germany and Dresden, Germany.
- 793 **Epigallocatechin-3-gallate inhibits UVA-induced photoaging in human skin fibroblasts through telomere pathway.** W Di, M Wei and L Dan. Nanjing, China.
- 794 **Potential role of interleukin-11 in photoaging-induced loss of subcutaneous fat.** W Li, A Pappas and D Cavender. Skillman, NJ.
- 795 **Baicalin protects human fibroblasts against ultraviolet A induced oxidative damage and photoaging *in vitro*.** M Wei, L Bingjiang and L Dan. Nanjing, China.
- 796 **Photoprotective effects of ferulic on human keratinocyte HaCaT cells: Proteomic identification of proteins associated with cutaneous cancer.** L Bingjiang, M Wei and L Dan. Nanjing, China.
- 797 **The anti-aging effect of Light-Emitting Diodes (LEDs) on human skin cells.** R Chabert, L Fouque-Parachini, S Pinacolo, N Garcia, G Oberto and N Domloge. Sophia Antipolis, France and Nice, France.
- 798 **Irradiation with visible light induces skin damage.** F Liebel, PR Bargo, A Brillouet, M Chu, E Ruvolo, A Vorobyeva-Schiano, N Kollias and M Southall. Skillman, NJ and Los Angeles, CA.
- 799 **Multiple exposures with visible light following a large initial dose induce persistent pigmentation, blue wavelengths are the major contributors.** I Seo, F Liebel, E Ruvolo, PR Bargo, M Southall and N Kollias. Skillman, NJ.
- 800 **E-Light as a novel nonablative approach to photoaging.** M El-Domyati, M Medhat, T El-Amawi, O Moawad, D Brennan, MG Mahoney and J Uitto. Al-Minya, Egypt; Philadelphia, PA and Cairo, Egypt.
- 801 **Evaluation of sunscreens photoprotection against cyclobutane pyrimidine dimers on *ex vivo* human skin model exposed to UVB or UVA radiation.** S Mouret, P Bogdanowicz, M Haure, N Castex-Rizzi and T Douki. Grenoble, France and Toulouse, France.
- 802 **Photoprotection by Avène 50+ inhibits UVA-activated synthesis of metalloproteases 1, 3, and 9 in keratinocytes: Implication of the EGFR/beta-catenin pathway.** C Jean, P Bogdanowicz, M Haure, G Laurent and N Castex-Rizzi. Toulouse, France.
- 803 **High levels of serum resistin in psoriasis patients are restored to normal by phototherapy.** K Kawashima, K Torii, T Furuhashi, C Saito and A Morita. Nagoya, Japan.
- 804 **High-dose UVA1 in combination with narrow-band UVB irradiation completely suppresses UVB-induced Langerhans cell migration and diminishes UVB-induced tolerance.** Y Shintani, K Torii, T Furuhashi, C Saito, A Maeda and A Morita. Nagoya, Japan.
- 805 **Calpain plays a pivotal role in the UVB-irradiated ROS generation in HaCaT keratinocytes through stimulation by IL-1alpha.** H Masaki, Y Izutsu, S Yahagi and Y Okano. Tokyo, Japan.
- 806 **Effect of TNF $\alpha$  blockade on UVB-induced TNF $\alpha$ -mediated photodamage/photoaging.** M Sharma, J LoMonico, K Nguyen and VP Werth. Philadelphia, PA.
- 807 **Effects of helium-neon laser on melanoblast differentiation: Focusing on mitochondrial biogenesis and antioxidant enzyme.** H Yu, C Lan, C Wu, S Wu and Y Wei. Kaohsiung, Taiwan and Taipei, Taiwan.
- 808 **Vitamin loaded nanosomes reduce erythema and tryptophan content changes in skin due to solar simulated ultraviolet radiation induced damage.** C Sunkari, E Papazoglou, M Neidrauer, JF Klement and J Uitto. Philadelphia, PA.
- 809 **Antia apoptotic, pro-antioxidative protective effects of melatonin against UV-induced damage in a human full skin model *in vitro*.** K Kleszczyński, LF Hardkop, N Piskozub and TW Fischer. Luebeck, Germany.
- 810 **Apoptosis induced by photodynamic therapy with the silicon phthalocyanine Pc 4 in *Candida albicans*.** M Lam, AA Lattif, PC Jou, Y Lee, CL Malbasa, PK Mukherjee, NL Oleinick, MA Ghannoum, KD Cooper and ED Baron. Cleveland, OH.
- 811 **Regulation of ultraviolet (UV) radiation induced cutaneous photoimmunosuppression by Toll like receptor-4 (TLR4).** TH Nasti and N Yusuf. Birmingham, AL.
- 812\* **Proteomics-based analysis of the effects of *in vivo* ultraviolet radiation on human skin.** C Malbasa, M Lam, P Karnik, C Yuan, H Zhao, MR Chance, M Matsui, D Yarosh, KD Cooper and ED Baron. Cleveland, OH and Melville, NY.
- 813\* **Generation of immature dendritic cells by modified extracorporeal photophoresis.** AH Baird, CL Berger and RL Edelson. New Haven, CT.
- 814 **Oxidative stress elevates cystein-rich protein 61 (CYR61), a novel mediator of photoaged skin, in human skin fibroblasts.** Z Qin, T He, JJ Voorhees, GJ Fisher and T Quan. Ann Arbor, MI.
- 815 **The GS-nitroxide JP04-39 is a potent topical antioxidant that can mitigate skin damage from ionizing radiation.** RM Brand, M Epperly, J Stottlemyer, X Gao, S Li, S Huq, P Wipf, V Kagan, J Greenberger and LD Falo. Pittsburgh, PA.
- 816\* **Endogenous and exogenous urocanic acid protects against ultraviolet B-induced DNA damage.** C Stremnitzer, C Barresi, V Militz, S Kezic, A Kammeyer, M Ghannadan, K Posa-Markaryan, C Selden, E Tschachler and L Eckhart. Vienna, Austria; Amsterdam, Netherlands; London, United Kingdom and Neuilly, France.
- 817\* **Enhancement of protoporphyrin IX and suppression of ferrochelatase levels by Vitamin D in tumor models of nonmelanoma skin cancer: Implications for tumor response to photodynamic therapy.** S Anand, N Atanaskova, C Wilson, T Hasan and EV Maytin. Cleveland, OH and Boston, MA.
- 818\* **Loss of epidermal PPAR $\gamma$  in SKH-1 mice results in absent sebaceous glands, a defect in permeability barrier function, and augmented UVB-induced apoptosis and inflammatory responses.** RP Sahu, S DaSilva and RL Konger. Indianapolis, IN.
- 819 **UVA irradiation silences IGF-1 expression in dermal fibroblasts both *in vivo*, and *in vitro*.** DF Spandau, WH Beeson and DA Lewis. Indianapolis, IN.
- 820 **Microscopic UV challenges on skin provide new information on relationship of challenge to response.** I Seo, PR Bargo, M Chu and N Kollias. Skillman, NJ.
- 821 **Nitric oxide (NO)-releasing exisulind suppresses UVB-induced cutaneous photocarcinogenesis.** SC Chaudhary, T Singh, P Kapur, D Kurundkar, Z Weng, CA Elmets, L Kopelovich and M Athar. Birmingham, AL and Bethesda, MD.
- 822 **Proteome changes in human epidermis induced by UVB irradiation.** E Benlhabib, MK Hordinsky, IG Panoutsopoulou, AA Junqueira, G Wendelschafer-Crabb, WR Kennedy and GL Wilcox. Minneapolis, MN.
- 823 **Photoactivated Rose Bengal, a possible mutagen in Chinese hamster ovary cells.** L Hunter, S Wang, J Wickliffe and M Wilkerson. Galveston, TX and New Orleans, LA.

## Pigmentation and Melanoma

All orals [designated with an asterisk (\*)] listed below are presented in the Pigmentation and Melanoma Minisymposium on Thursday, May 6, 2010 from 2:00-5:30 p.m. in Salon C, Hilton Atlanta. Orals designated by two asterisks (\*\*) will be presented during a Plenary Session.

- 824 **The role of macrophage migration inhibitory factor (MIF) in UVB-induced melanogenesis in the skin.** A Enomoto, Y Yoshihisa, O Norisugi, K Matsunaga, T Makino, J Nishihira and T Shimizu. Toyama, Japan and Ebetsu, Japan.
- 825 **Oncogenic transformation of cutaneous melanocytes by ultraviolet radiation and Bisphenol A.** Y Dvorkin, L Xu, M Consolo, T McCormick, K Cooper and P Karnik. Cleveland, OH.
- 826 **Frequency of somatic mutations in GNAQ in primary, pigmented dermal melanocytic proliferations.** A Emley, LP Nguyen, S Yang and M Mahalingam. Boston, MA.
- 827\* **The p16<sup>INK4A</sup> tumor suppressor regulates cellular oxidative stress.** NC Jenkins, T Liu, AG Goodson, G Samadashwily and D Grossman. Salt Lake City, UT.
- 828 **Combination of dacarbazine and dimethylfumarate efficiently reduces melanoma lymph node metastasis.** T Valero, S Steele, K Neumuller, A Bracher, H Niederleithner, H Pehamberger, P Petzelbauer and R Loewe. Vienna, Austria.
- 829 **Prevention and treatment of human melanoma by EGCG encapsulated in chitosan nanoparticles.** IA Siddiqui, RS Tarapore, DJ Bharali, MA Ahmad, SA Mousa and H Mukhtar. Madison, WI and Albany, NY.

- 830\* **The melanocyte-specific glycoprotein, Pmel17/gp100, is released by ectodomain shedding.** T Hoashi, N Kanda, S Watanabe, S Sato and VJ Hearing. Tokyo, Japan and Bethesda, MD.
- 831\* **A mechanism of acquired resistance to B-RAF (V600E) inhibition in melanoma.** RS Lo, R Nazarian, Q Wang, X Kong, RC Koya, N Attar, H Sazegar, Z Chen, S Nelson, G McArthur, J Sosman, JS Economou and A Ribas. Los Angeles, CA; Melbourne, Australia and Nashville, TN.
- 832 **An advanced approach for skin whitening /lightening regulation through the inhibition of a new intracellular target.** E Loing and I Lacasse. Quebec, Canada.
- 833 **Histochemical and immunohistochemical study in melasma. Evidence of damage in the basal membrane.** I Mesa-Garza, B Torres-Álvarez, J Castanedo-Cázares, C Fuentes-Ahumada, J Navarrete-Solis, C Oros-Ovalle and B Moncada. San Luis Potosí, Mexico.
- 834 **A new insight into skin whitening: The accumulation of advanced glycation end products (AGEs) in the dermis triggers melanogenesis in epidermal melanocytes.** S Yahagi, Y Izutsu, Y Okano, P Andre, I Renimel and H Masaki. Tokyo, Japan and Saint-Jean-de-Braye, France.
- 835 **Melanoma growth and metastasis is dependent on the presence of vitronectin in the extracellular matrix.** L Mesnard, A Prignon, M Halabi, S Guegan, E Rondeau, S Aractingi and K Khosrotehrani. Paris, France and Brisbane, Australia.
- 836 **Seasonal variation in serum level of 5-S-cysteinyldopa in postoperative cases of malignant melanoma without metastasis.** T Shukuwa, A Yoshizaki and H Ishikawa. Omura, Japan and Kawatana, Japan.
- 837 **Skin melanin index obtained from digital photography and videodermoscopy correlates with dermatologist assessment of skin type.** B Nardone, A Haley, M Martini, K Brown, DP West and JK Robinson. Chicago, IL.
- 838 **Assessment of pigmentation response to chronic solar exposure among skin phototypes I-VI.** M Martini, B Nardone, R Kundu, K Brown, A Haley, DP West and JK Robinson. Chicago, IL.
- 839 **Pediatric melanoma of the head and neck: A single-institution review of 41 patients.** JY Tcheung, PK Puri, AP Abernethy and KC Nelson. Durham, NC.
- 840 **Genetic variants in telomere-maintaining genes and skin cancer risk.** H Nan, AA Qureshi, J Prescott, I De Vivo and J Han. Boston, MA.
- 841 **Pigmentation and skin cancer genome-wide association studies: A review and meta-analysis.** MR Gerstenblith, J Shi and MT Landi. Rockville, MD.
- 842 **Elemental bi-mineral complex inhibits tyrosinase expression and melanogenesis *in vitro*.** N Chen, C Loy, Y Hu, Y Won, J Chantalat, Y Sun, E Bruning, C Saliou, M Seiberg and CB Lin. Skillman, NJ and Singapore, Singapore.
- 843\* **Regulation of human skin pigmentation *in situ* by repetitive UV exposure - molecular characterization of responses to UVA and/or UVB.** W Choi, Y Miyamura, R Wolber, C Smuda, W Reinhold, H Liu, L Kolbe and VJ Hearing. Bethesda, MD; Hamburg, Germany and Washington, DC.
- 844 **Dietary triterpene lupeol targets melanoma phenotype exhibiting activated Wnt/β-catenin signaling.** RS Tarapore, IA Siddiqui, M Saleem, V Spiegelman and H Mukhtar. Madison, WI and Austin, MN.
- 845\* **Exploring the role of keratinocyte-derived inflammation in melanomagenesis.** A Zhuang, C Cataisson, R Zaidi, S Hakim, G Merlino and SH Yuspa. Bethesda, MD.
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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 Suport  
H - Honoraria  
I - Investigator  
P - Co-inventor on Patent Held by University of Corporation  
SB - Speakers Bureau  
SH - Stock Holder  
O - Other

*Unless otherwise noted, authors/speakers/presiders with no disclosure statements listed had no conflicts of interest to disclose.*

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## SID Awards

### **Stephen Rothman Memorial Award Recipients**

Presented for distinguished service to investigative cutaneous medicine.

1967 Marion Sulzberger  
1968 Donald Pillsbury  
1969 Harvey Blank  
1970 Thomas Fitzpatrick  
1971 Aaron Lerner  
1972 William Montagna  
1973 Rudolf Baer  
1974 Hermann Pinkus  
1975 Eugene Van Scott  
1976 Albert Kligman  
1977 Irvin Blank  
1978 George Odland  
1979 Clayton Wheeler, Jr.  
1980 Clarence Livingood  
1981 Isadore Bernstein  
1982 J. Lamar Callaway  
1983 Richard Stoughton  
1984 A Gedeon Matoltsy  
1985 Herman Beerman  
1986 Otto Braun-Falco  
1987 Walter Shelley  
1988 John Strauss  
1989 Walter Lobitz, Jr.  
1990 Walter Lever  
1991 Robert Goltz  
1992 Irwin Freedberg  
1993 Arthur Eisen  
1994 Ruth Freinkel  
1995 Howard Baden  
1996 Irma Gigli  
1997 Stephen Katz  
1998 Klaus Wolff  
1999 Lowell Goldsmith  
2000 Richard Dobson  
2001 Robert Briggaman  
2002 Eugene Bauer  
2003 Georg Stingl  
2004 Stuart Yuspa  
2005 John Voorhees  
2006 Thomas Lawley  
2007 Barbara Gilchrest  
2009 Luis Diaz

### ***Naomi M. Kanof Clinical Investigator Award***

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.

1993 Alvan Feinstein  
1994 R. Michael Blaese  
1995 Judah Folkman  
1996 Jean Wilson  
1997 C. Garrison Fathman  
1998 Jeffrey Bluestone  
1999 Brian Strom  
2000 William Kelley  
2001 James Ostell  
2002 Leena Peltonen  
2003 Judith Campisi  
2004 Brian Druker  
2005 Joseph Nadeau  
2006 John Schiller  
2007 Thomas Pearson  
2009 Mahlon DeLong

### ***Julius Stone Lectureship***

This award is intended to promote the advancement of knowledge in immunology as it relates to the skin and skin disease.

1999 Eli Gilboa  
1999 Stephen Johnston  
1999 Jeffrey Trent  
2000 Nigel Bunnett  
2000 Ronald Crystal  
2000 Ralph Steinman  
2001 Roland Martin  
2002 Gerald Crabtree  
2004 Adrian Hayday  
2005 Polly Matzinger  
2006 Alexander Rudensky  
2007 Donald Y.M. Leung  
2009 Jamey Marth

### ***William Montagna Lectureship***

This annual award is intended to honor and reward young active investigators. Primary emphasis is given to researchers in skin biology.

1975 Kenneth Halprin  
1976 Frank Parker  
1977 Arthur Eisen  
1978 Irma Gigli  
1979 Marvin Karasek

1980 Irwin Freedberg

1981 Stephen Katz  
1982 John Parrish  
1983 Douglas Lowy  
1984 Gerald Lazarus  
1985 Eugene Bauer  
1986 Georg Stingl  
1987 Jouni Utto  
1988 Stuart Yuspa  
1989 Tung-Tien Sun  
1990 Karen Holbrook  
1991 Luis Diaz  
1992 Dennis Roop  
1993 Ervin Epstein, Jr.  
1994 John Stanley  
1995 Elaine Fuchs  
1996 Thomas Kupper  
1997 Barbara Gilchrest  
1998 Robert Modlin  
1999 Fiona Watt  
2000 Thomas Luger  
2001 Peter Elias  
2002 Kathleen Green  
2003 Masayuki Amagai  
2004 Akira Takashima  
2005 Paul Khavari  
2006 Richard Gallo  
2007 George Cotsarelis  
2008 Pierre Coulombe  
2009 Angela Christiano

1984 Robert Gallo  
1985 Thomas Waldmann  
1986 Torsten Wiesel  
1987 Leroy Hood  
1988 Joseph Goldstein  
1989 Pierre Chambon  
1990 Ronald Herberman  
1991 K. Frank Austen  
1992 Bert Vogelstein  
1993 Charles Janeway, Jr.  
1994 Solomon Snyder  
1995 Eric Lander  
1996 Irving Weissman  
1997 Michael Karin  
1998 Günter Blobel  
1999 Philippa Marrack  
2000 Robert Langer  
2001 William Haseltine  
2002 Ronald DePinho  
2003 Thomas Jessell  
2004 Robert Weinberg  
2005 Timothy Ley  
2006 Amita Seagal  
2007 Stuart Schreiber  
2009 Daniel Kastner

***Eugene M. Farber Psoriasis Research Award***

2003 David Jones  
Thomas McCormick  
2004 Edmund Lee  
Michael Allen  
2005 Curdin Conrad  
Shigetoshi Sano  
2006 Helen Young  
Amos Gilhar  
2007 Rajan Nair  
2008 Enno Christophers  
2009 James T. Elder

***SID/Galderma Acne Research Award***

2002 Diane Thiboutot  
2003 Jenny Kim  
2004 Michaela Downie  
2005 Andrzej Dlugosz  
2006 Sewon Kang  
2007 Philip Liu

***SID/Galderma Rosacea Research Award***

2009 Kenshi Yamasaki

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

2008 Jouni Utto  
2009 Stephen Katz

# Notes

# Notes



Join us for the

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**May 4 – 7, 2011  
JW Marriott Desert Ridge Resort and Spa  
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## CALL FOR APPLICATIONS

# CE.R.I.E.S. RESEARCH AWARD

The Epidermal and Sensory Research and Investigation Centre (Centre de Recherches et Investigations Épidermiques et Sensorielles) CE.R.I.E.S. is the healthy skin research centre of **CHANEL**, whose mission is to perform and encourage research of the physiology and biology of healthy skin. In addition to conducting its own independent research, the CE.R.I.E.S. is funding an annual award.



The CE.R.I.E.S. Research Award of 40,000 € is intended to honour a scientific researcher with a proven track record in fundamental or clinical research work, for a one year period, on the subject of:

### PHYSIOLOGY OR BIOLOGY OF HEALTHY SKIN AND/OR ITS REACTIONS TO ENVIRONMENTAL FACTORS

The awardee will be selected by an international jury consisting of the members of the Scientific Advisory Board of the CE.R.I.E.S.

Previous CE.R.I.E.S. Research Award Winners:

<b>2010</b>	<b>To be determined</b>
<b>2009</b>	<b>Sabine Werner, Ph.D., Zurich, Switzerland</b>
<b>2008</b>	<b>Paul A. Khavari, M.D., Ph.D., Stanford, USA</b>
<b>2007</b>	<b>Richard L. Gallo, M.D., Ph.D., San Diego, USA</b>
<b>2006</b>	<b>Irwin Mc Lean, Ph.D., DSc, FRSE, Dundee, Scotland, UK</b>
<b>2005</b>	<b>Masayuki Amagaï, M.D., Ph.D. Tokyo, Japan</b>
<b>2004</b>	<b>Thomas Schwarz, M.D. Kiel, Germany</b>
<b>2003</b>	<b>Angela M. Christiano, Ph.D., New York, USA</b>
<b>2002</b>	<b>Dennis R. Roop, Ph.D., Houston, USA</b>
<b>2001</b>	<b>Fiona M. Watt, D. Phil., London, UK</b>
<b>2000</b>	<b>Michael Karin, Ph.D., San Diego, USA</b>
<b>1999</b>	<b>Jonathan Rees, M.D., Edinburgh, UK</b>
<b>1998</b>	<b>Jean Krutmann, M.D., Düsseldorf, Germany</b>
<b>1997</b>	<b>Jens-Michael Schröder, Ph.D., Kiel, Germany</b>
<b>1996</b>	<b>Akira Takashima, M.D., Ph.D., Texas, USA</b>

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