

Meeting Program



Society for
Investigative
Dermatology

2009 Annual Meeting

May 6 - 9, 2009

Palais des congrès

Montréal, Québec

CANADA

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

Strategic Goals

- Stabilize and diversify membership to ensure the SID's future
- Strengthen and expand the SID's educational programming to promote and advance the importance of science
- Maintain the JID's status as the pre-eminent source of research information
- Strengthen the SID's government relations activities
- Develop a five-year financial and operations plan that attracts funding from public, corporate, and philanthropic sources to maintain the SID's growth and fiscal responsibility



2009 Annual Meeting Sponsors



PHARMACEUTICALS

2009 Annual Meeting Exhibitors

Canfield Scientific, Inc.
Courage & Khazaka Electronic GmbH
Lippincott / Williams & Wilkins
Millipore Corporation
Nature Publishing Group
Wiley-Blackwell
Zen-Bio, Inc.

Future Annual Meetings

May 5 - 8, 2010
Hilton Atlanta Hotel
Atlanta, Georgia

Officers

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Welcome to the 2009 SID Annual Meeting

On behalf of the Society for Investigative Dermatology, we welcome you to the SID's 69th 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; from those within academic and non-profit entities to those within the industrial realms. We are dedicated to the presentation of new research findings, exchange of information and ideas, education of the clinical, scientific, and commercial communities, and the promotion of a culture of discovery.

Our meeting attendees represent over 30 countries from around the world and conduct research in dermatology, cutaneous biology, and a variety of other specialties and disciplines. The cosmopolitan city of Montréal is cutting edge—the home to many educational and research institutions. It provides an ideal setting for our annual meeting.

Founded by explorers nearly 400 years ago at the confluence of the St. Lawrence and Ottawa rivers, Montréal takes its name from the three headed hill at the heart of the city (Mount Royal). Likewise, the science presented at the SID meeting this week is the confluence of complex streams of research from 14 categories (ranging from Immunology to Clinical Studies and Therapeutics) with marquee presentations at the plenary sessions, state-of-the-art lectures, and endowed lectureships.

Our 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 Committee on Scientific Programs for their dedication in developing this program.

Committee on Scientific Programs

Co-Chairs

Andrzej Dlugosz, MD
Richard Gallo, MD/PhD

Committee Members

Philip Fleckman, MD
Xiao-Jing Wang, MD/PhD
James Elder, MD/PhD
Michael Girardi, MD
David Margolis, MD/PhD
Anthony Oro, MD/PhD
Julie Segre, PhD
Tom Hornyak, MD/PhD

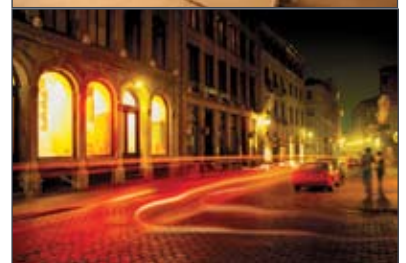
Welcome to Montréal. We encourage you to return your meeting evaluation forms so we can incorporate your feedback into the development of future education offerings.



Robert Swerlick, MD
Secretary-Treasurer



Russell Hall, MD
Deputy Secretary-Treasurer



Society for
Investigative
Dermatology

CME Statement & Objectives

CME Mission Statement

A primary purpose of the Society for Investigative Dermatology (SID) is to advance and promote the sciences relevant to skin health and disease through education and scholarly exchange of scientific information.

Target Audience

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

Learning Objectives

After attending this program, attendees will be able to:

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

Disclosure of Relevant Financial Relationships & Resolution of Conflicts of Interest

The Society for Investigative Dermatology has made the choice to meet the Accreditation Council for Continuing Medical Education's (ACCME) expectations for disclosure of relevant financial relationships. It is the policy of the SID to ensure balance, independence, objectivity and scientific rigor in all of its educational activities. All faculty and staff planning and participating in the Annual Meeting and other educational programs must comply with all procedures governing disclosure.

The SID has implemented a process where everyone in a position to control the content of an educational activity has disclosed all relevant financial relationships with any commercial interest. If it is determined that a conflict of interest exists as a result of a financial relationship, the conflict will be resolved prior to the activity.

All faculty/presenter relationships are disclosed in Annual Meeting printed materials. In addition, faculty/presenters are expected to make a verbal disclosure of relevant financial relationships or indicate no relationships exist at the beginning of their presentation. A PowerPoint slide with a disclosure statement must be used in each presentation as well.

Meeting-at-a-Glance

Wednesday, May 6, 2009

Registration Viger Foyer, Palais des congrès	8:00 am - 8:00 pm
SID Board of Directors Meeting St. Jacques, InterContinental Hotel	7:00 am - 2:00 pm
International PC Consortium 524 A/B/C, Palais des congrès	9:00 am - 12:00 pm
Translational Research Symposium 516 C/D/E, Palais des congrès	12:00 pm - 3:00 pm
Irvin H. Blank Forum <i>Recent Developments in Skin Immunity: Translational Implications</i> 517 A/B/C, Palais des congrès	3:00 pm - 5:00 pm
Albert M. Kligman/Philip Frost Leadership Lecture <i>The Skin Immune System: An Evolving Story</i> 517 A/B/C, Palais des congrès	7:00 pm - 7:30 pm
State-of-the-Art Plenary Lecture 1 <i>Genome Regulation by RNA</i> 517 A/B/C, Palais des congrès	7:30 pm - 8:00 pm
State-of-the-Art Plenary Lecture 2 <i>Immunologic Influences on Cancer Development and Progression</i> 517 A/B/C, Palais des congrès	8:00 pm - 8:30 pm
State-of-the-Art Plenary Lecture 3 <i>Psoriatic Arthritis vs. Psoriasis: What Can We Learn from Genetics?</i> 517 A/B/C, Palais des congrès	8:30 pm - 9:00 pm
Opening Night Welcome Reception <i>FREE TO ALL ATTENDEES</i> The Ruelle Walkway, InterContinental Hotel	9:00 pm - 11:00 pm

Thursday, May 7, 2009

Registration Viger Foyer, Palais des congrès	7:30 am - 4:00 pm
Plenary Session 1 517 A/B/C, Palais des congrès	8:00 am - 9:00 am
Herman Beerman Lecture <i>Horror Autoinflammaticus: Diseases of Innate Immunity</i> 517 A/B/C, Palais des congrès	9:00 am - 9:30 am
Naomi M. Kanof Lecture <i>Basal Ganglia and Circuit Disorders and Their Surgical Repair</i> 517 A/B/C, Palais des congrès	9:30 am - 10:00 am
American Skin Association Achievement Awards 517 A/B/C, Palais des congrès	10:00 am - 10:10 am
David Martin Carter Mentor Award 517 A/B/C, Palais des congrès	10:10 am - 10:15 am
Clinical Scholars Plenary Session 516 C/D/E, Palais des congrès	10:00 am - 11:00 am
Poster Session 1/Technical Exhibits Open 220 D/E, Palais des congrès	10:00 am - 12:00 pm
Coffee Break <i>Sponsored by Merz Pharmaceuticals, LLC</i> 517 D, Palais des congrès	10:15 am - 10:45 am
Sponsored Satellite Symposium <i>Advances in Rosacea Research Sponsored by Galderma</i> 517 A/B/C, Palais des congrès	12:00 pm - 2:00 pm
Resident Symposium <i>Insights into an Academic Career</i> 514 A/B/C, Palais des congrès	2:00 pm - 5:00 pm
CTCL Symposium 515 A/B/C, Palais des congrès	2:00 pm - 5:30 pm
Concurrent Minisymposia	2:00 pm - 5:30 pm
<i>Pigmentation and Melanoma</i> 516 A/B, Palais des congrès	
<i>Genetic Disease, Gene Regulation & Gene Therapy</i> 516 C/D/E, Palais des congrès	
<i>Immunology I: Adaptive Immunity</i> 518 A/B/C, Palais des congrès	
<i>Epidermal Structure & Function</i> 519 A/B, Palais des congrès	
<i>Clinical Research & Therapeutics</i> 524 A/B/C, Palais des congrès	
Sponsored Satellite Symposium <i>SID Burden of Skin Disease Co-Morbidity Symposium Sponsored by Abbott Laboratories, Amgen & Centocor</i> 517 A/B/C, Palais des congrès	5:30 pm - 7:30 pm

Friday, May 8, 2009

Registration Viger Foyer, Palais des congrès	7:30 am - 4:00 pm
Plenary Session 2 517 A/B/C, Palais des congrès	8:00 am - 9:00 am
Stephen Rothman Award Presented to Luis Diaz, MD 517 A/B/C, Palais des congrès	9:00 am - 9:10 am
Business Meeting for Members 517 A/B/C, Palais des congrès	9:10 am - 9:40 am
Eugene M. Farber Lecture <i>Molecular Dissection of Psoriasis: Integrating Genetics and Biology</i> 517 A/B/C, Palais des congrès	9:40 am - 10:10 am
State-of-the-Art Plenary Lecture 4 <i>Transcriptional Regulation in Melanocytes and Melanoma</i> 517 A/B/C, Palais des congrès	10:15 am - 10:45 am
State-of-the-Art Plenary Lecture 5 <i>Cadherins: Tales of Adhesion</i> 517 A/B/C, Palais des congrès	10:45 am - 11:15 am
Coffee Break <i>Sponsored by Merz Pharmaceuticals, LLC</i> 517 D, Palais des congrès	11:15 am - 11:45 am
Poster Session 2/Technical Exhibits Open 220 D/E, Palais des congrès	11:15 am - 1:15 pm
Clinical Scholars Program 516 C/D/E, Palais des congrès	11:30 am - 1:30 pm
Research in Cutaneous Surgery Symposium 514 A/B/C, Palais des congrès	2:00 am - 5:30 pm
Concurrent Minisymposia <i>Growth Factors & Signal Transduction</i> 516 A/B, Palais des congrès <i>Cell Adhesion / Matrix Biology</i> 516 C/D/E, Palais des congrès <i>Angiogenesis, Vascular Biology & Wound Healing</i> 518 A/B/C, Palais des congrès <i>Carcinogenesis & Cancer Genetics</i> 519 A/B, Palais des congrès <i>Auto-immunity and Inflammation</i> 524 A/B/C, Palais des congrès	2:00 pm - 5:30 pm
President's Reception ATTENDANCE BY INVITATION ONLY Les Voutes, InterContinental Hotel	6:00 pm - 7:30 pm
North American Hair Research Society Scientific Meeting 514 A/B/C, Palais des congrès	6:00 pm - 9:00 pm
Resident/Fellow Dinner Sessions Sarah Bernhardt, InterContinental Hotel	7:30 pm - 9:30 pm

Saturday, May 9, 2009

SID Board of Directors Meeting Sarah Bernhardt, InterContinental Hotel	7:00 am - 8:00 am
Registration Viger Foyer, Palais des congrès	7:30 am - 12:00 pm
Plenary Session 3 517 A/B/C, Palais des congrès	8:00 am - 9:00 am
William Montagna Lecture <i>Genetic Basis of Skin Diseases</i> 517 A/B/C, Palais des congrès	9:00 am - 9:30 am
Julius Stone Lecture <i>A Unified Approach to Discover the Molecular and Cellular Origins of Disease</i> 517 A/B/C, Palais des congrès	9:30 am - 10:00 am
Clinical Scholars Program 516 C/D/E, Palais des congrès	10:00 am - 12:00 pm
Poster Session 3/Technical Exhibits Open 220 D/E, Palais des congrès	10:00 am - 12:00 pm
ADEN Business/Scientific Sessions 524 A/B/C, Palais des congrès	10:00 am - 1:00 pm
Concurrent Minisymposia <i>Immunology II: Innate Immunity & Microbiology</i> 514 A/B/C, Palais des congrès <i>Hair and Cutaneous Development</i> 516 C/D/E, Palais des congrès <i>Photobiology</i> 518 A/B/C, Palais des congrès <i>Epidemiology & Health Services Research</i> 519 A/B, Palais des congrès	2:00 pm - 5:30 pm

Full Schedule

Wednesday, May 6, 2009

Registration Viger Foyer, Palais des congrès	8:00 am - 8:00 pm
SID Board of Directors Meeting St. Jacques, InterContinental Hotel	7:00 am - 2:00 pm
International PC Consortium 524 A/B/C, Palais des congrès	12:00 pm - 2:00 pm
Translational Research Symposium 516 C/D/E, Palais des congrès	12:00 pm - 3:00 pm
Irvin H. Blank Forum <i>Recent Developments in Skin Immunity: Translational Implications</i> 517 A/B/C, Palais des congrès	3:00 pm - 5:00 pm
Albert M. Kligman/Philip Frost Leadership Lecture <i>The Skin Immune System: An Evolving Story</i> Stephen Katz, MD/PhD 517 A/B/C, Palais des congrès	5:00 pm - 5:30 pm
State-of-the-Art Plenary Lecture 1 <i>Genome Regulation by RNA</i> Howard Chang, MD/PhD 517 A/B/C, Palais des congrès	7:30 pm - 8:00 pm
State-of-the-Art Plenary Lecture 2 <i>Immunologic Influences on Cancer Development and Progression</i> Michael Girardi, MD 517 A/B/C, Palais des congrès	8:00 pm - 8:30 pm
State-of-the-Art Plenary Lecture 3 <i>Psoriatic Arthritis vs. Psoriasis: What Can We Learn from Genetics?</i> Andrew Kowalczyk, PhD 517 A/B/C, Palais des congrès	8:30 pm - 9:00 pm
Opening Night Welcome Reception <i>FREE TO ALL MEETING ATTENDEES</i> The Ruelle Walkway, InterContinental Hotel	9:00 pm - 11:00 pm

Thursday, May 7, 2009

Registration Viger Foyer, Palais des congrès	7:30 am - 4:00 pm
Plenary Session I 517 A/B/C, Palais des congrès	8:00 am - 9:00 am
1. Endogenous survivin modulates survival and proliferation in normal human keratinocytes and during UVB irradiation. <u>A Marconi</u> , K Dallaglio, E Palazzo, M Dumas, F Truzzi, R Lotti, F Bontè and C Pincelli. Modena, Italy and St. Jean de Braye, France. <i>8:00 am Poster #759</i>	
2. A cohort study of vitamin D intake and melanoma risk. <u>MM Asgari</u> , SS Maruti, LH Kushi and E White. Oakland, CA; San Francisco, CA; Seattle, WA. <i>8:12 am Poster #353</i>	
3. A beneficial effect of <i>Staphylococcus epidermidis</i> by induction of antimicrobial defense through activation of TLR2 and P38 MAPK. <u>Y Lai</u> , K Radek, H Park, A Cogen, D Macleod, A Leichtle, AF Ryan, A Di Nardo and RL Gallo. San Diego, CA. <i>8:24 am Poster #716</i>	
4. Human skin langerhans cells and dermal dendritic cells show different capacity to initiate Th17 responses. <u>AR Mathers</u> , BM Janelins, JP Rubin, OA Tkacheva, WJ Shufesky, SC Watkins, AE Morelli and AT Larregina. Pittsburgh, PA. <i>8:36 am Poster #668</i>	
5. The I-BAR protein Missing in Metastasis is required for primary cilia formation, Sonic Hedgehog signaling, and hair follicle regeneration. <u>M Bershteyn</u> , W Woo, H Zhen and AE Oro. Stanford, CA. <i>8:48 am Poster #634</i>	
Herman Beerman Lecture <i>Horror Autoinflammaticus: Diseases of Innate Immunity</i> Daniel L. Kastner, MD/PhD 517 A/B/C, Palais des congrès	9:00 am - 9:30 am
Naomi M. Kanof Lecture <i>Basal Ganglia and Circuit Disorders and Their Surgical Repair</i> Mahlon DeLong, MD 517 A/B/C, Palais des congrès	9:30 am - 10:00 am
American Skin Association Achievement Award 517 A/B/C, Palais des congrès	10:00 am - 10:10 am
David Martin Carter Mentor Award 517 A/B/C, Palais des congrès	10:10 am - 10:15 am
Clinical Scholars Plenary Session 516 C/D/E, Palais des congrès	10:00 am - 11:00 am
Poster Session 1/Technical Exhibits Open Odd 001-313 & Even 314-628 220 D/E, Palais des congrès	10:00 am - 12:00 pm
Coffee Break <i>Sponsored by Merz Pharmaceuticals, LLC</i> 517 D, Palais des congrès	10:15 am - 10:45 am

Sponsored Satellite Symposium 12:00 pm - 2:00 pm
Advances in Rosacea Research
Sponsored by Galderma
517 A/B/C, Palais des congrès

Resident Symposium 2:00 pm - 5:00 pm
Insights into An Academic Career
514 A/B/C, Palais de congrès

CTCL Symposium 2:00 pm - 5:30 pm
515 A/B/C, Palais de congrès

Concurrent Minisymposia 1 2:00 pm - 5:30 pm
516 A/B, Palais des congrès
Pigmentation and Melanoma

Presiders: Thomas Hornyak, MD/PhD and Maria Wei, MD/PhD

1. **A novel player in the regulation of human pigmentation: Golgi-located N-acetylglucosaminyl 1-phosphotransferase (GNPTA) is involved in POMC processing and melanin production *in situ* and *in vitro*.** S Tiede, T Braulke, S Pohl and R Paus. Lübeck, Germany; Hamburg, Germany and Manchester, United Kingdom. 2:00 pm Poster #843
2. **The dedifferentiating role of agouti signaling protein in murine melanocytes via the Mc1r assessed by microarray.** E Le Pape, T Passeron, A Giubellino, JC Valencia, R Wolber and VJ Hearing. Bethesda, MD and Hamburg, Germany. 2:12 pm Poster #853
3. **A role for keratinocyte p53 in formation of pigmented lesions.** N Box, T Terzian, R Stiegmann, L Crane, G Lozano and D Roop. Aurora, CO and Houston, TX. 2:24 pm Poster #859
4. **Gli2, a TGF-beta inducible target, promotes melanoma invasion and metastasis.** V Alexaki, D Javelaud, L Van Kempen, KS Mohammad, S Dennler, F Luciani, Hoek, P Juarez, JS Goydos, PJ Fournier, C Sibon, C Bertolotto, F Verrecchia, S Saule, V Delmas, R Ballotti, L Larue, P Saiag, TA Guise and A Mauviel. Paris, France; Nijmegen, Netherlands; Charlottesville, VA; Orsay, France; Zurich, Switzerland; New Brunswick, NJ; Boulogne, France and Nice, France. 2:36 pm Poster #807
5. **AP-1 inhibition identifies cooperation of INK4 and Cip/Kip signaling pathways to suppress human melanoma.** A Jalili, C Wagner, KD Mertz, M Pashenkov, M Lupien, M Goiser, J Brunet, S Ramaswamy, TR Golub, G Stingl and SN Wagner. Vienna, Austria; Moscow, Russia; Boston, MA; Cambridge, MA and Charlestown, MA. 2:48 pm Poster #845
6. **Downregulation of Rap1GAP via promoter hypermethylation promotes melanoma cell proliferation, survival and migration.** L Gao, Z Hong, L Yuan, H Zhao and L Cornelius. St.Louis, MO. 3:00 pm Poster #798
7. **Autophagy regulates melanoma glycogen synthase kinase-3-dependent survival.** R Lo, R Nazarian, Y Zong, A Ribas and O Witte. Los Angeles, CA. 3:12 pm Poster #839
8. **Hyperactivation of oncogenic BRAF triggers autophagy and inhibits melanoma tumor growth.** N Maddodi, W Huang, K Kim, JB Longley and V Setaluri. Madison, WI. 3:24 pm Poster #852
9. **Both Erk1 and Erk2 regulate melanoma cell survival.** J Qin, H Xin and BJ Nickoloff. Maywood, IL. 3:36 pm Poster #825

10. **Mutations in genes regulating melanosome formation influence multi-drug resistance in melanomas and melanocytes.** ML Wei, T Xie, T Nguyen and M Hupe. San Francisco, CA. 3:48 pm Poster #797
11. **Genome-wide RNAi-based functional genomics identifies novel genes and pathways that regulate melanoma chemoresistance.** J Aruri, H Ho, MA White and AK Ganesan. Irvine, CA and Dallas, TX. 4:00 p.m. Poster #833
12. **Novel small molecule kinase inhibitors with potent and specific anti-melanoma activity.** NK Haass, KS Smalley, JT Lee, W Weninger and M Herlyn. Newtown, Australia; Sydney, Australia; Philadelphia, PA and Tampa, FL. 4:12 pm Poster #863
13. **Survivin promotes melanocyte migration through upregulation of $\alpha 5$ integrin.** J McKenzie, T Liu and D Grossman. Salt Lake City, UT. 4:24 pm Poster #804
14. **Deacetylation of ganglioside GM3 drives melanoma metastasis *in vivo* and distinguishes the metastatic phenotype.** X Wang, J Liu, P Sun, Q Yan, A Hui, E Yoo and AS Paller. Chicago, IL. 4:36 pm Poster #866
15. **Doxycycline (Dox)-inducible expression of CXC chemokine receptor-4 (CXCR4) in B16 melanoma cells reveals roles for CXCR4 in lung and lymph node (LN) metastasis.** H Zhang, V Lee and S Hwang. Bethesda, MD. 4:48 pm Poster #808

Concurrent Minisymposia 2 2:00 pm - 5:30 pm
516 C/D/E, Palais des congrès

Genetic Disease, Gene Regulation & Gene Therapy

Presider: Peter Koch, PhD

1. **Identification of downstream molecular targets of Trps1 during murine hair follicle morphogenesis.** KA Fantauzzo, A Jahoda and AM Christiano. New York, NY and Durham, NC. 2:00 pm Poster #521
2. **Reduced FRAS1 expression underlies epithelial fragility in AEC syndrome.** SE Clements and JA McGrath. London, United Kingdom. 2:12 pm Poster #479
3. **Atopic inflammation is an epidermal cell autonomous process in Netherton syndrome.** A Briot, C Deraison, M Lacroix, C Bonnart, A Robin, C Besson and A Hovnanian. Toulouse, France. 2:24 pm Poster #515
4. **Marie Unna hereditary hypotrichosis is caused by mutations of an upstream open reading frame in the human hairless gene.** X Zhang, Y Wen, Y Liu, Y Xue, Y Zhao, R Hua, K Wang, M Sun, W McLean and C He. Beijing, China; Shenyang, China and Dundee, United Kingdom. 2:36 pm Poster #512
5. **Kindlin-1 is required for RhoGTPase-mediated lamellipodia formation in keratinocytes.** C Has, C Herz, E Zimina, H Qu, Z Zhang, T Wen, Y Gache, M Aumailley and L Bruckner-Tuderman. Freiburg, Germany; Cologne, Germany and Nice, France. 2:48 pm Poster #494
6. **Mutations in FERMT1 in Kindler syndrome implicate a role for fermitin family homolog 1 in epidermal stem cell maintenance and integrin activation.** JE Lai-Cheong, A Tanaka, M Parsons and JA McGrath. London, United Kingdom. 3:00 pm Poster #482

7. **Conditional collagen VII inactivation allows analysis of anchoring fibril stability and function *in vivo* and reveals a major role of fibroblasts in collagen VII expression.** [A Fritsch](#), JS Kern, S Loeckermann, D Velati, R Fässler and L Bruckner-Tuderman. Freiburg, Germany and Martinsried, Germany. 3:12 pm Poster #483
8. **Characterization of molecular mechanisms underlying mutations in dystrophic epidermolysis bullosa using site-directed mutagenesis.** [M Chen](#), Y Hou, E Cua, G Henderson, S Andrews and D Woodley. Los Angeles, CA. 3:24 pm Poster #509
9. **A new role for Cockayne syndrome A and B in protection from mitochondrial aging of subcutaneous fat.** [Y Kamenisch](#), M Fousteri, J Knoch, A von Thaler, R Kuiper, M Schaller, H van Steeg, M Röcken, J Krutmann, LH Mullenders and M Berneburg. Tuebingen, Germany; Leiden, Netherlands; Utrecht,, Netherlands and Duesseldorf, Germany. 3:36 pm Poster #522
10. **Transcriptional coactivator DRIP/Mediator is involved in VDR function and regulates keratinocyte proliferation and differentiation.** [Y Oda](#), RJ Chalkley, AL Burlingame and DD Bikle. San Francisco, CA. 3:48 pm Poster #485
11. **Phase I trial of H5.020CMV.PDGF-b for treatment of venous leg ulcer.** [DJ Margolis](#), L Weinberg, M Curran, L Morris and T Crombleholme. Philadelphia, PA and Cincinnati, OH. 4:00 pm Poster #478
12. **Over-expression of fetuin-A counteracts ectopic mineralization in a mouse model of pseudoxanthoma elasticum.** [Q Jiang](#), F Dibra, MD Lee and J Uitto. Philadelphia, PA. 4:12 pm Poster #497
13. **The Pseudoxanthoma Elasticum phenotype in the *Abcc6*^{-/-} mice is modified by the *Ggcx* gene and the genetic background (129X1).** [Q Li](#), AE Grand-Pierre and J Uitto. Philadelphia, PA. 4:24 pm Poster #498
14. **Parabiotic heterogenetic pairing of *Abcc6*^{-/-} and wild-type mice halts progression of ectopic mineralization in a murine model of pseudoxanthoma elasticum.** [Q Jiang](#), [R Oldenburg](#), S Otsuru, A Grand-Pierre, EM Horwitz and J Uitto. Philadelphia, PA. 4:36 pm Poster #500
15. **Further pre-clinical characterization of TD101 — the first siRNA to enter clinical trials for a skin disorder.** [RP Hickerson](#), SA Leachman, LN Pho, F Smith, W McLean, D Leake, LM Milstone and RL Kaspar. Santa Cruz, CA; Salt Lake City, UT; Dundee, United Kingdom; Lafayette, CO and New Haven, CT. 4:48 pm Poster #537

Concurrent Minisymposia 3 2:00 pm - 5:30 pm

518 A/B/C, Palais des congrès

Immunology I: Adaptive Immunity

Presiders: Michael Girardi, MD and Daniel Kaplan, MD/PhD

1. **Pituitary adenylate cyclase-activating peptide (PACAP) and vasoactive intestinal polypeptide (VIP) enhance Langerhans cell (LC) antigen presentation for an interleukin-17 (IL-17) response.** [W Ding](#), L Stohl, M Michela and RD Granstein. New York, NY. 2:00 pm Poster 642
2. **Lymphocyte cooperation in T cell homing: CD4 T cells help CD8 T cells traffic to skin.** [X Jiang](#) and TS Kupper. Boston, MA. 2:12 pm Poster #678
3. **UV-induced regulatory T cells switch antigen-presenting cells from a stimulatory into a regulatory phenotype.** A Schwarz, W Schuller and [T Schwarz](#). Kiel, Germany. 2:24 pm Poster #648
4. **Attenuation of cutaneous dendritic cell functions by prostaglandin E₂-EP3 signaling.** [N Shiraishi](#), K Kabashima and Y Tokura. Kitakyusyu, Japan and Kyoto, Japan. 2:36 pm Poster #649
5. **IL-33 promotes dendritic cell development in a GM-CSF-dependent mechanism.** [N Mayuzumi](#), H Matsushima and A Takashima. Toledo, OH. 2:48 pm Poster #651
6. **Langerhans cells regulate CHS responses via cognate CD4 interactions and LC-derived IL-10.** [B Igyarto](#), MC Jenison, A Roers, PA Koni, MJ Shlomchik and DH Kaplan. Minneapolis, MN; Cologne, Germany; Augusta, GA and New Haven, CT. 3:00 pm Poster #729
7. **Initiation of inflammatory skin responses by promoting Th differentiation through prostaglandin I receptor IP.** [S Nakajima](#), T Honda, H Tanizaki, G Egawa, C Moniaga, S Narumiya, Y Miyachi and K Kabashima. Kyoto, Japan. 3:12 pm Poster #656
8. **CD5 is expressed by dendritic cells and is a co-inhibitory molecule for T cell activation and immune responses.** D He, H Li, L Wu, CA Elmets, C Raman and [H Xu](#). Birmingham, AL. 3:24 pm Poster #660
9. **CD4+CD25+ regulatory T cells suppress contact hypersensitivity reactions by blocking adhesion of T cells to vascular endothelium via a CD39, adenosine-dependent mechanism.** S Ring, SJ Oliver, BN Cronstein, AH Enk and [K Mahnke](#). New York, NY and Heidelberg, Germany. 3:36 pm Poster #662
10. **Targeting of a MOG-single chain fusion protein to DEC205+ dendritic cells *in vivo* ameliorates experimental autoimmune encephalomyelitis in C57BL/6 mice.** S Schmitt, S Ring, TS Johnson, V Storn, K Mahnke and [AH Enk](#). Heidelberg, Germany. 3:48 pm Poster #664
11. **Analysis of tumor-promoting CD8+ T cells reveals TH17 differentiation, regulatory capacity, and growth-factor potential.** [B Kwong](#), S Roberts, T Silberzahn, R Filler, A Galan, J Neustadter, W Lin, S Reddy, A Hayday and M Girardi. New Haven, CT and London, United Kingdom. 4:00 pm Poster #687
12. **Deficiency of Retinoid related Orphan Receptor (ROR) blocks the evolution of Th17 T cells and abrogates the contact hypersensitivity response (CHS), despite intact immunity and IFN γ production in response to CHS antigens.** R Purwar, [A Jetten](#) and TS Kupper. Boston, MA and Research Triangle Park, NC. 4:12 pm Poster #692
13. **Skin-specific homing imprinting requires T cell priming during early stage of cutaneous infection.** [Q Zhong](#), TS Kupper, K Dubin, M Wurbel and L Liu. Boston, MA. 4:24 pm Poster #694
14. **Efficient IL-4 therapy of psoriasis selectively abrogates IL-23 and Th17 responses in humans.** E Guenova, K Ghoreschi, W Hötzenecker, G Weindl, K Sauer, K Schäkel, M Schaller, M Röcken and [T Biedermann](#). Tuebingen, Germany; Berlin, Germany and Dresden, Germany. 4:36 pm Poster #695

15. **Psoriasis lesions contain distinct populations of CD4+ and CD8+ T cells producing interferon gamma, interleukin-17, and interleukin-22.** CJ Rubin, I Kryczek, JE Gudjonsson, A Johnston, W Zou, JT Elder and AT Bruce. Ann Arbor, MI. 4:48 pm Poster #697

Concurrent Minisymposia 4

2:00 pm - 5:30 pm

519 A/B, Palais des congrès

Epidermal Structure & Function

Presiders: Matthias Schmuth, MD and Satrajit Sinha, PhD

1. **SNAP29, a protein deficient in CEDNIK syndrome, is expressed in the lamellar granules and is regulated during epidermal differentiation in a PPAR- γ dependent fashion.** D Fuchs, J Lugassy, M Indelman, H Stewart and E Sprecher. Tel Aviv, Israel; Haifa, Israel and Oxford, United Kingdom. 2:00 pm Poster #421
2. **A novel ABCA12 mutant mouse model provides new insight into the pathological mechanisms of Harlequin Ichthyosis.** L Zhang, W Feng, L Niswander, D Roop and T Williams. Aurora, CO. 2:12 pm Poster #466
3. **Desmoglein 1 interacts with erbin: A putative mechanism for inhibiting Erk signaling during epidermal differentiation and morphogenesis.** R Harmon, C Simpson, S Getsios and K Green. Chicago, IL. 2:24 pm Poster #454
4. **Vitamin D receptor and coactivators SRC 2 and 3 regulate barrier sphingolipid production and epidermal permeability barrier formation.** Y Uchida, Y Oda, S Moradian, D Crumrine, PM Elias and DD Bikle. San Francisco, CA. 2:36 pm Poster #404
5. **The profilaggrin N-terminus interacts, and is co-expressed, with two novel nuclear proteins in keratinocytes.** RB Presland, OT Lawrence, J Huard and H Kortgere. Seattle, WA. 2:48 pm Poster #409
6. **Knock-down of (pro)-filaggrin in an organotypic skin model reproduces some of the features observed in atopic dermatitis and Ichthyosis vulgaris.** J Jin, M Mildner, L Eckhart, D Födinger, V Mlitz, C Ballaun and E Tschachler. Vienna, Austria and Neuilly, France. 3:00 pm Poster #443
7. **Caspase-14 is associated with DNA degradation in differentiated keratinocytes.** M Yamamoto, J Hosoi, C Katagiri and T Hibino. Yokohama, Japan and Tokyo, Japan. 3:12 pm Poster #407
8. **Effect of overexpression of the N-Terminus of profilaggrin on epidermal biology in genetically modified living skin equivalent.** S Aho, J Lee, H Meldrum and C Bosko. Trumbull, CT. 3:24 pm Poster #458
9. **Ovol2 inhibits transient expansion and terminal differentiation of epidermal progenitor cells by repressing c-Myc and Notch1.** J Wells, B Lee, A Cai, W Lee, L Rugg, S Sinha, Q Nie and X Dai. Irvine, CA and Buffalo, NY. 3:36 pm Poster #436
10. **A novel role for Nrf2 in restoration of epidermal barrier function in utero.** AJ Huebner, P Koch, S Werner and D Roop. Aurora, CO and Zurich, Switzerland. 3:48 pm Poster #472
11. **Acute and chronic skin barrier disruption leads to increased expression of murine β -defensin-1, -3, and -14.** K Hinrichsen, J Meingassner, J Harder and E Proksch. Kiel, Germany and Vienna, Austria. 4:00 pm Poster #445

12. **Ceramide metabolites in epidermal permeability barrier function and atopic dermatitis.** N Loiseau, S Moradian, PM Elias, WM Holleran and Y Uchida. San Francisco, CA and Toulouse, France. 4:12 pm Poster #405
13. **Ceramide stimulates ABCA12 expression via PPAR-beta in human keratinocytes.** Y Jiang, Y Uchida, B Lu, P Kim, C Mao, M Akiyama, PM Elias, WM Holleran, C Grunfeld and KR Feingold. San Francisco, CA; Charleston, SC and Sapporo, Japan. 4:24 pm Poster #434
14. **Pemphigus vulgaris antibodies (PV IgG and AK23) antagonize differentiation-dependent onset of Wnt signaling via constitutive c-Myc in keratinocyte cultures.** A Galichet, L Williamson, C Kolly, K Schulze, H Posthaus, E Boitier, MM Suter and EJ Müller. Bern, Switzerland and Anthony, France. 4:36 pm Poster #406
15. **Abnormal lamellar body formation and secretion in Sjögren-Larsson syndrome is responsible for the defective epidermal water barrier.** WB Rizzo, D S'Aulis, MA Jennings, D Crumrine, ML Williams and PM Elias. Omaha, NE and San Francisco, CA. 4:48 pm Poster #429

Concurrent Minisymposia 5

2:00 pm - 5:30 pm

524 A/B/C, Palais des congrès

Clinical Research & Therapeutics

Presiders: James Elder, MD/PhD and Craig Elmets, MD

1. **The cyclooxygenase-2 inhibitor celecoxib effectively suppresses the development of nonmelanoma skin cancers: Results of a phase II/III clinical trial.** CA Elmets, JL Viner, AP Pentland, W Cantrell, H Bailey, S Kang, KG Linden, M Heffernan, D Madeleine, B Elewski, A Umar, H Lin, W Bell and G Gordon. Birmingham, AL; Madison, WI; Ann Arbor, MI; Irvine, CA; St. Louis, MO; Houston, TX; Bethesda, MD; Skokie, IL and Rochester, NY. 2:00 pm Poster #325
2. **Aberrant toll-like receptor signaling increases kallikrein in rosacea.** K Yamasaki, K Kanada, S Morizane, AL Cogen, T Nakatsuji and RL Gallo. San Diego, CA. 2:12 pm Poster #268
3. **Topical 5-FU improves photoaging.** D Sachs, S Kang, C Hammerberg, Y Helfrich, D Karimipour, J Orringer, T Johnson, T Hamilton, G Fisher and J Voorhees. Ann Arbor, MI and Baltimore, MD. 2:24 pm Poster #259
4. **Actinic keratoses are intermittently present during the natural course of their disease.** W Cantrell, JW Turnham, AA Andea and CA Elmets. Birmingham, AL. 2:36 pm Poster #314
5. **Polymorphisms in TNFAIP3 as a predictor of response to TNF blockade in psoriasis.** T Tejasvi, PE Pstuart, RP Nair, JJ Voorhees and JT Elder. Ann Arbor, MI. 2:48 pm Poster #327
6. **Th17 T-cells are reduced in atopic dermatitis (AD) lesions compared to psoriasis vulgaris.** K Nograles, LC Zaba, A Shemer, T Kikuchi, M Ramon, I Cardinale, R Bergman, JG Krueger and E Guttman-Yassky. New York, NY; Ramat Gan, Israel and Haifa, Israel. 3:00 pm Poster #263

Friday, May 8, 2009

Registration 7:30 am - 4:00 am

Viger Foyer, Palais des congrès

Plenary Session II 8:00 am - 9:00 am

517 A/B/C, Palais des congrès

1. **Unscheduled melanogenesis in response to oncogenic Hedgehog signaling in skin.** SH Yang, M Verhaegen, V Grachtchouk, A Wang, J Liu, L Syu, J Ferris and AA Dlugosz. Ann Arbor, MI. 8:00 am Poster #868
2. **Adult stem cells for treatment of Recessive Dystrophic Epidermolysis Bullosa (RDEB).** JE Wagner, A Ishida-Yamamoto, JA McGrath, D Keene, M Hordinsky, BR Blazar and J Tolar. Minneapolis, MN; Asahikawa, Japan; London, United Kingdom and Portland, OR. 8:12 am Poster #328
3. **Filaggrin-deficient mice exhibit enhanced percutaneous antigen priming.** AD Irvine, PG Fallon, T Sasaki, A Sandilands, JJ Callanan, RB Presland, P Fleckman, J Kudoh, M Amagai and W McLean. Dundee, United Kingdom; Dublin, Ireland; Tokyo, Japan and Seattle, WA. 8:24 am Poster #519
4. **Grainyhead-like factor Get1/Grh13 is a shared transcriptional regulator for epidermal and urothelial differentiation.** Z Yu, J Mannik, A Soto, K Lin and B Andersen. Irvine, CA. 8:36 am Poster #468
5. **Regulatory T cells expanded in skin-draining lymph nodes via RANK-RANKL-activated Langerhans cells suppress cutaneous inflammation and colitis.** K Loser, A Luegering, T Sparwasser, TA Luger and S Beissert. Muenster, Germany and Hannover, Germany. 8:48 am Poster #666

Stephen Rothman Award 9:00 am - 9:10 am

Presented to Luis Diaz, MD

517 A/B/C, Palais des congrès

Business Meeting for Members 9:10 am - 9:40 am

517 A/B/C, Palais des congrès

Eugene M. Farber Lecture 9:40 am - 10:10 am

Molecular Dissection of Psoriasis:

Integrating Genetics and Biology

James T. Elder, MD/PhD

517 A/B/C, Palais des congrès

State-of-the-Art Plenary Lecture 4 10:15 am - 10:45 am

Transcriptional Regulation in Melanocytes and Melanoma

David Fisher, MD/PhD

517 A/B/C, Palais des congrès

State-of-the-Art Plenary Lecture 5 10:45 am - 11:15 am

Cadherins: Tales of Adhesion

Andrew Kowalczyk, PhD

517 A/B/C, Palais des congrès

Coffee Break 11:15 am - 11:45 am

Sponsored by Merz Pharmaceuticals, LLC

517 D, Palais des congrès

Poster Session 2/Technical Exhibits Open 11:15 am - 1:15 pm

Even 002-312 & Odd 629-867

220 D/E, Palais des congrès

7. **Mutation-specific siRNA resolves callus in a pachyonychia congenita patient.** SA Leachman, RP Hickerson, ME Schwartz, EE Bullough, SL Hutcherson, KM Boucher, CD Hansen, MJ Eliason, GS Srivatsa, DJ Kornbrust, FD Smith, W McLean, LM Milstone and RL Kaspar. Salt Lake City, UT; Santa Cruz, CA; Richmond, VA; Encinitas, CA; Reno, NV; Dundee, United Kingdom and New Haven, CT. 3:12 pm Poster #322
8. **Increased vitamin D deficiency in cutaneous T-cell lymphoma: From theory to therapy.** KM Cox, R Talpur, P Liu and M Duvic. Houston, TX. 3:24 pm Poster #329
9. **Predictors of retinoid dermatitis.** KC Lee and MA Weinstock. Chicago, IL and Providence, RI. 3:36 pm Poster #270
10. **African Americans display a significant lack of hyperalgesia and neurogenic inflammation in response to topical capsaicin.** H Wang, A Papoiu, R Coghill, T Patel and G Yosipovitch. Winston Salem, NC. 3:48 pm Poster #307
11. **Malignant clonal T cells in Leukemic (L-)CTCL/Sezary Syndrome (SS) exhibit a unique cell surface profile: high and uniform expression of CCR4 and central memory markers CCR7, L-selectin, and CD27.** JJ Campbell, D Soler, R Clark and T Kupper. Boston, MA. 4:00 pm Poster #324
12. **Obesity increases the risk of psoriatic arthritis among psoriasis patients.** R Soltani-Arabshahi, B Wong, B Feng, S Ahmed, DE Goldgar, K Callis Duffin and GG Krueger. Salt Lake City, UT. 4:12 pm Poster #272
13. **Clinical efficacy and tolerability of repeat course of total skin electron beam therapy (TSEBT) in mycosis fungoides (MF).** YS Levin, D Navi, N Riaz, NC Sullivan, RT Hoppe and YH Kim. Stanford, CA. 4:24 pm Poster #273
14. **Photochemical tissue bonding for closure of excision wounds: A first-in-human clinical trial.** S Tsao, M Yao, FP Henry, H Tsao, RW Redmond and IE Kochevar. Boston, MA. 4:36 pm Poster #279
15. **A priming *in vitro* step greatly enhances the repertoire of key genes involved in epidermal proliferation and migration in bioengineered skin.** T Kwak, T Yufit, P Carson, A Michalowska and V Falanga. Providence, RI; Bethesda, MD and Boston, MA. 4:48 pm Poster #266

Sponsored Satellite Symposium 5:30 pm - 7:30 pm

SID Burden of Skin Disease Co-Morbidity Symposium

Sponsored by Abbott Laboratories, Amgen and Centocor

517 A/B/C, Palais des congrès

Social reception immediately following the symposium,

7:30 pm - 8:30 pm, 517 D

Clinical Scholars Program 11:30 am - 1:30 pm
516 C/D/E, Palais des congrès

Research in Cutaneous Surgery Symposium 2:00 pm - 5:30 pm
514 A/B/C, Palais des congrès

Concurrent Minisymposia 6 2:00 pm - 5:30 pm
516 A/B, Palais des congrès
Growth Factors & Signal Transduction
Presiders TBD

1. **The c-Jun N-terminal kinase 2 promotes human epidermal neoplasia.** H Ke, RN Harris, J Coloff, JY Jin, B Leshin, P de Marval Miliani, S Tao, JC Rathmell, RP Hall and JY Zhang. Durham, NC and Palo Alto, CA. 2:00 pm Poster #570
2. **Activation of the canonical Wnt pathway in keratinocytes by Mcl-1.** LA Sitailo, P Sethupathi and MF Denning. Maywood, IL. 2:12 pm Poster #568
3. **CD109, a TGF- β co-receptor, regulates TGF- β receptor internalization and degradation in keratinocytes.** AA Bizet, K Liu, N Tran-Khanh, A Saksena, M Buschmann and A Philip. Montreal, Canada. 2:24 pm Poster #563
4. **Rho-mediated regulation of Ca²⁺-induced cell-cell adhesion and differentiation in keratinocytes.** C Tu, W Chang and D Bikle. San Francisco, CA. 2:36 pm Poster #551
5. **Lysophosphatidic acid-evoked calcium fluxes promote keratinocyte migration through Orai1, lipid rafts and NFAT.** R Jans, AM Brown, K Ross and NJ Reynolds. Newcastle upon Tyne, United Kingdom. 2:48 pm Poster #540
6. **Anthralin inhibits store-operated calcium entry and STIM1 translocation through a superoxide-dependent mechanism.** S Milner, K Ross and NJ Reynolds. Newcastle upon Tyne, United Kingdom. 3:00 pm Poster #560
7. **Protein phosphatase 1 is required for extracellular calcium-induced keratinocyte differentiation.** Z Xie, SD Pennypacker and DD Bikle. San Francisco, CA. 3:12 pm Poster #549
8. **Regulation of ultraviolet irradiation induced epidermal growth factor receptor nuclear translocation by Receptor Protein Tyrosine Phosphatase-kappa in human keratinocytes.** Y Xu, Y Shao, J Zhou, JJ Voorhees and GJ Fisher. Ann Arbor, MI. 3:24 pm Poster #571
9. **Small molecule suppression of ganglioside synthesis enhances keratinocyte wound healing by promoting insulin and epidermal growth factor receptor.** AS Paller, S McDaniel, N Gatla, A Arora, H Iordanov and X Wang. Chicago, IL. 3:36 pm Poster #574
10. **Downregulation of Src-family tyrosine kinases by Srcasm: the role of Grb2 and TSG-101.** L Zhou, E Ayli, C Marshall, W Li, T Griffin, T Salah and J Seykora. Philadelphia, PA. 3:48 pm Poster #572
11. **Elucidation of the mechanisms by which SH2/SH3 adapters Nck α and Nck β connect PDGF-BB signaling to promote human dermal fibroblast migration.** S Guan, J Fan, A Han, M Chen, D Woodley and W Li. Los Angeles, CA. 4:00 pm Poster #566
12. **EphA2-mediated cell-cell communication regulates human keratinocyte differentiation.** SY Lin, LJ Sheu, KS Bryce, F Shahijanian, D Deb-Basu, DL Hirschberg, RM Lavker and S Getsios. Chicago, IL and Stanford, CA. 4:12 pm Poster #564

13. **The direct binding of insulin-like growth factor-1 (IGF-1) to integrins plays a role in IGF signaling.** S Yamaji, J Saegusa, K Ieguchi, YK Takada and Y Takada. Sacramento, CA. 4:24 pm Poster #555
14. **Neutrophil-dominant psoriasis-like skin inflammation induced by epidermis-specific Raf expression in mice.** M Tarutani, Y Imai, T Tsuda, K Nakanishi and K Yamanishi. Nishinomiya, Japan. 4:36 pm Poster #552
15. **ER signaling is activated to protect human keratinocytes from UVB-induced ER stress.** K Mera, K Kawahara, I Maruyama and T Kanekura. Kagoshima, Japan. 4:48 pm Poster #546

Concurrent Minisymposia 7 2:00 pm - 5:30 pm
516 C/D/E, Palais des congrès
Cell Adhesion / Matrix Biology
Presiders TBD

1. **Embryonic trafficking of T cells to skin is dependant on E/P selectin ligands and CCR4.** X Jiang, JJ Campbell, C Gerard and TS Kupper. Boston, MA. 2:00 pm Poster #231
2. **Catenin control of desmocollin gene expression.** E Tokonzaba, X Cheng and PJ Koch. Aurora, CO. 2:12 pm Poster #228
3. **Classical cadherins as key regulators of keratinocyte intercellular junctions.** C Michels, T Buchta, W Bloch, T Krieg and CM Niessen. Cologne, Germany. 2:24 pm Poster #242
4. **Plakophilin 2 integrates intracellular signals required for actomyosin remodeling necessary for desmosome assembly and focal adhesion dynamics in epithelial cells.** L Godsel, A Bass-Zubek, R Hobbs, V Todorović, N Garcia and K Green. Chicago, IL. 2:36 pm Poster #243
5. **p38MAPK signaling and desmoglein-3 internalization are linked events in pemphigus acantholysis.** P Jolly, P Berkowitz, H Lee, M Chua, L Diaz and DS Rubenstein. Chapel Hill, NC. 2:48 pm Poster #217
6. **BPAG1e regulates β 4 integrin dynamics at the leading edge of migrating keratinocytes.** KJ Hamill, SB Hopkinson, PJ DeBiase and JC Jones. Chicago, IL. 3:00 pm Poster #235
7. **MMP-2, but not MMP-9, is required for pemphigus foliaceus induction in mice.** N Li, Z Liu, M Park, Z Werb and LA Diaz. Chapel Hill, NC and San Francisco, CA. 3:12 pm Poster #227
8. **Collagen XXIII - novel ligand for integrin α 2 β 1 in epidermis.** G Veit, B Eckes, J Käpylä, A Ishada-Yamamoto, T Krieg, J Heino, JA Eble and M Koch. Cologne, Germany; Turku, Finland; Asahikawa, Japan and Frankfurt, Germany. 3:24 pm Poster #234
9. **SERCA2, the intracellular calcium pump targeted in Darier's disease, is necessary for proper regulation of PKC signaling, keratin organization and desmosome assembly.** RP Hobbs, LM Godsel, MF Denning and KJ Green. Chicago, IL. 3:36 pm Poster #210
10. **The ultrastructure of acantholysis in pemphigus vulgaris.** MF Jonkman, GF Diercks, G van der Wier and HH Pas. Groningen, Netherlands. 3:48 pm Poster #224
11. **Differentiation of mouse bone marrow-derived stem cells and iPS cells into keratinocytes and other skin components.** M Itoh and AM Christiano. New York, NY. 4:00 pm Poster #240

12. **The elastin receptor mediates endocytosis of elastin to lysosomes and the subsequent degradation of elastin by cathepsin K.** SD Gan, K Codriansky and TM Ruenger. Boston, MA. 4:12 pm Poster#222
13. **Critical roles for EpCAM (epithelial cell adhesion molecule) for early embryogenesis and placental development.** K Nagao, J Zhu, J Hanson, MI Morasso, L Tessarollo, S Mackem and MC Udey. Bethesda, MD and Tokyo, Japan. 4:24 pm Poster #215
14. **Hyaluronan (HA) fragment-CD44 interactions selectively regulate keratinocyte proliferation, differentiation, wound healing and permeability barrier homeostasis in aged versus young epidermis.** LY Bourguignon, W Xia, G Wong, G Wei, E Gilad, J Youm, P Elias and W Holleran. San Francisco, CA. 4:36 pm Poster #209
15. **Involvement of increased versican expression in the pathogenesis of keloids.** E Araki, M Naitoh, S Aota, S Matsui, S Suzuki, Y Miyachi and A Utani. Kyoto, Japan and Kobe, Japan. 4:48 pm Poster #232

Concurrent Minisymposia 8

2:00 pm - 5:30 pm

518 A/B/C, Palais des congrès

Angiogenesis, Vascular Biology & Wound Healing

Presider: Thomas Darling, MD/PhD

1. **Epidermal caspase-8 regulates a wound healing response.** P Lee, D Lee and C Jamora. La Jolla, CA. 2:00 pm Poster #020
2. **Delayed cutaneous wound repair in Pyk2 knockout mice.** A Hindes, CJ Burns, BL Marmer, G Goldberg, M Blumenberg and T Efimova. St. Louis, MO and New York, NY. 2:12 pm Poster #039
3. **Overexpression of CD109 in the epidermis modulates inflammation during wound healing.** J Vorstenbosch, C Gallant-Behm, R Fang, S Mathur, T Mustoe and A Philip. Montreal, Canada and Chicago, IL. 2:24 pm Poster #049
4. **Overexpression of Hoxb13 in mouse skin results in delayed wound healing, dermatitis, and upregulation of VEGF.** JA Mack and EV Maytin. Cleveland, OH. 2:36 pm Poster #036
5. **Rate of cutaneous wound healing is dependent on MAPKAPK-2-mediated macrophage activation.** T Thuraisingam, Y Xu, K Eadie, M Heravi, R Greemberg, G Matthias, M Guiot and D Radzioch. Montreal, Canada and Hannover, Germany. 2:48 pm Poster #006
6. **The lysosomal protease cathepsin K plays an important role in wound healing and scar formation in the skin.** TM Ruenger, A Sharov, T Sharova, D Zhang and D Broemme. Boston, MA and Vancouver, Canada. 3:00 pm Poster #050
7. **Promotion of cutaneous wound healing with a fusion protein of hepatocyte growth factor and collagen-binding domain of fibronectin.** N Okiyama, T Kitajima, Y Ito, N Miyasaka, H Yokozeki and H Kohsaka. Tokyo, Japan; Kanagawa, Japan and Saitama, Japan. 3:12 pm Poster #018
8. **CXCR4-selective antagonist AMD3100 accelerates impaired wound healing in diabetic mice.** Y Nishimura, M Ii, J Asai, H Takenaka, N Katoh, H Hamada, G Qin, DW Losordo and S Kishimoto. Kyoto, Japan; Kobe, Japan; Chiba, Japan and Chicago, IL. 3:24 pm Poster #019

9. **Enrichment of tissue-engineered skin with Schwann cells improves cutaneous nerve regeneration.** M Blais, M Grenier and F Berthod. Quebec, Canada. 3:36 pm Poster #010
10. **CLIC4 regulates TGF- β dependent myofibroblast conversion of dermal fibroblasts.** A Shukla, S Madanikia and SH Yuspa. Bethesda, MD. 3:48 pm Poster #023
11. **Opposing roles of angiogenesis and lymphangiogenesis in inflammation.** R Huggenberger, K Alitalo and M Detmar. Zurich, Switzerland and Helsinki, Finland. 4:00 pm Poster #005
12. **Beta-arrestin1 mediates nicotinic acid induced flushing, but not its antilipolytic effect.** RW Walters, AK Shukla, JJ Kovacs, JD Violin, SM DeWire, CM Lam, JR Chen, MJ Muehlbauer, EJ Whalen and RJ Lefkowitz. Durham, NC. 4:12 pm Poster #002
13. **MAPK-dependent CCL21 expression by lymphatic endothelial cells.** T Miyagaki, M Sugaya, H Okochi, A Blauvelt and K Tamaki. Tokyo, Japan and Portland, OR. 4:24 pm Poster #009
14. **Apelin attenuates UVB-induced inflammation by promoting the stabilization of lymphatic vessels.** M Sawane, K Kajiyu, H Kidoya, F Muramatsu and N Takakura. Yokohama, Japan and Suita, Japan. 4:36 pm Poster #008
15. **Breaking the "harmony" of signaling via TNFR1/p55 or TNFR2/p75 for cancer treatment.** S Sasi, H Gilbert, M Silver, C Coleman, L Hlatky, G Qin, R Kishore and DA Goukassian. Boston, MA and Chicago, IL. 4:48 pm Poster #021

Concurrent Minisymposia 9

2:00 pm - 5:30 pm

519 A/B, Palais des congrès

Carcinogenesis & Cancer Genetics

Presider: Rebecca Morris, PhD

1. **The immunosuppressive surface ligand CD200 regulates immune privilege in metastatic squamous cell carcinoma.** M Stumpfova, D Ratner, EB Desciak, YD Eliezri and DM Owens. New York, NY. 2:00 pm Poster #191
2. **Langerhans cells are necessary for chemical mutagenesis.** J Neustadter, S Roberts, R Filler, B Kwong, J Lewis, A Galan, S Reddy, R Tigelaar, P Fu, D Kaplan, A Hayday and M Girardi. New Haven, CT; Jefferson, AR; Minneapolis, MN and London, United Kingdom. 2:12 pm Poster #176
3. **Heterogeneity in mutant Ha-ras expression within cutaneous papillomas in mice.** S Li, H Park, CS Trempus, D Gordon, LC King, G Cotsarelis and RJ Morris. New York, NY; Research Triangle Park, NC; Piscataway, NJ and Philadelphia, PA. 2:24 pm Poster #161
4. **Identification of the core gene expression signature and key cell-signaling pathways associated with Ras driven squamous cell carcinoma invasion.** TW Ridky, D Wong and PA Khavari. Stanford, CA. 2:36 pm Poster #170
5. **Repression of protein kinase C delta gene expression in human squamous cell carcinomas by a novel Ras \rightarrow NF- κ B signaling pathway.** V Yadav, NC Yanez and MF Denning. Maywood, IL. 2:48 pm Poster #166
6. **Hairless is repressed by tumor necrosis factor-alpha via activation of NF κ B.** H Kim, A Casta, MA Bachelor, A Englehard, DM Owens and AM Christiano. New York, NY. 3:00 pm Poster #179

7. **A chemical genetic screen reveals novel ATR/ATM pathway inhibitors that ensitize p53-deficient cells to DNA-damaging agents.** M Kawasumi, H Sloan, J Bradner and P Nghiem. Seattle, WA and Cambridge, MA. 3:12 pm Poster #152
8. **Genomic instability and cMyc amplification are associated with the p53^{R172H} gain of function mutation in mouse skin SCCs.** EC Torchia, S Acin, C Caulin and DR Roop. Aurora, CO and Houston, TX. 3:24 pm Poster #192
9. **Plakophilin 3 acts as a tumor suppressor gene in oral cancer.** J Chen, C O'Shea, A Schmidt and PJ Koch. Aurora, CO and Marburg, Germany. 3:36 pm Poster #160
10. **Increased expression and ectodomain shedding of Dsg2 in skin carcinomas.** D Brennan and MG Mahoney. Philadelphia, PA. 3:48 pm Poster #180
11. **Oral and topical small molecule hedgehog antagonists reduce BCCs in Ptch1+/- K14Cre-ER2 p53 fl/fl mice.** JY Tang, T Tang, TZ Xiao, A Wu, E Shpall, C Callahan, F de Sauvage and EH Epstein. Oakland, CA; Stanford, CA and South San Francisco, CA. 4:00 pm Poster #167
12. **Hedgehog signaling of BCC is inhibited by Vitamin D: Implication for a chemopreventive agent against BCC carcinogenesis.** TZ Xiao, JY Tang, A Wu, E Shpall, I Khaimsky, So and EH Epstein. Oakland, CA. 4:12 pm Poster #188
13. **Srcasm inhibits Fyn-induced skin carcinogenesis-a role for Notch 1.** L Zhou, W Li, C Marshall, R Hick, T Dentchev, A Werth, E Williams, C Miller, W Pear and J Seykora. Philadelphia, PA. 4:24 pm Poster #178
14. **Silencing of FAK and Src kinases normalizes human, 3D tissue models of squamous cell carcinoma harboring E-cadherin-deficient tumor cells.** A Alt-Holland, A Sowalsky, Y Szwec-Levin, Y Shamis, L Feig and JA Garlick. Boston, MA. 4:36 pm Poster #186
15. **Human papilloma virus increases skin cancer risk in organ transplant recipients by substituting for somatic alterations of the CDKN2A locus.** K Ridd, S Vemula, G Palmedo, H Kutzner, R Roy, RJ Akhurst, A Balmain, E Epstein and BC Bastian. San Francisco, CA and Friedrichshafen, Germany. 4:48 pm Poster #195

Concurrent Minisymposia 10

2:00 pm - 5:30 pm

524 A/B/C, Palais des congrès

Auto-immunity and Inflammation

Presider: Rachael Clark, MD/PhD

1. **The immune phenotype of therapeutic IL-12/IL-23 blockade in psoriasis patients treated with ustekinumab.** J Krueger, T Kikuchi, R Fidelus-Gort, A Khatcherian, I Novitskaya and C Brodmerkel. New York, NY; Wilmington, DE and Malvern, PA. 2:00 pm Poster #088
2. **Skin resident T cells producing IL-13 and TNF α : a possible role in the initiation of cutaneous sclerosis.** A Calarese, M Lichtman, TS Kupper and RA Clark. Boston, MA. 2:12 pm Poster #082
3. **Induced keratinocyte hyper-proliferation in alfa2beta1 integrin transgenic mice results in systemic immune cell activation.** I Teige, A Bäcklund, L Svensson, PH Kvist, TK Pedersen and K Kemp. Ballerup, Denmark. 2:24 pm Poster #071
4. **Ceramide deficiency in epidermis results in development of dermatitis through Langerhans cell maturation and expansion of IL-17-producing $\gamma\delta$ T cells.** K Nakajima, M Terao, H Azukizawa, I Katayama, J Takeda and S Sano. Kochi, Japan and Osaka, Japan. 2:36 pm Poster #074
5. **Development of a spontaneous, TCR transgenic mouse model of human vitiligo.** S Mehrotra, IC Le Poole, M Li, GE Lyons, N Spivey, T Martins da Palma, OS Naga, HR Norell, CM Diaz, DJ Cole and MI Nishimura. Charleston, SC; Chicago, IL and Miami, FL. 2:48 pm Poster #110
6. **Rapid downregulation of LL-37 and β -Defensins in psoriasis with etanercept therapy.** NR Smith, F Wang, S Kang, GJ Fisher and JJ Voorhees. Ann Arbor, MI and Baltimore, MD. 3:00 pm Poster #111
7. **Apoptosis precedes desmoglein cleavage and keratinocyte dissociation in pemphigus: Anti-Fas Ligand neutralizing antibodies prevent acantholysis both *in vitro* and *in vivo*.** R Lotti, E Shu, F Truzzi, E Palazzo, A Marconi, Y Kitajima and C Pincelli. Modena, Italy and Gifu, Japan. 3:12 pm Poster #080
8. **The microRNAs regulate CD4+CD25+FoxP3+ Treg cell and iNKT cell development.** L Zhou, K Seo, H He, R Pacholczyk, D Meng, J Xu and Q Mi. Detroit, MI and Augusta, GA. 3:24 pm Poster #102
9. **IL-12/IL-23p40 small interfering RNA establish protective immunity against autoimmune disease *in vivo*.** J Brück, C Weigert, S Pascolo, I Glocova, K Fuchs, K Ghoreschi and Röcken. Tübingen, Germany. 3:36 pm Poster #116
10. **Th17 dependent psoriasis-like skin disease in transgenic mice upon activation of PPAR delta.** M Romanowska, CN Palmer and J Foerster. Dundee, United Kingdom. 3:48 pm Poster #095
11. **Wnt5a causes hypersensitivity toward type 1 interferon and is aberrantly distributed in psoriasis.** M Romanowska, S Donandt, A Evans, DB Kellock, SE Bray, K McLean and JP Foerster. Dundee, United Kingdom and Berlin, Germany. 4:00 pm Poster #094
12. **Dissecting the roles of Th1 versus Th2 cells in cutaneous inflammation.** E Robinson, K Yasui, L Xu, C Ko and C Herrick. New Haven, CT. 4:12 pm Poster #128
13. **PAF induces Th17 lymphocytes through activation of monocyte-derived Langerhans cells.** A Drolet, M Thivierge, S Turcotte, D Hanna, B Maynard, J Stankova and M Rola-Pleszczynski. Sherbrooke, Canada. 4:24 pm Poster #115
14. **Surgical denervation of skin using the KC-Tie2 mouse model of psoriasis eliminates dendritic cells and markedly improves acanthosis and angiogenesis.** SM Ostrowski, JA Wolfram, AM Belkadi, DA Hatala, W Fu, D Diaconu and NL Ward. Cleveland, OH. 4:36 pm Poster #103
15. **Galectin-3 negatively regulates TCR-mediated CD4+ T cell activation at the immunological synapse.** H Chen, A Fermin, S Vardhana, I Weng, K Lo, E Chang, R Yang, D Hsu, M Dustin and F Liu. Sacramento, CA; New York, NY and San Diego, CA. 4:48 pm Poster #106

President's Reception

6:00 pm - 7:30 pm

ATTENDANCE BY INVITATION ONLY

Les Voutes, Palais des congrès

North American Hair Research Society Scientific Meeting

6:00 pm - 9:00 pm

514 A/B/C, Palais des congrès

Resident/Fellow Dinner Sessions 7:30 pm - 9:30 pm
Sarah Bernhardt, InterContinental Hotel

Saturday, May 9, 2009

SID Board of Directors Meeting 7:00 am - 8:00 am
Sarah Bernhardt, InterContinental Hotel

Registration 7:30 am - 12:00 pm
Viger Foyer, Palais des congrès

Plenary Session III 8:00 am - 9:00 am
517 A/B/C, Palais des congrès

1. **Oxidative stress impairs TGF- β responsiveness by coordinate down-regulation of Type II TGF- β receptor and Smad3 in primary human skin fibroblasts.** T He, T Quan, JJ Voorhees and GJ Fisher. Ann Arbor, MI. 8:00 am Poster #241
2. **Rapamycin inhibits tumor angiogenesis in a xenograft model of tuberous sclerosis complex.** S Li, J Wang, S Rajesh, J Moss and T Darling. Bethesda, MD. 8:12 am Poster #024
3. **Downregulating Δ Np63 causes skin squamous cell carcinomas.** JR Quante and MI Koster. Aurora, CO. 8:24 am Poster #153
4. **Characterization of functions and egress mechanism on skin regulatory T cell using Kaede-transgenic mice.** T Honda, M Tomura, H Tanizaki, O Kanagawa, Y Miyachi and K Kabashima. Kyoto, Japan and Yokohama, Japan. 8:36 am Poster #112
5. **Inhibition of *Propionibacterium acnes*-induced inflammation by a selective inhibitor of p38 α mitogen-activated protein kinase.** L Zhang, W Li, P Lyte, D Cavender, M Southall and M Eisinger. Skillman, NJ. 8:48 am Poster #550

William Montagna Lecture 9:00 am - 9:30 am
Genetic Basis of Skin Diseases
Angela Christiano, PhD
517 A/B/C, Palais des congrès

Julius Stone Lecture 9:30 am - 10:00 am
A Unified Approach to Discover the Molecular and Cellular Origins of Disease
Jamey Marth, PhD
517 A/B/C, Palais des congrès

Clinical Scholars Program 10:00 am - 12:00 pm
516 C/D/E, Palais des congrès

Poster Session 3/Technical Exhibits Open 10:00 am - 12:00 pm
Odd 315-627 & Even 630-868
220 D/E, Palais des congrès

ADEN Business/Scientific Sessions 10:00 am - 1:00 pm
524 A/B/C, Palais des congrès

Concurrent Minisymposia 11 2:00 pm - 5:30 pm

514 A/B/C, Palais des congrès

Immunology II: Innate Immunity & Microbiology

Presiders: Robert Modlin, MD and Akira Takashima, MD/PhD

1. **IL-17A enhances vitamin D3 induced expression of cathelicidin antimicrobial peptide in human keratinocytes.** M Peric, S Koglin, S Kim, S Morizane, R Besch, J Prinz, T Ruzicka, RL Gallo and J Schaubert. Munich, Germany and San Diego, CA. 2:00 pm Poster #721
2. **HIV-1 induces Cdc42-dependent filopodia formation to facilitate Dendritic cell-T cell trans-infection.** DS Nikolic, M Lehmann, E Garcia, FP Blanchet and V Piguët. Geneva, Switzerland. 2:12 pm Poster #728
3. **Identification of Bcl-3 as a novel modulator of antimicrobial peptide production in atopic dermatitis.** AS Büchau, DT MacLeod, S Morizane, PF Kotol, T Ruzicka, T Hata and RL Gallo. San Diego, CA and Munich, Germany. 2:24 pm Poster #705
4. **Real-time *in vivo* imaging of IL-1 beta producing cells in inflamed murine skin.** H Matsushima and A Takashima. Toledo, OH. 2:36 pm Poster #715
5. **Gamma/delta T cells promote neutrophil recruitment in immunity against *Staphylococcus aureus* skin infection.** LS Miller, EM Pietras, J Cho, D Farzam, HR Monroe, NC Garcia, G Cheng and RL Modlin. Los Angeles, CA. 2:48 pm Poster #734
6. **Imiquimod treatment of human squamous cell carcinomas enhances T cell IFN γ production and effector function.** S Huang, G Murphy, C Schanbacher, C Schmults, T Kupper and RA Clark. Boston, MA. 3:00 pm Poster #654
7. **Herpes simplex virus type 1 exploits scavenger receptors to infect human keratinocytes.** DT MacLeod and RL Gallo. La Jolla, CA. 3:12 pm Poster #731
8. **Hyaluronan and CD44 direct specific inflammatory responses through TLR4.** J Muto, K Yamasaki and RL Gallo. San Diego, CA. 3:24 pm Poster #706
9. ***Staphylococcus epidermidis* antimicrobial peptide functions as a surface antibiotic and induces keratinocyte TLR2-mediated expression of defensins and cathelicidin.** AL Cogen, Y Lai, K Yamasaki, J Tanios, V Nizet and RL Gallo. La Jolla, CA and San Diego, CA. 3:36 pm Poster #707
10. **Contrasting roles of the IL-1 and IL-18 receptors in myd88-dependent contact hypersensitivity.** PA Klekotka, L Yang and WM Yokoyama. Saint Louis, MO. 3:48 pm Poster #737
11. **Exploring natural killer cells resident in normal human skin.** AE Gehad, RA Clark, SL King, TS Kupper and RC Fuhlbrigge. Boston, MA. 4:00 pm Poster #738
12. **LL37 enhances TLR9 expression and activation in keratinocytes and is coordinately overexpressed in psoriasis.** S Morizane, K Yamasaki, M Murakami, K Iwatsuki and RL Gallo. San Diego, CA; Asahikawa, Japan and Okayama, Japan. 4:12 pm Poster #708
13. **Uric acid crystals induce inflammation in human keratinocytes through P2Y receptors.** H Uratsuji, Y Tada and K Tamaki. Tokyo, Japan. 4:24 pm Poster #714

14. **Cholinergic activation decreases innate immune antimicrobial activity and barrier function to increase susceptibility to bacterial infection.** KA Radek, SK Mahata, L Taupenot, DT O'Connor and RL Gallo. San Diego, CA. 4:36 pm Poster #733
15. **Integrated pathways of neutrophil-mediated tissue injury in immune complex disease.** DJ Lee, H Li, MT Ochoa, M Tanaka, RJ Carbone, R Damoiseaux, A Burdick, TH Rea and RL Modlin. Los Angeles, CA; Kyoto, Japan and Miami, FL. 4:48 pm Poster #719

Concurrent Minisymposia 12 2:00 pm - 5:30 pm

516 C/D/E, Palais des congrès

Hair and Cutaneous Development

Presiders: Thomas Andl, PhD and Maranke Koster, PhD

1. **SWAMP, a novel inhibitor of Wnt signaling, is mutated in Hereditary Hypotrichosis Simplex.** Y Shimomura, D Agalliu, A Vonica, V Luria, A Baumer, S Belli, L Petukhova, M Wajid, A Schinzel, BA Barres and AM Christiano. New York, NY; Stanford, CA; Zurich, Switzerland and Trento, Italy. 2:00 pm Poster #623
2. **Inducible expression of *Dickkopf1* reversibly inhibits hair growth without affecting stem cell maintenance.** Y Choi, T Andl and SE Millar. Philadelphia, PA and Nashville, TN. 2:12 pm Poster #635
3. **Partial proteasome inhibitors induce hair follicle growth by maintaining β -catenin signaling.** JS Van Arnam, PC Means, EG Huntzicker and AE Oro. Stanford, CA. 2:24 pm Poster #637
4. **Fibroblast growth factor 9 from dendritic epidermal T cells promotes hair follicle neogenesis after wounding in adult skin.** O Kwon, M Ito, Z Yang, F Wang, DM Ornitz and G Cotsarelis. Philadelphia, PA; Houston, TX and St. Louis, MO. 2:36 pm Poster #624
5. **Involvement of the Lhx2 transcription factor in the control of stem cells activity during epidermal development, tumorigenesis and wound healing.** A Mardaryev, A Sharov, T Sharova, M Fessing and V Botchkarev. Bradford, United Kingdom and Boston, MA. 2:48 pm Poster #614
6. **Transgenic expression of Smad1 in keratinocytes impairs postnatal hair follicle cycling, wound healing and prevents tumorigenesis via functional restriction of epithelial stem cells.** TY Sharova, AN Mardaryev, VA Botchkarev and AA Sharov. Boston, MA and Bradford, United Kingdom. 3:00 pm Poster #625
7. **Role of Dlx3 in hair cycling.** J Kim, J Hwang, J Suh and MI Morasso. Bethesda, MD and Seoul, South Korea. 3:12 pm Poster #627
8. **Hedgehog signaling maintains the undifferentiated state of the follicle secondary hair germ during telogen.** ME Hutchin, M Grachtchouk, J Liu, J Waldinger, A Wang, AB Glick and AA Dlugosz. Ann Arbor, MI and University Park, PA. 3:24 pm Poster #638
9. **MicroRNAs (miRNA) in hair-cycle-dependent gene regulation, hair growth control, and associated tissue remodeling.** A Mardaryev, M Ahmed, A Sharov and N Botchkareva. Bradford, United Kingdom and Boston, MA. 3:36 pm Poster #626

10. **Inflammatory mediator TAK1 regulates hair follicle cycling.** K Sayama, Y Shirakata, S Hirakawa, K Sugawara, P Chambon, S Akira, R Paus and K Hashimoto. Toon, Japan; Hamburg, Germany; Illkirch, France and Suita, Japan. 3:48 pm Poster #600
11. **Regulation of bulge proliferation by RAS and its antagonists.** A Mukhopadhyay, SR Krishnaswami and BD Yu. San Diego, CA. 4:00 pm Poster #599
12. **Cross talk between p63 and IRF6 in the regulation of keratinocyte proliferation.** F Moretti, B Marinari, N Lo Iacono, E Botti, G Spallone, G Merlo, S Chimenti, L Guerrini and A Costanzo. Rome, Italy. 4:12 pm Poster #592
13. **Transgenic mice delineate the functional properties of p63 isoforms in regulating keratinocyte differentiation.** R Romano, K Ortt and S Sinha. Buffalo, NY. 4:24 pm Poster #596
14. **A role for p63 in establishing tissue-specific chromatin organization and high-order chromatin remodelling in epidermal keratinocytes during skin development.** M Fessing, A Mardaryev, M Gdula, A Sharov, T Sharova, A Panteleyev, C Missero and V Botchkarev. Bradford, United Kingdom; Boston, MA; Dundee, United Kingdom and Napoli, Italy. 4:36 pm Poster #604
15. **Evidence that Prostaglandin D₂ contributes to development of Androgenetic Alopecia.** LA Garza, B Alagesan, JA Lawson, SM Norberg, T Zhao, HB Blat, DC Stanton, L Carrasco, FM Susan, GA FitzGerald and G Cotsarelis. Philadelphia, PA; Smithville, TX and Baltimore, MD. 4:48 pm Poster #584

Concurrent Minisymposia 13 2:00 pm - 5:30 pm

518 A/B/C, Palais des congrès

Photobiology

Presiders TBD

1. **Protein network analysis of acutely UV-irradiated mouse skin and human samples representing the progression of cutaneous SCC.** JG Einspahr, V Calvert, E Olson, C Curiel-Lewandrowski, C Longo, J Deng, L Lance, G Pellicani, DS Alberts, R Krouse, A Prasad, GT Bowden and EF Petricoin. Tucson, AZ; Manassas, VA and Modena, Italy. 2:00 pm Poster #774
2. **Ultraviolet irradiation induces CYR61/CCN1, a novel mediator of collagen homeostasis, via activation of transcription factor AP-1 in human skin fibroblasts.** TH Quan, Z Qin, Y Xu, T He, JJ Voorhees and GJ Fisher. Ann Arbor, MI. 2:12 pm Poster #776
3. **UV irradiation induces Snail expression by MAPK/AP-1 signaling cascade in human keratinocytes.** Y Li, Y Liu, Y Xu, S Kang, TM Johnson, JJ Voorhees and GJ Fisher. Ann Arbor, MI. 2:24 pm Poster #786
4. **Time-dependent generation of ROS in HaCaT keratinocytes after UVB-irradiation is modulated by a Ca²⁺-dependent cascade.** H Masaki and Y Okano. Tokyo, Japan. 2:36 pm Poster #777
5. **Oxidized phospholipids mediate responses to UVA-1 via the redox-sensitive transcription factor Nrf2.** F Gruber, H Mayer, M Bilban, B Lengauer, JM Sanders, R de Martin, O Wagner, TW Kensler, N Leitinger and E Tschachler. Vienna, Austria; Charlottesville, VA; Baltimore, MD and Neuilly, France. 2:48 pm Poster #779

6. **Functional melanocortin 1 receptor activates signaling pathways that inhibit UV-induced genotoxicity in human melanocytes by enhancing DNA repair.** A Kadekaro, R Starner, V Swope, P Cassidy, S Leachman, A Koshoffer, R Boissy and Z Abdel-Malek. Cincinnati, OH and Salt Lake City, UT. 3:00 pm Poster #791
7. **Skin microbiota rescues melanocyte from UVB apoptosis.** Y Lai, PF Kotol, RL Gallo and A Di Nardo. La Jolla, CA. 3:12 pm Poster #790
8. **IL10 is required for UVA1-induced suppression of delayed type hypersensitivity (DTH) but not for suppression of contact hypersensitivity (CHS).** Y Shintani, A Maeda, K Torii, C Saito and A Morita. Nagoya, Japan. 3:24 pm Poster #765
9. **PUVA suppresses the initiation of EAE via inhibition of Th17-migration into CNS.** T Furuhashi, A Maeda, K Torii, C Saito, Y Shintani and A Morita. Nagoya, Japan. 3:36 pm Poster #767
10. **The effect of a new photodynamic therapy with glycoconjugated fullerene.** E Otake, S Sakuma, A Maeda, H Ooi, S Yano and A Morita. Nagoya, Japan and Kyoto, Japan. 3:48 pm Poster #766
11. **Early critical events after photodynamic therapy with the silicon phthalocyanine Pc 4: Evidence for photodamage to ER proteins and Ca²⁺ depletion.** M Lam, ME Rodriguez, SJ Howell, L Xue, MC Davis, CW Distelhorst, ME Kenney, NL Oleinick, TS McCormick, KD Cooper and ED Baron. Cleveland, OH. 4:00 pm Poster #787
12. **Protein kinase C δ is critical for UV radiation induced cell cycle checkpoint activation.** EL LaGory and MF Denning. Maywood, IL. 4:12 pm Poster #785
13. **The IGF-1/IGF-1R signaling axis in the skin: A new paradigm for aging-associated skin cancer.** D Lewis, J Travers and D Spandau. Indianapolis, IN. 4:24 pm Poster #793
14. **Inhibition of angiogenesis in UV-induced skin tumors by drinking green tea polyphenols requires IL-12.** SM Meeran, T Punathil, S Katiyar, CA Elmets and SK Katiyar. Birmingham, AL. 4:36 pm Poster #752
15. **Delivery of Chlorella virus pyrimidine dimer glycosylase to skin cells to enhance repair of UVB-induced DNA dimers.** JL Johnson, B Lowell, R Lloyd and A McCullough. Portland, OR. 4:48 pm Poster #751

Concurrent Minisymposia 14 2:00 pm - 5:30 pm
519 A/B, Palais des congrès

Epidemiology & Health Services Research

Presiders: Joel Gelfand, MD and Abrar Qureshi, MD

1. **Tumor infiltrating lymphocytes are a prognostic marker for survival in patients who develop melanoma metastases.** CC Wriston, AB Troxel, DB Shin, A Schaffer, AI Rubin, JA Brauer and ME Ming. Philadelphia, PA. 2:00 pm Poster #363
 2. **Increasing burden of melanoma in the United States.** E Linos, S Swetter, M Cockburn, G Colditz and C Clarke. Stanford, CA; Los Angeles, CA and St. Louis, MO. 2:12 pm Poster #349
 3. **Tumor recurrence after treatment of keratinocyte carcinoma.** MM Chren, JS Torres, SE Stuart, RJ Labrador, D Bertenthal and WJ Boscardin. San Francisco, CA. 2:24 pm Poster #384
 4. **Accuracy of tele dermatology for pigmented neoplasms.** E Warshaw, F Lederle, J Grill, A Gravely, A Bangerter, L Fortier, K Bohjanen, K Chen, P Lee, H Rabinovitz, R Johr, V Kaye, S Bowers, R Wenner, S Askari, D Kedrowski and D Nelson. Minneapolis, MN; Miami, FL; Springfield, IL and St. Louis, MO. 2:36 pm Poster #391
 5. **Topical tretinoin and prevention of keratinocyte carcinoma.** MA Weinstock, SF Bingham, R Hall, D Eilers, R Kirsner, M Naylor, J Kalivas, G Cole, K Marcolivio, JJ DiGiovanna and JE Vertrees. Providence, RI. 2:48 pm Poster #388
 6. **Association between serum vitamin D3 levels and non-melanoma skin cancer.** JY Tang, N Parimi, A Wu, J Boscardin, M Chren, SR Cummings, EH Epstein and DC Bauer. Stanford, CA; San Francisco, CA and Oakland, CA. 3:00 pm Poster #378
 7. **Co-morbidity of psychiatric conditions skin disease in the United States: A population-based cross-sectional analysis of the 2007 National Health Interview Survey.** N Smith and F Tausk. Rochester, NY. 3:12 pm Poster #383
 8. **Depression and incident diabetic foot ulcers: A prospective cohort study.** LH Williams, CM Rutter, WJ Katon, GE Reiber, P Ciechanowski, SR Heckbert, EH Lin, EJ Ludman, MM Oliver, BA Young and M Von Korff. Seattle, WA. 3:24 pm Poster #365
 9. **Effects of chronic pruritus on depression, activities of daily living, and quality of life.** L Kamalpour, PD Harvey, E Veledar, S Kini, M McIlwain, L Van, R Berrios, T Finch, L Delong and SC Chen. Atlanta, GA. 3:36 pm Poster #360
 10. **Measuring negative body image among patients with acne vulgaris: Validation of the Body Image Disturbance Questionnaire in a clinical population.** WP Bowe, A Doyle, C Crerand, DJ Margolis and AR Shalita. Brooklyn, NY and Philadelphia, PA. 3:48 pm Poster #348
 11. **Risk of cardiovascular mortality in patients with severe psoriasis.** RS Azfar, AL Neimann, DB Shin, AB Troxel and JM Gelfand. Philadelphia, PA and New York, NY. 4:00 pm Poster #376
 12. **Cardiovascular risk factors and stroke are increased in psoriasis patients compared to the US population.** I Grozdev, LY Cao, DC Babineau, EF Kern, TS McCormick, KD Cooper and NJ Korman. Cleveland, OH. 4:12 pm Poster #393
 13. **United States patients with severe psoriasis have an risk of increased all cause but not increased cardiovascular mortality.** RS Stern and A Huibregtse. Boston, MA. 4:24 pm Poster #364
 14. **Alcohol intake and risk of incident psoriasis in us women: A prospective study.** AA Qureshi, PL Dominguez, G Curhan and HK Choi. Boston, MA. 4:36 pm Poster #375
 15. **Health care delivery system effect on disparities in melanoma outcomes among medicare-aged hispanic patients.** P Rouhani, K Arheart and RS Kirsner. Miami, FL. 4:48 pm Poster #386
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Meeting Information & Policies

Continuing Medical Education Mission Statement

A primary purpose of the Society for Investigative Dermatology (SID) is to advance and promote the sciences relevant to skin health and disease through education and scholarly exchange of scientific information. A strategic plan initiative is to strengthen and expand educational programs for targeted sectors of the dermatology community, including research investigators, clinicians, research and clinical trainees, members of industry, and community advocates for skin health/disease, in a manner that fosters scientific excellence, elevates evidence-based medicine, and meets high ethical standards.

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On-site Registration

On-site registration will take place at the Registration Counter at the Palais des congrès during the following hours:

Wednesday, May 6, 2009 • 8:00 am - 8:00 pm
Thursday, May 7, 2009 • 7:30 am - 4:00 pm
Friday, May 8, 2009 • 7:30 am - 4:00 pm
Saturday, May 9, 2009 • 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 service to its members. A placement/job postings page is available to members on the SID website at www.sidnet.org. In addition, prospective employers and candidates may conduct interviews or post additional announcement at the Meeting. A board will be available in the registration area.

Technical Exhibits

Exhibits will be on display during the following times in Room 220 D/E of the Palais des congrès:

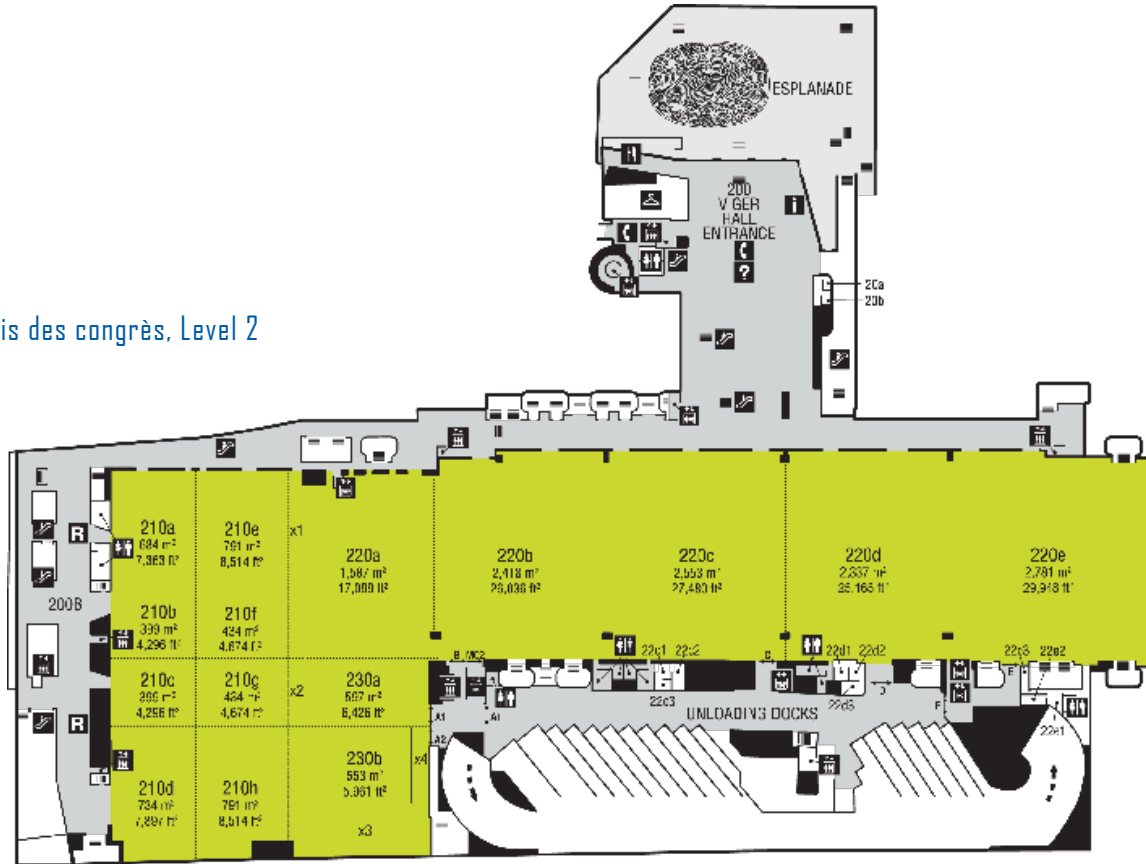
Thursday, May 7, 2009 • 10:00 a.m.-12:00 p.m.
Friday, May 8, 2009 • 11:15 a.m.-1:15 p.m.
Saturday, May 9, 2009 • 10:00 a.m.-12:00 p.m.

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Palais des congrès Maps

Palais des congrès, Level 2



Palais des congrès, Level 5



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Program Submission & General Information

A preliminary program and general information must be submitted to the SID for the symposium. It should include the following:

- Company name
- Contact person
- Individual identified as Scientific Program Chair for event and permission to contact that person
- Session Title
- Educational objectives
- Program description
- Tentative speaker list and presentation titles
- Summary of why the program is relevant and should be a part of the SID meeting

Speakers must provide conflict of interest disclosure statements to the SID at least 6 months before the Meeting. These statements must appear in written literature prepared for the symposium. Speakers may not make an identical presentation at both the SID Meeting and Sponsored Symposium. Potential speakers must be approved by the SID prior to being invited to present.

Review Process

If the SID decides that substantial duplication or overlap of program materials exists among 2 or more proposed Sponsored Symposia, priority will be based on the date of approval by the SID.

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After approval of the final program, changes in subject matter, speakers or presentations may not be made without the written approval of the SID.

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Sponsors must agree to produce and distribute their own marketing materials for Sponsored Symposia. Information about each symposium will be included in the official Program Book. Sponsors can receive one set of SID membership mailing labels (free of charge) and may use the SID logo. All mailings must be reviewed and approved by the SID before any literature is sent to our members. The use of SID Board of Director names on the return address is prohibited, as are letters addressed from Session Directors/Faculty inviting SID members to attend.

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Meeting registrants will be invited to attend all Sponsored Symposia free of additional charge.

Publications

Some symposia may merit consideration for publication in the Journal of Investigative Dermatology Symposium Proceedings series. If the sponsor would like their symposium considered for publication, the editor of the Journal should be contacted early in the planning process of the symposium to discuss procedures, deadlines, and budget.

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The distribution of samples, gifts, books, or any other kind of credit vouchers for the purchase of products and/or services to encourage attendance is prohibited. The only materials approved for distribution at the Sponsored Symposia are reprints of previously published scientific articles and syllabi directly related to presentation.

Failure to Follow Policies

Sponsors who fail to adhere to the policies set forth are subject to cancellation of their Satellite Symposia.



Session Information

- 21 Special Lectures & State-of-the-Art Lectures
- 22 Blank Forum, Awards, Networking Events & Business Meeting
- 23 Sponsored Satellite Symposium: *Advances in Rosacea Research (Sponsored by Galderma)*
- 24 Sponsored Satellite Symposium: *SID Burden of Skin Disease Co-Morbidity Symposium (Sponsored by Abbott Laboratories, Amgen and Centocor)*
- 25 International Pachyonychia Congenita Consortium
- 26 Cutaneous T Cell Lymphoma Symposium
- 27 Research in Cutaneous Surgery Symposium
- 28 North American Hair Research Society Scientific Meeting
- 29 American DermatoEpidemiology Network Business & Scientific Session
- 30 Ancillary Groups

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Special Lectures



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The Skin Immune System: An Evolving Story
Stephen Katz, MD/PhD
Director, National Institute of Arthritis and Musculoskeletal and Skin Diseases
Bethesda, Maryland



Herman Beerman Lecture
Horror Inflammaticus: Diseases of Innate Immunity
Daniel L. Kastner, MD/PhD
Chief, Genetics & Genomics Branch, National Institute of Arthritis and Musculoskeletal and Skin Diseases
Bethesda, Maryland



Naomi M. Kanof Lecture
Basal Ganglia and Circuit Disorders and Their Surgical Repair
Mahlon DeLong, MD
Professor of Neurology, Emory University
Atlanta, Georgia



Eugene M. Farber Lecture
Molecular Dissection of Psoriasis: Integrating Genetics and Biology
James T. Elder, MD/PhD
Professor, University of Michigan
Ann Arbor, Michigan



William Montagna Lecture
Genetic Basis of Skin Diseases
Angela M. Christiano, PhD
Professor and Vice Chair for Research Dermatology and Genetics Development, Columbia University
New York, New York



Julius Stone Lecture
A Unified Approach to Discover the Molecular and Cellular Origins of Disease
Jamey D. Marth, PhD
Professor, Dept. of Cellular and Molecular Medicine, University of California, San Diego
La Jolla, California

State-of-the-Art Lectures



State-of-the-Art Plenary Lecture 1
Genome Regulation by RNA
Howard Chang, MD/PhD
Associate Professor of Dermatology, Stanford University
Stanford, California



State-of-the-Art Plenary Lecture 2
Immunologic Influences on Cancer Development and Progression
Michael Girardi, MD
Associate Professor and Residency Director, Yale University
New Haven, Connecticut



State-of-the-Art Plenary Lecture 3
Psoriatic Arthritis vs. Psoriasis: What Can We Learn from Genetics?
James T. Elder, MD/PhD
Professor, University of Michigan
Ann Arbor, Michigan



State-of-the-Art Plenary Lecture 4
Transcriptional Regulation in Melanocytes and Melanoma
David E. Fisher, MD/PhD
Chief of Dermatology, Massachusetts General Hospital
Boston, Massachusetts



State-of-the-Art Plenary Lecture 5
Cadherins: Tales of Adhesion
Andrew Kowalczyk, PhD
Associate Professor of Cell Biology, Emory University
Atlanta, Georgia

Blank Forum, Awards, Networking Events & Business Meeting

Irvin H. Blank Forum

Held annually, the Irvin H. Blank Forum is designed especially for residents, fellows and students. This year's forum, *Recent Developments in Skin Immunity: Translational Implications*, will be held on Wednesday, May 6, 2009 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.



Innate Immunity: Antimicrobial Peptides in Immune Defense

Richard Gallo, MD/PhD
Chief of Dermatology, University of California, San Diego
San Diego, California



Role of Vitamin D in Immune Defense Against Microbial Pathogens

Robert Modlin, MD
Professor and Chief of Dermatology, University of California, Los Angeles
Los Angeles, California



Plasmacytoid Dendritic Cells in Skin Immunity

Michel Gilliet, MD
Associate Professor Immunology and Melanoma Medical Oncology, University of Texas
Houston, Texas



Th17 Cells in Skin Immunity and Disease

Andrew Blauvelt, MD
Professor of Dermatology, Oregon Health & Science University
Portland, Oregon



Regulatory T Cells and Immune Surveillance in the Skin

Rachael Clark, MD/PhD
Assistant Professor of Dermatology, Brigham & Women's Hospital
Boston, Massachusetts

American Skin Association Achievement Awards

Thursday, May 7, 2009 • 10:00 - 10:10 am • 517 A/B/C

The American Skin Association presents its Achievement Awards to Raymond E. Boissy, PhD (Vitiligo & Pigment Cell Disorders); W.H. Irwin McLean, PhD (Autoimmune & Inflammatory Skin Diseases); Paul A. Khavari, MD/PhD (Skin Cancer & Melanoma); Christopher E.M. Griffiths, MD (Psoriasis); and Alan N. Moshell, MD (Public Policy / Medical Education).

David Martin Carter Mentor Award

Thursday, May 7, 2009 • 10:10 - 10:15 am • 517 A/B/C

The American Skin Association presents the 2009 David Martin Carter Mentor Award to Thomas J. Lawley, MD, FAAD, Dean, Emory University.

Stephen Rothman Memorial Award

Friday, May 8, 2009 • 9:00-9:10 am • 517 A/B/C



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

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

Opening Night Welcome Reception

Wednesday, May 6, 2009 • 9:00 pm - 11:00 pm
The Ruelle Walkway, InterContinental Hotel

Resident / Fellow Dinner Session

Friday, May 8, 2009 • 7:30 pm - 9:30 pm
Sarah Bernhardt, InterContinental Hotel

Business Meeting for Members

Friday, May 8, 2009 • 9:10 am - 9:40 am • 517 A/B/C

Members of the SID will meet on Friday, May 8, 2009 from 9:10 am - 9:40 am in 517 A/B/C. 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 2008 Business Meeting and discuss SID affairs. New officers and directors will be elected during the Business Meeting.

Sponsored Satellite Symposium

Advances in Rosacea Research

Thursday, May 7, 2009 • 12:00 pm - 2:00 pm • 517 A/B/C

Chair: Diane Thiboutot, MD, Penn State University, Hershey, Pennsylvania
Richard Gallo, MD, University of California, San Diego, California

Corporate Sponsor: Galderma

12:00 pm

Overview and Presentation of Award

Diane Thiboutot, MD, Professor and Vice Chair of Dermatology Research
Penn State University College of Medicine, Hershey, Pennsylvania

12:10 pm – 12:30 pm

Increased Serine Protease Activity and Cathelicidin Promotes Skin Inflammation in Rosacea

Kenshi Yamasaki, MD/PhD, Division of Dermatology
University of California, San Diego, California

12:30 pm – 12:45 pm

Adenosine Triphosphate Enhances Production of Inflammatory Factors by Human Dermal Microvascular Endothelial Cells: Possible Relevance to Rosacea

Richard Granstein, MD, Chairman, Department of Dermatology
Weill Medical College of Cornell University, New York, New York

12:45 pm – 1:00 pm

Successful Treatment of the Erythema and Flushing of Rosacea Using a Topically Applied Selective α 1-Adrenergic Receptor Agonist, Oxymetazoline

Stuart Shanler, MD
Cliffside Park, New Jersey

1:00 pm – 1:15 pm

Pilot Quality-of-Life Instrument for Acne Rosacea

Kimberly Nicholson, MD
Northwestern University, Chicago, Illinois

1:15 pm – 1:30 pm

Rosacea: Physiology and Regulation Principles

Françoise Chanteloube
Bayer Santé Familiale, Lons, France

1:30 pm – 1:50 pm

Questions and Discussion

1:50 pm – 2:00 pm

Closing Comments

Richard Gallo, MD/PhD, Chief of Dermatology
University of California, San Diego, California

GALDERMA

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of dermatology



SID/Galderma

Rosacea Research Award

In partnership with Galderma, the SID is pleased to present the Advances in Rosacea Research Award to encourage new research in rosacea, as well as to encourage young investigators to specialize in this area of research. This \$10,000 award is structured so that the investigator will receive \$5,000, and \$5,000 will be donated to his/her laboratory. The award is given to an investigator who publishes the best paper in rosacea research during the previous three years. The ad hoc SID Committee on Advances in Rosacea Research selects the best paper. This award is not limited to members of the SID, but is open to scientists worldwide.

2009 SID/Galderma Rosacea Research Award

Kenshi Yamasaki, MD/PhD
University of California, San Diego
San Diego, California

Disclosure Statements

See Author / Speaker Index (pages 63-94) for individual speaker disclosures.

Sponsored Satellite Symposium

Burden of Skin Disease Co-Morbidity Symposium

Thursday, May 7, 2009 • 5:30 pm - 7:30 pm • 517 A/B/C

Chairs: Kevin Cooper, MD, University Hospitals, Cleveland, Ohio
Joel Gelfand, MD, University of Pennsylvania, Philadelphia, Pennsylvania
Corporate Sponsors: Abbott Laboratories, Amgen and Centocor

5:30 pm - 5:40 pm

Co-morbidity as a Unifying Tool

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

5:40 pm - 5:55 pm

Co-morbidity as a Tool for Population Studies

Joel Gelfand, MD, Medical Director, Clinical Studies Unit and
Assistant Professor of Dermatology
University of Pennsylvania, Philadelphia, Pennsylvania

5:55 pm - 6:25 pm

Strengths & Weaknesses of Using Databases for Epidemiological Studies

Jacques Le Lorier, MD/PhD, Professor, Department of Medicine
University of Montréal, Montréal, Canada

6:25 pm - 6:40 pm

Macrophage Inflammation, Lipids, and Atherosclerosis

Geneviève Renier, MD/PhD, Associate Professor, Department of Medicine
University of Montréal, Montréal, Canada

6:40 pm - 6:48 pm

Psoriasis Activation of Monocytes and Dendritic Cells

Kevin Cooper, MD, Professor and Chairman, Department of Dermatology
University Hospitals, Cleveland, Ohio

6:48 pm - 7:00 pm

Vitamin D and Macrophage-mediated Inflammation

Robert Modlin, MD, Professor and Chief of Dermatology
University of California, Los Angeles, California

7:00 pm - 7:20 pm

Questions & Discussion

7:20 pm - 7:30 pm

Closing Remarks

Robert Swerlick, MD
Emory University, Atlanta, Georgia

7:30 pm - 8:30 pm

Social Reception for Symposium Attendees

517 D, Palais des congrès



The Society is grateful to our industry sponsors for providing unrestricted educational grant support for this Sponsored Satellite Symposium. All meeting registrants are invited to attend.

Lowell Goldsmith, MD
*SID Senior Medical and
Scientific Advisor*
Co-Morbidity Project Steering
Committee Chair

Disclosure Statements

See Author / Speaker Index (pages 63-94) for individual speaker disclosures.

Associate Meetings

International Pachyonychia Congenita Consortium

Hosted by Pachyonychia Congenita Project

Tuesday, May 5, 2009 • 9:00 am - 5:00 pm • 524 A/B/C

Delivery! An Introduction

Nucleic Acid Delivery: An Urgent Need

Nicholas Dean, PhD

Excaliard Pharmaceuticals, Carlsbad, California

Topical Delivery of siRNAs: Challenges and Lessons Learned

Joseph Carroll, PhD

University of Colorado, Boulder, Colorado

Experience with Clinical Trials

TD101 Clinical Trial: Intradermal Injection of siRNA

Sancy A. Leachman, MD/PhD

University of Utah, Salt Lake City, Utah

Plasmid DNA Delivery with Electroporation: Results from Pre-clinical and Clinical Studies

Richard Heller, PhD

Old Dominion University, Norfolk, Virginia

Topical Delivery of Proteins by Liposomes

Daniel Yarosh, PhD

Estee Lauder Companies, Inc., Melville, New York

AVT-01 Decoy Oligodeoxynucleotides Show a Clear Drug Potential in Psoriasis Clinical Phase IIa Studies Associated with a Very Specific Th-17 Pathway Inhibitor Signature

Dr. Thomas Schulze, Dr.rer.nat.

Avontec GmbH, Martinsried, Germany

Development of Delivery Technologies

Topical Non-invasive Delivery of Nucleic Acids

Marianna Foldvari, PhD

University of Waterloo, Ontario, Canada

Developing Topical Formulations for siRNA Skin Delivery

Roger L. Kaspar, PhD

TransDerm, Inc., Santa Cruz, California

Sonoporation & Sonophoresis: Transdermal Delivery Mediated by Ultrasound

Paul Campbell, PhD

University of Dundee, Scotland, United Kingdom

Novel Approaches to Transdermal Drug Delivery

Marc Brown, PhD, CChem, MRSC

MedPharm Ltd., Guildford, Surrey, United Kingdom

Needle-free Liquid Jet Injectors

Samir Mitragotri, PhD

University of California, Santa Barbara, California

Pros and Cons of Using Microneedle Delivery Systems

Tycho Speaker, PhD

TransDerm, Inc., Santa Cruz, California

DNA Delivery Using Coated Microneedle Patch

Yeu-Chun Kim, PhD

Georgia Institute of Technology, Atlanta, Georgia

Gene Delivery to Excised Human Skin Via Microchannels

James Birchall, MRPharmS, PhD

Cardiff University, Wales, United Kingdom

Electromotive Delivery of Oligonucleotides into Rabbit Corneas

Daniel James Gibson, PhD

University of Florida, Gainesville, Florida

HOSTED DINNER—6:30pm for participants

International Pachyonychia Congenita Consortium

Hosted by Pachyonychia Congenita Project

Wednesday, May 6, 2009 • 9:00 am - 12:00 pm • 524 A/B/C

Achieving Successful Delivery of Nucleic Acids to Skin

Prologue

Roger L. Kaspar, PhD

TransDerm, Inc., Santa Cruz, California

The Future View

Dennis Roop, PhD

University of Colorado, Denver, Colorado

Panel Discussion: Developing an Action Plan for Delivery

Christopher Contag, PhD

Stanford University, Stanford, California

Peter Hull, PhD

Division of Dermatology, University of Saskatchewan, Canada

W.H. Irwin McLean, PhD

College of Life Sciences, University of Dundee, United Kingdom

Break and Boxed Lunch

Confirming the Action Plan

Mary Schwartz, Director

PC Project

Following the session, IPCC will join the SID's Translational Research Symposium, 12:00 pm - 3:00 pm, in 514 A/B/C

Contact for additional information:

Mary Schwartz, Director

PC Project

Tel: 877-628-7300 (toll free)

Fax: 877-628-7399

Email: Mary.Schwartz@pachyonychia.org

Associate Meetings

Cutaneous T Cell Lymphoma Symposium

Thursday, May 7, 2009 • 2:00 pm - 5:30 pm • 515 A/B/C

OPEN TO ALL MEETING REGISTRANTS

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

Cutaneous Lymphoma Foundation Young Investigator Award
Chunlei Zhang, MD/PhD, University of Texas, Houston, Texas

LBH-589 inhibits NF- κ B signaling pathway and synergizes with bexarotene to induce apoptosis in CTCL cell lines and patients' Sézary cells. C Zhang, X Zhang, T Trynosky, S Molavi, E Gupta, A Villa-Prados and M Duvic. Houston, TX. 2:00 pm Poster #252

- Low-dose total skin electron beam therapy (TSEBT): A revisited paradigm in management of mycosis fungoides (MF).** J Young, D Navi, N Riaz, RT Hoppe and YH Kim. Stanford, CA. 2:12 pm Poster #317
- Photodynamic therapy with the silicon phthalocyanine Pc 4 induces Bcl-2 photodamage and reduction of CD45RB in the epidermis of Mycosis fungoides patients.** M Deng, AH Hsia, M Lam, Y Liu, LY Xue, ME Kenney, NL Oleinick, KD Cooper and ED Baron. Cleveland, OH. 2:24 pm Poster #795
- Decreased T cell expression of the anti-apoptotic protein Ku70 in CTCL skin lesions.** K Ferenczi, J Ohtola, P Aubert, M Kessler, H Sugiyama, S Matsuyama, T McCormick and KD Cooper. Cleveland, OH. 2:36 pm Poster #190
- Loss of immune function genes and gain of non-lymphoid genes in Sezary Syndrome.** TM Germeroth, HM Gibson, AJ Wilson, BF Chong and HK Wong. Detroit, MI. 2:48 pm Poster #197
- Increased Syndecan4 expression in malignant T-lymphocytes is associated with progression in Mycosis Fungoides.** A Dougherty, L Shiue, V Prieto, R Bassett, X Ni and M Duvic. Houston, TX. 3:00 pm Poster #265
- The possibility of personalized medicine in CTCL: Transcriptional analysis of lesioned patient skin reveals three clusters with distinct clinical outcomes.** I Litvinov, D Jones, D Sasseville and T Kupper. Montreal, Canada and Boston, MA. 3:12 pm Poster #151
- CCL26 and CCL11 produced by lesional fibroblasts increase CCR3+ lymphocytes both in the lesional skin and in the peripheral blood in patients with CTCL.** T Miyagaki, M Sugaya, H Fujita, H Ohmatsu, T Kakinuma, T Kadono and K Tamaki. Tokyo, Japan. 3:24 pm Poster #283
- Dinitrofluorobenzene (DNFB) promotes the development of a high-grade, aggressive lymphoma by MBL2 murine T cells in skin.** X Wu and S Hwang. Bethesda, MD. 3:36 pm Poster #154
- Exploiting the DC-HIL/syndecan-4 pathway to treat cutaneous T cell lymphoma.** J Chung, L Shiue, M Tomihari, M Duvic, PD Cruz and K Ariizumi. Dallas, TX and Houston, TX. 3:48 pm Poster #301
- Toll-like receptor (TLR) agonists synergize with interleukin-15 (IL-15) and interferon gamma (IFN gamma) to boost cell mediated immunity (CMI): Relevance to treatment of cutaneous T-cell lymphoma (CTCL).** M Wysocka, LC Showe, B Benoit, AB Troxel, JM Gelfand and AH Rook. Philadelphia, PA. 4:00 pm Poster #298
- Increased levels of CD4+25high regulatory T cells in patients with cutaneous T-cell lymphoma after extracorporeal photopheresis.** LH Shiue, E Aakhus, P Arias-Mendoza, M Duvic and X Ni. Houston, TX. 4:12 pm Poster #271

Associate Meetings

Research in Cutaneous Surgery Symposium

Friday, May 8, 2009 • 2:00 pm - 5:30 pm • 514 A/B/C

OPEN TO ALL MEETING REGISTRANTS

Presiders: Murad Alam, MD and Jeffrey Orringer, MD

- 1. Induction of pigmentation in human melanoma cells stimulates NFκB activity and affects the responsiveness to vitamin D3 derivatives.** Z Janjetovic, RC Tuckey, LM Pfeffer and AT Slominski. Memphis, TN and Crawley, Australia. 2:00 pm Poster #842
- 2. Immunotherapy of solid tumors utilizing PLGA/ tumor lysate nanoparticles to stimulate TIL and circulating CD8+ tumor-specific T cells.** DJ Hanlon, S Prasad, V Patriub and M Saltzman. New Haven, CT and Bristol, United Kingdom. 2:12 pm Poster #330
- 3. Development and optimization of a serological assay for cytoplasmic melanoma-associated antigen, a potential early marker of response to treatment in resected melanoma.** N Habib, M Lolis, S Ferrone and J Bystryn. New York, NY and Pittsburgh, PA. 2:24 pm Poster #858
- 4. Cyclosporine A (CsA), an immunosuppressant, transforms squamous cell carcinoma (SCC) to a more invasive phenotype: A non-immunological effect.** SE Beatrous, J Xu, H Xu, AR Kurundkar, A Maheshwari, L Kopelovich, CA Elmets and M Athar. Birmingham, AL and Bethesda, MA. 2:36 pm Poster #199
- 5. Positive correlation between VEGF-A expression in melanocytic lesions and degree of histological atypia.** C Curriel-Lewandrowski, JG Einspahr, K Saboda, M Krutzsch, L Morrison and RB Nagle. Tucson, AZ. 2:48 pm Poster #043
- 6. ALDH activity defines tumor-initiating cells in human melanoma.** K Dallaglio, M Okamoto, DR Roop and M Fujita. Aurora, CO. 3:00 pm Poster #851
- 7. Is melanoma in African American patients biologically more aggressive? Analysis of survival in a prognostic factor-matched population.** DT Alexandrescu, FP Nelson, A Bidulescu, H Farzanmehr, GL Peck and LC Kauffman. San Diego, CA; Atlanta, GA and Washington, DC. 3:12 pm Poster #867
- 8. Increased risk of second primary cancers after diagnosis of melanoma.** PT Bradford, DM Freedman, AM Goldstein and MA Tucker. Bethesda, MD. 3:24 pm Poster #827
- 9. CD133 identifies human cutaneous squamous cell carcinoma tumor initiating cells.** GK Patel, CL Yee, A Montemarano, K Maggio and JC Vogel. Cardiff, United Kingdom; Bethesda, MD and Washington DC. 3:36 pm Poster #155
- 10. p53-modulating compounds inhibit ultraviolet B (UVB)-induced skin cancer development in genetically engineered murine models.** DR Bickers, X Tang, Y Zhu, ME Daly, WJ Liu, L Kopelovich, AL Kim and M Athar. New York, NY; Birmingham, AL and Bethesda, MD. 3:48 pm Poster #206
- 11. The role of p53 in melanoma tumor suppression.** T Terzian, S Robinson, R Stiegmann, G Lozano, D Roop, W Robinson and N Box. Aurora, CO and Houston, TX. 4:00 pm Poster #198
- 12. Squamous cell carcinoma cell lines deficient in p53, p63 and global genomic DNA repair.** TK Dong and DH Oh. San Francisco, CA. 4:12 pm Poster #202
- 13. JunB and c-Jun display opposite effects on epidermal growth and neoplasia.** JY Jin, B Leshin, H Ke and JY Zhang. Durham, NC. 4:24 pm Poster #163
- 14. Clinical and pathological characteristics of melanoma in African American patients.** DT Alexandrescu, LC Kauffman, FD Kabigting, CA Dasanu, H Farzanmehr and F Nelson. San Diego, CA; Washington, DC and Hartford, CT. 4:36 pm Poster #835
- 15. Evaluation of antigen loading strategies for dendritic cell vaccines in patients with metastatic melanoma.** LJ Geskin, J Kirkwood, L Butterfield, W Storkus, T Whiteside and LD Falot. Pittsburgh, PA. 4:48 pm Poster #702
- 16. Retinoid inhibition of IGF/PI3K/Akt signaling is a likely mechanism of its anti-Basal cell carcinoma effects.** P So and EH Epstein. Oakland, CA. 5:00 pm Poster #182
- 17. Identification of miRNAs involved in melanoma tumorigenesis.** NB Goldstein, M Fujita, DA Norris and YG Shellman. Aurora, CO. 5:12 pm Poster #830

Associate Meetings

North American Hair Research Society Scientific Meeting

Friday, May 8, 2009 • 6:00 pm - 9:30 pm • 514 A/B/C

OPEN TO ALL MEETING REGISTRANTS

Presider: George Cotsarelis, MD

1. **Circadian clock genes play a role in regulation of timing of anagen progression in mouse hair follicles.** KK Lin, [M Geyfman](#), V Kumar, D Chudova, AT Ihler, P Smyth, R Paus, JS Takahashi and B Andersen. Irvine, CA; Evanston, IL; Luebeck, Germany and Manchester, United Kingdom.
6:00 pm Poster #603
2. **Role of vitamin D receptor in adult hair follicle cycling.** [AE Teichert](#), SM Chang, H Elalieh and DD Bikle. San Francisco, CA. *6:12 pm Poster #597*
3. **Dynamic expression profiling of human dermal papilla signature during explant culture.** [C Higgins](#), K Fantuazzo, H Bazzi, G Richardson, R Bernstein, C Jahoda and A Christiano. New York, NY. and Durham, United Kingdom.
6:24 pm Poster #617
4. **Cross-talk between AHR and PPAR gamma signaling pathways in Cicatricial Alopecia.** LF Xu, P Mirmirani, VH Price, TS McCormick, KD Cooper and [P Karnik](#). Cleveland, OH and San Francisco, CA. *6:36 pm Poster #631*
5. **Reciprocal requirements for Eda/Edar/NF-kB and Wnt/b-catenin signaling pathways in hair follicle induction.** [Y Zhang](#), T Andl, ML Mikkola, P Overbeek, SE Millar and R Schmidt-Ullrich. Philadelphia, PA; Helsinki, Finland; Houston, TX and Berlin, Germany. *6:48 pm Poster #636*
6. **Murine eyelashes as a study model for hypertrichology or alopecia of eyelashes.** [M Tauchi](#), TA Fuchs, DF Woodward and E Lütjen-Drecoll. Erlangen, Germany and Irvine, CA.
7:00 pm Poster #612

Associate Meetings

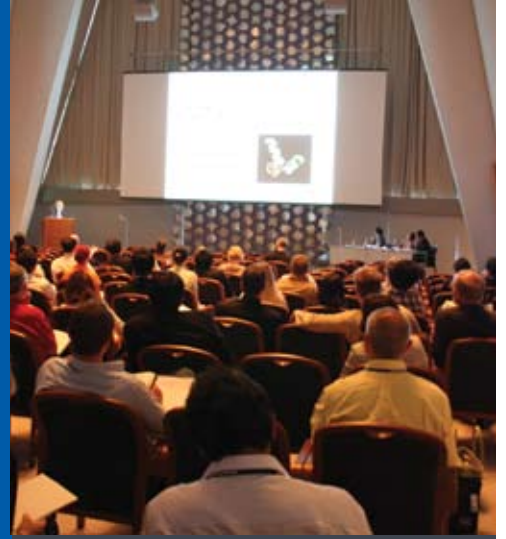
American DermatoEpidemiology Network (ADEN) Business & Scientific Session

Saturday, May 9, 2009 • 10:00 am - 1:00 pm • 524 A/B/C

OPEN TO ALL MEETING REGISTRANTS

Presiders: Robert Dellavalle MD/PhD and Michael Ming, MD

- Eczema prevalence in the United States: Data from the 2003 National Survey of Children's Health.** [TE Shaw](#), GP Currie and EL Simpson. Portland, OR. 10:00 am Poster #372
- A genetic epidemiologic investigation of gestational outcomes associated with the DNA repair disorder, trichothiodystrophy.** [R Moslehi](#), C Signore, D Tamura, JL Mills, JJ DiGiovanna, MA Tucker, J Troendle, A Goldstein and KH Kraemer. Bethesda, MD and Albany, NY. 10:12 am Poster #350
- Resource utilization and quality of life in the congenital ichthyoses.** L Kamalpour, [BL Gammon](#), KH Chen, E Veledar, Z Rice, M Pavlis and SC Chen. Atlanta, GA; New Orleans, LA and Taichung, Taiwan. 10:24 am Poster #373
- Psoriasis is associated with disruption in religious affiliation and marital status during early adulthood.** [EM Seidler](#) and AB Kimball. Boston, MA. 10:36 am Poster #389
- Treatment of primary mucinous carcinoma of the skin: Meta-analysis of 189 cases.** [M Alam](#), R Trela, N Kim, S Yoo and A Rademaker. Chicago, IL. 10:48 am Poster #382
- Validation of psoriasis self-reports and phenotypes in the nurses health study 2.** [PL Dominguez](#), HK Choi, G Curhan and AA Qureshi. Boston, MA. 11:00 am Poster #374
- Vitamin D Levels and photoprotective behavior in patients with NMSC.** [N Hill](#), L Delong, V Tangpricha, B Gammon, M Kumari, E Veledar and SC Chen. Boston, MA and Atlanta, GA. 11:12 am Poster #385
- Exposure to particle pollution is associated with skin aging in elderly women.** [A Vierkötter](#), T Schikowski, U Ranft, D Sugiri, M Matsui, A Morita, U Krämer and J Krutmann. Düsseldorf, Germany; Melville, NY and Nagoya, Japan. 11:24 am Poster #358
- Length-of-wait: A novel measure for access to ambulatory care in dermatology.** [P Agarwal](#), T Lugdon, L Wang, M Rubenstein, H Haynes, T Kupper and A Qureshi. Boston, MA. 11:36 am Poster #379
- Cutaneous lymphoma incidence patterns in the United States: A population-based study of 3,884 cases.** [P Bradford](#), SS Devesa, WF Anderson and JR Toro. Rockville, MD and Bethesda, MD. 11:48 am Poster #351
- Itch and perceived self-efficacy among adolescents: Results from a cross-sectional study.** [F Dalgard](#) and R Stern. Boston, MA and Oslo, Norway. 12:00 pm Poster #352
- Treatment of rare and uncommon nonmelanoma tumors by Mohs surgery: A meta-analysis of 1232 cases.** [M Alam](#), C Wickman, D Danahey, NA Kim, S Yoo and A Rademaker. Chicago, IL. 12:12 pm Poster #381
- Patient preferences for dermatology visits.** [JY Yoo](#), DL Pancir and AB Kimball. New York, NY and Boston, MA. 12:24 pm Poster #355
- Pyoderma gangrenosum: A tertiary care experience.** AM Binus, AA Qureshi, VW Li and [LS Winterfield](#). Boston, MA. 12:48 pm Poster #361



Educational Tracks

- 31 Track Descriptions
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- 34 Clinical Scholars Plenary Session
- 35 Clinical Scholars Lectures
- 36 Resident Symposium

Educational Track Descriptions

The SID is pleased to offer three educational program tracks within the 2009 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 new 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.

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.

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.

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 6, 2009	Translational Research					Translational Research Symposium		
	Clinical Scholars							
	Resident							
Thursday, May 7, 2009	Translational Research	Plenary Session 1	Beerman & Kanof Lectures	Poster Session 1 & Technical Exhibits		Advances in Rosacea Research <i>Sponsored by Galderma</i>		
	Clinical Scholars	Plenary Session 1	Beerman & Kanof Lectures	Clinical Scholars Plenary Session	Poster Session 1 & Technical Exhibits	Advances in Rosacea Research <i>Sponsored by Galderma</i>		
	Resident	Plenary Session 1	Beerman & Kanof Lectures	Clinical Scholars Plenary Session		Advances in Rosacea Research <i>Sponsored by Galderma</i>		Ins
Friday, May 8, 2009	Translational Research	Plenary Session 2		Farber Lecture	State-of-the-Art Plenary Lectures 4, 5	Poster Session 2 & Technical Exhibits		
	Clinical Scholars	Plenary Session 2		Farber Lecture	State-of-the-Art Plenary Lectures 4, 5	Clinical Scholars Lecture Session		
	Resident	Plenary Session 2			State-of-the-Art Plenary Lectures 4, 5	Clinical Scholars Lecture Session		
Saturday, May 9, 2009	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 <i>or</i> CTCL Symposium		Burden of Skin Disease Co-Morbidity Symposium					
Concurrent Minisymposia <i>or</i> CTCL Symposium		Burden of Skin Disease Co-Morbidity Symposium					
Resident Symposium <i>ights into an Academic Career</i>							
Concurrent Minisymposia							
Concurrent Minisymposia				Resident / Fellow Dinner Session			
Concurrent Minisymposia							
Concurrent Minisymposia							

Educational Track Programs

Translational Research Symposium

Wednesday May 6, 2009 • 12:00 pm - 3:00 pm • 514 A/B/C

Presider TBD

Photoacoustic Imaging of Melanoma

Lihong Wang, PhD
Professor of Radiology, Washington University
St. Louis, Missouri

Optical Methods of Molecular Imaging

Chris Contag, PhD
Associate Professor Dept. of PM & I and Rediology,
Stanford University
Stanford, California

Multispectral Imaging

Marcus Bosenberg, MD/PhD
Associate Professor of Dermatology and Pathology,
Yale University
New Haven, Connecticut

Confocal Microscopy of Human Skin:

Toward Clinical Applications
Milind Rajadhyaksha, PhD
Memorial Sloan Kettering Cancer Center
New York, New York

Closing Remarks

Ethan Lerner, MD/PhD
Associate Professor of Dermatology, Harvard University
Boston, Massachusetts

Clinical Scholars Plenary Session

Thursday, May 7, 2009 • 10:00 am - 11:00 am • 516 A/B

*OPEN ONLY TO CLINICAL SCHOLARS &
RESIDENT TRACK PARTICIPANTS*

Presider: Ponciano Cruz, MD

1. **The cyclooxygenase-2 inhibitor celecoxib effectively suppresses the development of nonmelanoma skin cancers: Results of a phase II/III clinical trial.** [CA Elmets](#), JL Viner, AP Pentland, W Cantrell, H Bailey, S Kang, KG Linden, M Heffernan, D Madeleine, B Elewski, A Umar, H Lin, W Bell and G Gordon. Birmingham, AL; Madison, WI; Ann Arbor, MI; Irvine, CA; St. Louis, MO; Houston, TX; Bethesda, MD; Skokie, IL and Rochester, NY.

*Presented by Craig Elmets, MD
Professor and Chairman of Dermatology, University of
Alabama, Birmingham
Birmingham, Alabama*

2. **Photochemical tissue bonding for closure of excision wounds: A first-in-human clinical trial.** S Tsao, M Yao, FP Henry, H Tsao, RW Redmond and [IE Kochevar](#). Boston, MA.

*Presented by Irene Kochevar, MD
Professor, Massachusetts General Hospital
Boston, Massachusetts*

3. **Oral and topical small molecule hedgehog antagonists reduce BCCs in Ptch1+/- K14Cre-ER2 p53 fl/fl mice.** JY Tang, T Tang, TZ Xiao, A Wu, E Shpall, C Callahan, F de Sauvage and [EH Epstein](#). Oakland, CA; Stanford, CA and South San Francisco, CA.

*Presented by Ervin Epstein, MD
Principal Investigator, Children's Hospital of Oakland
Research Institute, Oakland, California*

4. **Skin resident T cells producing IL-13 and TNF α : a possible role in the initiation of cutaneous sclerosis.** [A Calarese](#), M Lichtman, TS Kupper and RA Clark. Boston, MA.

*Presented by Rachael Clark, MD
Assistant Professor of Dermatology, Harvard University,
Boston, Massachusetts*

Educational Track Programs

Clinical Scholars Lecture Session

Friday, May 8, 2009 • 11:30 am - 1:30 pm • 519 A/B

OPEN ONLY TO CLINICAL SCHOLARS &
RESIDENT TRACK PARTICIPANTS

Presider: Nick Reynolds, MD/FRCP



Antimicrobial Peptides and the Skin Immune System in Human Skin Disease

Richard Gallo, MD/PhD
Chief of Dermatology, University of California, San Diego
San Diego, California



Barrier Function and Effects of Stress

Peter Elias, MD
Professor, Department of Dermatology,
University of California, San Francisco
San Francisco, California



Stem Cells in the Skin

George Cotsarelis, MD
Associate Professor of Dermatology,
University of Pennsylvania
Philadelphia, Pennsylvania

Clinical Scholars Lecture Session

Saturday, May 9, 2009 • 10:00 am - 12:00 pm • 519 A/B


OPEN ONLY TO CLINICAL SCHOLARS &
RESIDENT TRACK PARTICIPANTS

Presider: Nick Reynolds, MD/FRCP



Cell Therapy

(or Pre-Natal Diagnosis of Skin Disease)

John McGrath, MD 
Professor of Molecular Dermatology, King's
College London
London, United Kingdom



Acne and Insights into Mechanism of Anti-acne Therapy

Diane Thiboutot, MD
Professor and Vice Chair of Dermatology
Research, Pennsylvania State University
Hershey, Pennsylvania



Epidemiology of Skin Cancer, UV Exposure and Role of Vitamin D

Martin Weinstock, MD/PhD
Professor of Dermatology, Brown University
Providence, Rhode Island

Educational Track Programs

Resident Symposium: Insights into an Academic Career

Thursday, May 7, 2009 • 2:00 pm - 5:00 pm • 514 A/B/C

OPEN ONLY TO RESIDENT TRACK PARTICIPANTS



Welcome

Oscar Colegio, MD/PhD
Clinical Instructor, Yale University
New Haven, Connecticut



Writing the Perfect (Or At Least Nearly Perfect) Paper

Sam Hwang, MD/PhD
Chairman of Dermatology,
Medical College of Wisconsin
Milwaukee, WI



Mentoring & Finding a Niche

Stephen Katz, MD/PhD
Director, National Institute of Arthritis and
Musculoskeletal and Skin Diseases
Bethesda, Maryland



The JID & Choosing an Appropriate Journal for the Perfect Paper

Paul Bergstresser, MD
Professor of Dermatology,
University of Texas Southwestern
Dallas, Texas



Academic Rank

Amy Paller, MD
Professor and Chairman of Dermatology,
Northwestern University
Chicago, Illinois



NIH Funding Programs

Carl Baker, MD/PhD
Program Director, Division of Skin and
Rheumatic Diseases
Bethesda, Maryland



How I Did It

Daniel Kaplan, MD/PhD
Professor of Dermatology,
University of Minnesota
Minneapolis, Minnesota



Effective Oral Presentations

John Stanley, MD
Chairman of Dermatology,
University of Pennsylvania
Philadelphia, Pennsylvania



Abstracts

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- 42 Cell Adhesion & Matrix Biology
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- 47 Epidermal Structure & Function
- 49 Genetic Disease, Gene Regulation & Gene Therapy
- 50 Growth Factors & Signal Transduction
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Abstract Presentation Information

Oral Presentations

Oral presentations and lectures will take place at the Palais des congrès. 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 523 A/B).

Poster Presentations

All posters will be displayed until Saturday, May 9 at 12:00 p.m. in Room 220 D/E. 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 9. Posters may not be removed early. The SID is not responsible for posters left unclaimed as of 6:00 p.m. on Saturday, May 9. Unclaimed posters will not be returned.

Install All Posters

Wednesday, May 6, 2009 • 8:00 am - 6:00 pm

Poster Session I

Odd poster numbers 001-313 & Even poster numbers 314-628
Thursday, May 7, 2009 • 10:00 am - 12:00 pm

Poster Session II

Even Poster numbers 002-312 & Odd Poster numbers 629-867
Friday, May 8, 2009 • 11:15 am - 1:15 pm

Poster Session III

Odd Poster numbers 315-627 & Even Poster numbers 630-868
Saturday, May 9, 2009 • 10:00 am - 12:00 pm

Dismantle All Posters

Saturday, May 9, 2009 • 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

The 523 A/B will be available to all presenters.

Tuesday, May 5, 2009 • 4:00 pm - 7:00 pm
Wednesday, May 6, 2009 • 7:00 am - 8:00 pm
Thursday, May 7, 2009 • 7:00 am - 5:00 pm
Friday, May 8, 2009 • 7:00 am - 5:00 pm
Saturday, May 9, 2009 • 7:00 am - 4:00 pm

Keyword Index

The keyword index is located on pages 59-62 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 Friday, May 8, 2009 from 2:00-5:30 p.m. in Room 518 A/B/C, Palais des congrès. Orals designated by two asterisks (**) will be presented during a Plenary Session.

- 001 Utilization of a new tissue expander in the closure of a large Mohs surgical defect.** A Bajoghli, J Yoo and D Faria. Falls Church, VA; Washington, DC; Tyson's Corner, VA and Vienna, VA.
- 002* Beta-arrestin1 mediates nicotinic acid induced flushing, but not its antipolytic effect.** RW Walters, AK Shukla, JJ Kovacs, JD Violin, SM DeWire, CM Lam, JR Chen, MJ Muehlbauer, EJ Whalen and RJ Lefkowitz. Durham, NC.
- 003 The effect of magnolia on VEGF regulation: an *in vitro* vascular permeability assay and possible implications.** M Stotland, D Collins, Y Ee, AR Shalita and WS Lee. Brooklyn, NY and Melville, NY.
- 004 Epinephrine increases keratinocyte migration by activating the α_{2B} -adrenergic receptor.** P Steenhuis, AP Glucksman, Z Gurenko and RR Isseroff. Davis, CA.
- 005* Opposing roles of angiogenesis and lymphangiogenesis in inflammation.** R Huggenberger, K Alitalo and M Detmar. Zurich, Switzerland and Helsinki, Finland.
- 006* Rate of cutaneous wound healing is dependent on MAPKAPK-2-mediated macrophage activation.** T Thuraisingam, Y Xu, K Eadie, M Heravi, R Greemberg, G Matthias, M Guiot and D Radzioch. Montreal, Canada and Hannover, Germany.
- 007 Differential keratin expression during epiboly in an organotypic model of injury.** S Luo, T Yufit, P Carson and V Falanga. Providence, RI and Boston, MA.
- 008* Apelin attenuates UVB-induced inflammation by promoting the stabilization of lymphatic vessels.** M Sawane, K Kajiya, H Kidoya, F Muramatsu and N Takakura. Yokohama, Japan and Suita, Japan.
- 009* MAPK-dependent CCL21 expression by lymphatic endothelial cells.** T Miyagaki, M Sugaya, H Okochi, A Blauvelt and K Tamaki. Tokyo, Japan and Portland, OR.
- 010* Enrichment of tissue-engineered skin with Schwann cells improves cutaneous nerve regeneration.** M Blais, M Grenier and F Berthod. Quebec, Canada.
- 011 Withdrawn.**
- 012 Development of a standardized chronic wound in a diabetic (db/db) mouse by application of biofilm.** P Hochwalt, G Zhao, R Underwood, M Usui, P Singh, P Stewart, G James, J Olerud and P Fleckman. Seattle, WA and Bozeman, MT.
- 013 Human lactoferrin stimulates keratinocytes proliferation, migration and protects cells from death.** L Tang, J Wu, Q Ma, N Huang and J Li. Miami, FL and Sacramento, FL.
- 014 Topical simvastatin accelerates wound healing in diabetes by enhancing angiogenesis and lymphangiogenesis.** J Asai, H Takenaka, A Moriyasu, N Katoh and S Kishimoto. Kyoto, Japan.
- 015 The linear excisional wound: a new model for human *ex vivo* wound healing studies.** AE Rizzo, LA Beckett, BS Baier and RR Isseroff. Davis, CA and Mather, CA.
- 016 A dual regulatory role of PEDF and its interplay with VEGF in human epidermal keratinocytes and dermal fibroblasts: From normal skin to psoriasis.** M Zheng, X Man, X Yang, C Li and S Cai. Hangzhou, China.
- 017 Molecular techniques: Role in diagnosing microbial bioburden within a wound.** S Kandula, JH Melendez, ME Shirliff, JM Zenilman and GS Lazarus. Baltimore, MD.
- 018* Promotion of cutaneous wound healing with a fusion protein of hepatocyte growth factor and collagen-binding domain of fibronectin.** N Okiyama, T Kitajima, Y Ito, N Miyasaka, H Yokozeki and H Kohsaka. Tokyo, Japan; Kanagawa, Japan and Saitama, Japan.
- 019* CXCR4-selective antagonist AMD3100 accelerates impaired wound healing in diabetic mice.** Y Nishimura, M li, J Asai, H Takenaka, N Katoh, H Hamada, G Qin, DW Losordo and S Kishimoto. Kyoto, Japan; Kobe, Japan; Chiba, Japan and Chicago, IL.
- 020* Epidermal caspase-8 regulates a wound healing response.** P Lee, D Lee and C Jamora. La Jolla, CA.
- 021* Breaking the "harmony" of signaling via TNFR1/p55 or TNFR2/p75 for cancer treatment.** S Sasi, H Gilbert, M Silver, C Coleman, L Hlatky, G Qin, R Kishore and DA Goukassian. Boston, MA and Chicago, IL.
- 022 Rosacea: Physiology and regulation principles.** F Chanteloube, A Loiseau and G Tenca. Lons, France and Gençay, France.
- 023* CLIC4 regulates TGF- β dependent myofibroblast conversion of dermal fibroblasts.** A Shukla, S Madanikia and SH Yuspa. Bethesda, MD.
- 024** Rapamycin inhibits tumor angiogenesis in a xenograft model of tuberous sclerosis complex.** S Li, J Wang, S Rajesh, J Moss and T Darling. Bethesda, MD.
- 025 Change of fate of epidermal stem cells contributes to pathogenesis of chronic wounds.** O Stojadinovic, I Pastar, A Krzyzanowska, S Vukelic, K Zimmerman, H Brem and M Tomic-Canic. Miami, FL and New York, NY.
- 026 Isolation of directionally migrating human keratinocytes in an electric field.** YC Liu, H Yang, JY Lee, A Revzin and RR Isseroff. Davis, CA.
- 027 Acute animal model of radiation-altered wound healing.** M Jourdan, E Olasz, J Moulder, B Fish, M Mader, A Schock, A Lopez and Z Lazarova. Milwaukee, WI.
- 028 Carboxymethyl lysine as a biomarker for the senescence of human dermal microvascular endothelial cells.** J Noh, S Oh, J Lee, N Chang and K Lee. Seoul, Korea, South.
- 029 Proteomic analysis of human dermal microvascular endothelial cells after UVB irradiation and intense pulsed light treatment.** S Oh, J Noh, N Chang, K Lee and J Lee. Seoul, Korea, South.
- 030 Skin wounds actively generate endogenous electric fields and fluxes of Ca^{2+} and Na^{+} .** B Reid, D Graham, P Smith and M Zhao. Davis, CA and Woods Hole, MA.
- 031 Fibronectin growth factor-binding peptides protect adult human dermal fibroblasts from oxidative- and cytokine-induced death.** L Macri, MG Tonnesen, F Lin and RA Clark. Stony Brook, NY and Northport, NY.
- 032 Fibronectin contains four novel, evolutionarily conserved growth factor-binding peptides required for fibroblast survival.** RA Clark, F Lin and MG Tonnesen. Stony Brook, NY and Northport, NY.
- 033 Indigo naturalis and one of its pure components, indigo, exert anti-angiogenic effects both *in vivo* and *in vitro*.** Y Lin and J Su Pang. Keelung, Taiwan and Taoyuan, Taiwan.
- 034 Comparative assessment of molecular events involved in wound healing using a porcine partial thickness wound model and real time RT-PCR.** R Perez, Y Rivas, J Gil, J Valdes and SC Davis. Miami, FL.
- 035 Media conditioned by human metastatic melanoma cells inhibits *in vitro* dermal fibroblast migration.** K Kobrin, T Kwak, T Yufit and V Falanga. Providence, RI and Boston, MA.
- 036* Overexpression of Hoxb13 in mouse skin results in delayed wound healing, dermatitis, and upregulation of VEGF.** JA Mack and EV Maytin. Cleveland, OH.
- 037 *Candida albicans* infections: A porcine skin model to evaluate treatment efficacy.** R Perez, J Gil, J Valdes, Y Rivas and SC Davis. Miami, FL.
- 038 Podoplanin can influence the MAPK pathway and thereby regulate its own expression.** T Schüller, L Bruckner-Tuderman and V Schacht. Freiburg, Germany.
- 039* Delayed cutaneous wound repair in Pyk2 knockout mice.** A Hinds, CJ Burns, BL Marmer, G Goldberg, M Blumenberg and T Efimova. St. Louis, MO and New York, NY.
- 040 Parallel studies of cutaneous wound healing: IR imaging, confocal Raman microscopy, and molecular biology.** G Zhang, K Chan, M Tomic-Canic, O Stojadinovic, B Lee, CR Flach and R Mendelsohn. Newark, NJ; London, United Kingdom; New York, NY and South San Francisco, CA.
- 041 Identification of minimum amino acid sequence in heat shock protein-90 as a novel motogen for both human keratinocytes and fibroblasts during wound healing.** W Li, C Cheng, J Fan, R Kim, M Chen and D Woodley. Los Angeles, CA.
- 042 Effect of transforming growth factor beta 3 on the proliferative phase of murine wound healing.** J Morrison, B Schutte and M Dunnwald. Iowa City, IA and East Lansing, MI.

- 043** Positive correlation between VEGF-A expression in melanocytic lesions and degree of histological atypia. [C Curiel-Lewandrowski](#), JG Einspahr, K Saboda, M Krutzsch, L Morrison and RB Nagle. Tucson, AZ.
- 044** The role of insulin-like growth factor-1 (IGF-I) in wound healing of human skin cells. [S Chen](#), J Conte, S Yim, D Pchelintsev and U Santhanam. Suffern, NY.
- 045** Stress-related catecholamines alter chemokines of hMSC *in vitro*. [BR Lin](#), RS Bolaji, JA Nolte and RR Isseroff. Davis, CA and Sacramento, CA.
- 046** Noninvasive assessment of cutaneous microcirculation using functional diffuse reflectance spectroscopy. [I Seo](#), PR Bargo and N Kollias. Skillman, NJ.
- 047** Melanoma cells trigger vascular leak via VEGF-independent activation of endothelial cell matrix metalloproteinases. S Weng and [M Kluger](#). New Haven, CT.
- 048** An I_h current in normal human keratinocytes: Possible involvement in cell migration. [SC Lee](#), EV Leaver, Z Gurenko, P Steenhuis and RR Isseroff. Davis, CA.
- 049*** Overexpression of CD109 in the epidermis modulates inflammation during wound healing. [J Vorstenbosch](#), C Gallant-Behm, R Fang, S Mathur, T Mustoe and A Philip. Montreal, Canada and Chicago, IL.
- 050*** The lysosomal protease cathepsin K plays an important role in wound healing and scar formation in the skin. [TM Ruenger](#), A Sharov, T Sharova, D Zhang and D Broemme. Boston, MA and Vancouver, Canada.
- 051** The role of extracellular superoxide dismutase in the molecular link between inflammation and angiogenesis. [H Lee](#), Y Kim, B Jeon, J Han and T Kim. Seoul, Korea, South.
- 060** Tolerance to mature but not precursor desmoglein 1 (Dsg1) in non-pemphigus patients: Implications for development of autoimmunity. [J Yamagami](#), S Kacir, AS Payne, DL Siegel and JR Stanley. Philadelphia, PA.
- 061** Calcitonin gene-related peptide (CGRP) inhibits chemokine production by human dermal microvascular endothelial cells (HDMEC). [J Huang](#), W Ding and RD Granstein. New York, NY.
- 062** Eruptive pseudoangiomatosis lesions do not harbor Epstein-Barr virus but are associated with characteristic intravascular neutrophils. S Jin, M Chang, H Shin, H Park and [S Cho](#). Seoul, South Korea and Ilsan, Korea, South.
- 063** Autoimmunity to desmocollin 3 in pemphigus vulgaris. [X Mao](#), AR Nagler, LH Jackson, EJ Choi, KM Leiferman, M Amagai, JJ Zone and AS Payne. Philadelphia, PA; Salt Lake City, UT and Tokyo, Japan.
- 064** A desmoglein 3 pemphigus antibody signaling. A Chernyavsky, J Arredondo and [SA Grand](#). Irvine, CA.
- 065** Microarray analysis defines disease-, severity-, and inheritance-specific gene signatures in Alopecia Areata blood. [AB Coda](#), V Qafalijaj Hysa, K Seiffert-Sinha and AA Sinha. East Lansing, MI.
- 066** HLA-E profile is associated with susceptibility to Alopecia areata. [DG Bhanusali](#), A Sachdev, A Rahmanian, JA Gerlach and AA Sinha. East Lansing, MI.
- 067** Increased IFN- γ production from peripheral blood mononuclear cells in acne vulgaris patients by *Propionibacterium acnes*: Host but not *P. acnes* species dependent production. [H Sugisaki](#), K Yamanaka, M Kakeda, H Kitagawa, I Kurokawa and H Mizutani. Tsu, Japan.
- 068** Escape of desmoglein 3-reactive T cell from central tolerance by expression of dual T cell receptors. [H Takahashi](#), M Kuwana and M Amagai. Tokyo, Japan.
- 069** Expression of the 27 kD and 90 kD heat shock proteins in psoriatic skin. [D Mairhofer](#), RM Nazarian, A Lobo, RJ Geller, MC Mihm and F Trautinger. St. Poelten, Austria; Boston, MA and Concord, MA.
- 070** The molecular basis for increased dermal content of hyaluronic acid and chondroitin sulfate in cutaneous lupus erythematosus. [LM Chang](#), L Schaffer, SR Head and VP Werth. Philadelphia, PA and La Jolla, CA.
- 071*** Induced keratinocyte hyper-proliferation in alfa2beta1 integrin transgenic mice results in systemic immune cell activation. I Teige, A Bäcklund, L Svensson, PH Kvist, TK Pedersen and [K Kemp](#). Ballerup, Denmark.
- 072** Activating transcription factor 3 is expressed in inflamed human skin and is upregulated by interferon- γ . B Sapkota and [BP Pollack](#). Atlanta, GA.
- 073** Familial Mediterranean fever (FMF)-associated mutant B30.2 domain activates a NALP3-independent inflammasome and induces autoinflammatory disease in mice. [Y Cho](#), J Chae, J Linton, PP Liu, L Feigenbaum, DL Kastner and SI Katz. Beth, MD.
- 074*** Ceramide deficiency in epidermis results in development of dermatitis through Langerhans cell maturation and expansion of IL-17-producing $\gamma\delta$ T cells. [K Nakajima](#), M Terao, H Azukizawa, I Katayama, J Takeda and S Sano. Kochi, Japan and Osaka, Japan.
- 075** Increased IL-23 expression, but not IL-12, in individuals with hyperkeratotic hand dermatitis or palmoplantar psoriasis. [JV Lillis](#), C Guo, J Lee and A Blauvelt. Portland, OR.
- 076** Improvement of psoriasis-like lesions in transgenic mice overexpressing amphiregulin with omega-3 supplementation. [J Genebriera](#), M Pellizzon and M Pittelkow. Rochester, MN and New Brunswick, NJ.
- 077** Regulation of CCL20 chemokine by Trim32 and Piasy, the contribution of keratinocyte in psoriasis pathogenesis. [Y Liu](#), J Lagowski and M Kulesz-Martin. Portland, OR.
- 078** Roles of sphingosine-1-phosphate for eosinophil localization and function in mice. [K Sugita](#), K Kabashima, J Sakabe, R Yoshiki and Y Tokura. Kitakyushu, Japan and Kyoto, Japan.
- 079** Successful preventive and therapeutic approaches to CD8 T cell-mediated autoimmunity using self-peptides. [J Guterma](#), K Nogales, E Nelson, J Linton, F Miyagawa, Y Cho and SI Katz. Bethesda, MD.
- 080*** Apoptosis precedes desmoglein cleavage and keratinocyte dissociation in pemphigus: Anti-Fas Ligand neutralizing antibodies prevent acantholysis both *in vitro* and *in vivo*. [R Lotti](#), E Shu, F Truzzi, E Palazzo, A Marconi, Y Kitajima and C Pincelli. Modena, Italy and Gifu, Japan.
- 081** Impaired psoriatic CCR5⁺ regulatory T cells exhibit reduced migratory capacity toward CCR5 ligands. [H Sugiyama](#), T McCormick, J Massari, S Shimada and K Cooper. Cleveland, OH and Yamanashi, Japan.
- 082*** Skin resident T cells producing IL-13 and TNF α : a possible role in the initiation of cutaneous sclerosis. [A Calarese](#), M Lichtman, TS Kupper and RA Clark. Boston, MA.

Auto-immunity and Inflammation

All orals [designated with an asterisk (*)] listed below are presented in the Auto-immunity and Inflammation Minisymposium on Friday, May 8, 2009 from 2:00-5:30 p.m. in Room 524 A/B/C, Palais des congrès. Orals designated by two asterisks (***) will be presented during a Plenary Session.

- 052** Upregulation of Id1 in peripheral blood of psoriatic patients. [C Ronpirin](#), T Tencomnao, J Wongpiyabavorn, M Arjariyakul and W Chaicumpa. Prathumthani, Thailand and Bangkok, Thailand.
- 053** Low strength of correlation between the intensity of neutrophil elastase expression in lesional skin and the level of serum IgA antibodies to epidermal transglutaminase in dermatitis herpetiformis. [M Dmochowski](#), J Gornowicz, M Bowszyc-Dmochowska, A Seraszek and E Kaczmarek. Poznan, Poland.
- 054** ASB16165, a novel phosphodiesterase 7A inhibitor in development as a topical agent for psoriasis (2) - Effect on induction and function of cytotoxic T lymphocytes. [K Kadoshima-Yamaoka](#), M Murakawa, M Goto, Y Tanaka, H Inoue, H Murafuji, Y Hayashi, K Nagahira, K Miura, T Nakatsuka, K Chamoto, Y Fukuda and T Nishimura. Osaka, Japan and Sapporo, Japan.
- 054** ASB16165, a novel phosphodiesterase 7A inhibitor in development as a topical agent for psoriasis (1) - Effect on function of T lymphoblasts. [M Murakawa](#), K Kadoshima-Yamaoka, M Goto, Y Tanaka, H Inoue, H Murafuji, A Nagahira, Y Hayashi, K Nagahira, K Miura, T Nakatsuka, K Chamoto, Y Fukuda and T Nishimura. Osaka, Japan and Sapporo, Japan.
- 056** ASB16165, a novel phosphodiesterase 7A inhibitor in development as a topical agent for psoriasis (3) - Effect on proliferation and function of NKT cells. [M Goto](#), M Murakawa, K Kadoshima-Yamaoka, Y Tanaka, H Inoue, H Murafuji, Y Hayashi, K Miura, T Nakatsuka, K Nagahira, K Chamoto, Y Fukuda and T Nishimura. Osaka, Japan and Sapporo, Japan.
- 057** ASB16165, a novel phosphodiesterase 7A inhibitor in development as a topical agent for psoriasis (4) - Effect in phorbol ester-induced mouse dermatitis model. [R Yoshioka](#), K Kadoshima-Yamaoka, M Goto, M Murakawa, Y Tanaka, H Inoue, H Murafuji, S Kanki, Y Hayashi, K Nagahira, A Ogata, T Nakatsuka and Y Fukuda. Osaka, Japan.
- 058** *In vitro* biologic activity of GABA rich *Lactobacillus plantarum* DSM19463 biomass on reconstructed human epidermis. [G Giuliani](#), A Benedusi, M Meloni, L Béatrice and B Marzani. Milan, Italy and Montélier, France.
- 059** ASB16165, a novel phosphodiesterase 7A inhibitor in development as a topical agent for psoriasis (5) - preclinical toxicological studies. [T Yotsumoto](#), S Kanki, T Matsumoto, R Nakamura, M Doi, T Ochiai, M Nakamoto, K Nakano, M Kobayashi, S Nakada, C Tamaki, T Tabata, Y Fujieda, T Iwata, A Ogata, H Ogasawara, Y Kanai and Y Nakanishi. Gunma, Japan and Osaka, Japan.

- 083 **Phenotypical and functional analyses of ectoenzyme CD39/CD73 expressing CD4⁺CD25^{high} regulatory T cells in human peripheral blood.** [L Han](#), J Massari, Z Zheng, J Xu, T McCormick, K Cooper and H Sugiyama. Cleveland, OH and Shanghai, China.
- 084 **Specific immunoglobulin isotypes correlate with disease activity, morphology, duration, and HLA association in Pemphigus vulgaris (PV).** MM Dhandha, [K Seiffert-Sinha](#) and AA Sinha. East Lansing, MI.
- 085 **Pregnant women have an increased incidence of IgE-class autoantibodies directed against BP180.** [MH Noe](#), KA Messingham, DS Brandt and JA Fairley. Iowa City, IA and Boston, MA.
- 086 **Sertaconazole nitrate mediates its anti-itch activity by inducing PGD2 via the p38 MAPK pathway.** [S Kaur](#), R Sur, F Liebel and M Southall. Skillman, NJ.
- 087 **Development of a novel chimeric fusion protein to identify CCR10+ cells.** B Gammon, [V Lee](#) and ST Hwang. Bethesda, MD and New Orleans, LA.
- 088* **The immune phenotype of therapeutic IL-12/IL-23 blockade in psoriasis patients treated with ustekinumab.** [J Krueger](#), T Kikuchi, R Fidelus-Gort, A Khatcherian, I Novitskaya and C Brodmerkel. New York, NY; Wilmington, DE and Malvern, PA.
- 089 **BP180-specific IgE directly affects keratinocyte structure and function.** [K Messingham](#), A DeGueme and J Fairley. Iowa City, IA and Milwaukee, WI.
- 090 **Evolutionary conserved chemotactic activity of S100A7 (psoriasin) is mediated by RAGE and potentiates inflammation with highly homologous but functionally distinct S100A15.** [R Wolf](#), H Dong, C Voscopoulos, J Winston, M Gunsior, P Goldsmith, C Cataisson, T Chavakis, O Howard, JJ Oppenheim and SH Yuspa. Bethesda, MD; Frederick, MD and Munich, Germany.
- 091 **Prolactin enhances CCL20 production in human keratinocytes.** [N Kanda](#) and S Watanabe. Tokyo, Japan.
- 092 **Carbazole modulates chemokine production by the transformed human microvascular endothelial cell line HMEC-1 and antigen presentation by murine epidermal cells.** [C Cuijijis](#), J Huang, J Arbiser, W Ding and R Granstein. New York, NY and Atlanta, GA.
- 093 **Development of psoriasis is dependent on IL-12/23p40, but partially on IL-17A in a mouse model.** [M Takaishi](#), K Nakajima, J DiGiovanni, Y Iwakura and S Sano. Nankoku, Japan; Smithville, TX and Tokyo, Japan.
- 094* **Wnt5a causes hypersensitivity toward type 1 interferon and is aberrantly distributed in psoriasis.** [M Romanowska](#), S Donandt, A Evans, DB Kellock, SE Bray, K McLean and JP Foerster. Dundee, United Kingdom and Berlin, Germany.
- 095* **Th17 dependent psoriasis-like skin disease in transgenic mice upon activation of PPAR delta.** M Romanowska, CN Palmer and [J Foerster](#). Dundee, United Kingdom.
- 096 **Rapid suppression of receptors for IL-20-related cytokines by etanercept in psoriasis.** [F Wang](#), N Smith, S Kang, G Fisher and J Voorhees. Ann Arbor, MI and Baltimore, MD.
- 097 **Mapping pathogenic epitopes recognized by herpes gestationis autoantibodies using humanized BP180NC16A mice.** [L Heimbach](#), N Li, W Huang, G Guidice, J Fairley, P Marinkovich, L Diaz and Z Liu. Chapel Hill, NC; Iowa City, IA and Stanford, CA.
- 098 **The presence of cutaneous autoantibodies in scabies.** MM Wong, KA Messingham, E Boddicker, L Arlian, KB Yancey and JA Fairley. Iowa City, IA; Brooklyn, NY; Dayton, OH and Dallas, TX.
- 099 **The systemic lupus erythematosus susceptibility locus Sle3 is associated with heightened contact hypersensitivity and hyperstimulatory dermal dendritic cells.** [M Tomihari](#), J Chung, J Zhu, PD Cruz, C Mohan and K Ariizumi. Dallas, TX.
- 100 **Abnormal *in vitro* keratinocyte-T cell interactions during psoriasis.** [M Rosa Fortin](#), PE Poubelle and R Pouliot. Québec, Canada.
- 101 **Systemic profile of psoriasis: The effects of ustekinumab and etanercept following 12 weeks of treatment.** [C Brodmerkel](#), K Li, T Kikuchi, R Fidelus-Gort, A Khatcherian, I Novitskaya, F Baribaud and J Krueger. Malvern, PA; New York, NY and Wilmington, DE.
- 102* **The microRNAs regulate CD4⁺CD25⁺FoxP3⁺ Treg cell and iNKT cell development.** L Zhou, K Seo, H He, R Pacholczyk, D Meng, J Xu and [Q Mi](#). Detroit, MI and Augusta, GA.
- 103* **Surgical denervation of skin using the KC-Tie2 mouse model of psoriasis eliminates dendritic cells and markedly improves acanthosis and angiogenesis.** [SM Ostrowski](#), JA Wolfram, AM Belkadi, DA Hatala, W Fu, D Diacou and NL Ward. Cleveland, OH.
- 104 **CD4⁺CD45RO⁺CCR4⁺ memory T cells activate keratinocytes to produce the proinflammatory cytokine IL32 γ in a cell-cell contact manner: Implications for the pathogenesis of psoriasis.** SO Francis, L Hu, [R Asokan](#), M Fujita, S Kim, CA Dinarello, DA Norris and CK Edwards. Aurora, CO.
- 105 **A role for BP180 in the keratinocyte pro-inflammatory response.** [E Van den Bergh](#), BT Burmeister, SL Eliason and GJ Giudice. Iowa City, IA and Milwaukee, WI.
- 106* **Galectin-3 negatively regulates TCR-mediated CD4⁺ T cell activation at the immunological synapse.** [H Chen](#), A Fermin, S Vardhana, I Weng, K Lo, E Chang, R Yang, D Hsu, M Dustin and F Liu. Sacramento, CA; New York, NY and San Diego, CA.
- 107 **Autoantibodies in scurfy mice recognize keratins.** [EN Huter](#), K Natarajan, DD Glass and EM Shevach. Bethesda, MD.
- 108 **An IL13 polymorphism that associates with psoriasis and protects from risk of psoriatic arthritis is abrogated by smoking.** I Freeny, B Feng, B Wong, R Solatani-Arabsahi, DE Goldgar, SJ Schrodri, GG Krueger and [KC Duffin](#). Salt Lake City, UT; Oakland, CA and Philadelphia, PA.
- 109 **Antioxidants in psoriasis: A preliminary in vivo analysis.** [JA Kado](#), CN Young and L Savoy. Detroit, MI.
- 110* **Development of a spontaneous, TCR transgenic mouse model of human vitiligo.** [S Mehrotra](#), IC Le Poole, M Li, GE Lyons, N Spivey, T Martins da Palma, OS Naga, HR Norell, CM Diaz, DJ Cole and MI Nishimura. Charleston, SC; Chicago, IL and Miami, FL.
- 111* **Rapid downregulation of LL-37 and β -Defensins in psoriasis with etanercept therapy.** [NR Smith](#), F Wang, S Kang, GJ Fisher and JJ Voorhees. Ann Arbor, MI and Baltimore, MD.
- 112** **Characterization of functions and egress mechanism on skin regulatory T cell using Kaede-transgenic mice.** [T Honda](#), M Tomura, H Tanizaki, O Kanagawa, Y Miyachi and K Kabashima. Kyoto, Japan and Yokohama, Japan.
- 113 **Severe irritant contact dermatitis and loss of epidermal LC in zinc deficient mouse.** [T Kawamura](#), Y Ogawa and S Shimada. Yamanashi, Japan.
- 114 **Anti-inflammatory effects of newly synthesized PAR-2 antagonist, NP-003 in oxazolone-induced chronic dermatitis animal model.** [J Leon](#), M Kwon, S Jeong, H Kim, H Kwak, B Park and S Lee. Daejeon, South Korea and Seoul, South Korea.
- 115* **PAF induces Th17 lymphocytes through activation of monocyte-derived Langerhans cells.** [A Drolet](#), M Thivierge, S Turcotte, D Hanna, B Maynard, J Stankova and M Rola-Pleszczynski. Sherbrooke, Canada.
- 116* **IL-12/IL-23p40 small interfering RNA establish protective immunity against autoimmune disease *in vivo*.** [J Brück](#), C Weigert, S Pascolo, I Glöckova, K Fuchs, K Ghoreschi and Röcken. Tübingen, Germany.
- 117 **Amphiregulin induces T cell activation through complex cytokine circuits in psoriasis-like transgenic mouse model.** [J Lu](#), K Squillace and MR Pittelkow. Rochester, MN.
- 118 **Possible coordinated involvement of p120catenin and Rho A in pemphigus intracellular signaling.** [Y Aoyama](#), Y Isa, K Murase and Y Kitajima. Gifu, Japan.
- 119 **The impact of tonsillectomy on patients with chronic plaque psoriasis—a controlled study.** [RH Thorleifsdottir](#), A Johnston, SL Sigurdardottir, JH Olafsson, B Sigurgeirsson, H Petersen, JE Gudjonsson and H Valdimarsson. Reykjavik, Iceland and Ann Arbor, MI.
- 120 **Local and systemic inflammation are a consequence of targeted deletion of epidermal EGFR.** [F Mascia](#), G Souto Adeva and SH Yuspa. Bethesda, MD.
- 121 **Essential role of hypoxia-induced angiogenesis in experimental arthritis.** [K Fuchs](#), BJ Pichler, S Wiehr, M Judenhofer, D Bukala, H Wehr, G Reischl, M Kneilling and M Röcken. Tuebingen, Germany.
- 122 **CD127low/- and FoxP3+ expression levels characterize different regulatory T cell populations in human peripheral blood.** S Klein, C Kretz, PH Krammer and [A Kuhn](#). Heidelberg, Germany and Muenster, Germany.
- 123 **Functional and phenotypic characterization of LRRC32⁺ and LRRC32⁻ regulatory T cells.** [DV Chan](#), A Somani, A Young, J Massari, E Garaczi, H Sugiyama, K Cooper and T McCormick. Cleveland, OH.
- 124 **Leaf-encapsulated acne vaccines: agroinfiltration and transient expression of *Propionibacterium acnes* CAMP virulence factor as an antigen in radish leaves.** [P Liu](#), T Nakatsui, R Gallo and C Huang. San Diego, CA.
- 125 **Evidence for the expression of type 1 interferons in scalp lesions of Alopecia Areata.** [M Ghoreishi](#), JP Dutz and M Martinka. Vancouver, Canada.
- 126 **Isoprenylcysteine analogs: A novel class of non-steroidal anti-inflammatory show specificity to different inflammatory endpoints.** [E Perez](#), JB Stock, AV Gonzalez, S Lee, MV Voronkov, K Rapole, J Barrera-Oro, K Rouzard, JS Gordon and MB Stock. Monmouth Junction, NJ and Princeton, NJ.

- 127** Long-term topical treatment with anti-inflammatory N-acetyl-S-farnesylcysteine (AFC) avoids the skin thinning and inhibition of wound healing associated with glucocorticoids. J.S. Gordon, J Barrero-Oro, J Fernandez, AV Gonzalez, K Rouzard, E Perez, JB Stock and MB Stock. Monmouth Junction, NJ and Princeton, NJ.
- 128*** Dissecting the roles of Th1 versus Th2 cells in cutaneous inflammation. E Robinson, K Yasui, L Xu, C Ko and C.Herrick. New Haven, CT.
- 129** Defining and targeting CXCR2 signaling during skin inflammation. C.Cataisson, L Wright, D Maloney, C Thomas and SH Yuspa. Bethesda, MD.
- 130** Clinical and histopathological analysis of subjects treated with lenalidomide for refractory chronic cutaneous lupus erythematosus. M.Rosenbach, J Okawa, M Krathen, I Braunstein, C Kovarik and VP Werth. Philadelphia, PA.
- 131** Proteasome inhibition with bortezomib ameliorates acute and chronic cutaneous graft-versus-host disease after allogeneic bone marrow transplantation. WJ Murphy, LA Welniak and K Sun. Sacramento, CA and Reno, NV.
- 132** Epidermal growth factors synergize with the psoriasis-associated inflammatory cytokines IL-1, IL-17 and IL-22 promoting keratinocyte antimicrobial peptide and chemokine expression. A.Johnston, JE Gudjonsson and JT Elder. Ann Arbor, MI.
- 133** Expression of vitamin A metabolism components are altered in both mouse and rat models of alopecia areata. HB Everts, C Johnson, KA Silva, DE Ong, LE King, KJ McElwee and JP Sundberg. Columbus, OH; Bar Harbor, ME; Nashville, TN and Vancouver, Canada.
- 134** Successful treatment of patients with bullous pemphigoid (BP) with rituximab despite persistent anti-BP180 antibody. RP Hall, RD Streilein, D Hannah, PD McNair and MC Levesque. Durham, NC and Pittsburgh, PA.
- 135** Deposition of granular immunoglobulin in dermal papillae of human skin by passive transfer of anti-epidermal transglutaminase antibody to SCID mice bearing normal human skin. J.Zone, L Schmidt, M Sotiriou, T Taylor, C Hull and L Meyer. Salt Lake City, UT.
- 136** Psoriatic patient cardiovascular event surrogates in relation to markers of systemic inflammation, lipids and disease severity. LY Cao, I Grozdev, RL Feig, TL Carman, DC Babineau, EF Kern, BR Bohaty, TS McCormick, KD Cooper and NJ Korman. Cleveland, OH.
- 137** IL17C is a pro-inflammatory cytokine up-regulated in lesional psoriatic skin induced by IL-17A and IL-22. M.Riblett, A Johnston, AT Bruce, X Xing, JJ Voorhees, JT Elder and JE Gudjonsson. Ann Arbor, MI.
- 138** Homoioflavanone, an extract of *Cremastra appendiculata* Makino, inhibits UVB-induced skin inflammation. S.Hur and T Kim. Seoul, South Korea.
- 139** Profiling of recently-identified IL-1 family cytokines in psoriasis. X.Xing, A Johnston, M Riblett, AT Bruce, M Shum, JJ Voorhees, JT Elder and JE Gudjonsson. Ann Arbor, MI.
- 140** CD109 is an important regulator of extracellular matrix production in dermal fibroblasts of systemic sclerosis. X Man, KW Finnson, A Iorga, M Baron and A.Philip. Montreal, Canada.
- 146** Polymorphisms of FAS and FAS ligand genes and risk of skin cancer. MA Dyer, H Nan, DJ Hunter, J Han and A Qureshi. Boston, MA.
- 147** Role of SWI/SNF chromatin remodeling complex in nucleotide excision repair in human melanoma cells. L.Lin, R Wong and G Li. Vancouver, Canada.
- 148** Detection of human papilloma virus type 16 in Bowenoid papulosis and Bowen's carcinoma. S.Mii, S Niiyama, H Takasu, Y Amoh, S Kosaka, K Hara, H Kitasato, Y Sato and K Katsuoka. Sagamihara, Japan.
- 149** The expression of CD1a and CD83 molecules in cervical lesions caused by human papilloma virus infection. T Lai and D.Luo. Nanjing, China.
- 150** Indoleamine-pyrrole 2,3-dioxygenase expression may contribute to immunoprotection in basal cell carcinomas. BK Lo, N Sidhu, D Zloty, RB Jalili, A Ghahary, B Cowan, J Shapiro and KJ McElwee. Vancouver, Canada.
- 151** The possibility of personalized medicine in CTCL: Transcriptional analysis of lesioned patient skin reveals three clusters with distinct clinical outcomes. I.Litvinov, D Jones, D Sasseville and T Kupper. Montreal, Canada and Boston, MA.
- 152*** A chemical genetic screen reveals novel ATR/ATM pathway inhibitors that sensitize p53-deficient cells to DNA-damaging agents. M Kawasumi, H Sloan, J Bradner and P.Nghiem. Seattle, WA and Cambridge, MA.
- 153**** Downregulating Δ Np63 causes skin squamous cell carcinomas. JR Quante and MI Koster. Aurora, CO.
- 154** Dinitrofluorobenzene (DNFB) promotes the development of a high-grade, aggressive lymphoma by MBL2 murine T cells in skin. X.Wu and S Hwang. Bethesda, MD.
- 155** CD133 identifies human cutaneous squamous cell carcinoma tumor initiating cells. GK Patel, CL Yee, A Montemarano, K Maggio and JC Vogel. Cardiff, United Kingdom; Bethesda, MD and Washington DC.
- 156** Ectodysplasin receptor Edar is highly expressed in nodular basal cell carcinomas. M.Yu, S Ma, D Zloty, B Cowan, J Shapiro and K McElwee. Vancouver, Canada.
- 157** Profile of immunoregulatory cells in human cutaneous squamous cell carcinoma and pre-cancerous lesions. S.August, C Pickard, SV Dixon, JM Theaker, MR Ardern-Jones, SD Gadola and E Healy. Southampton, United Kingdom.
- 158** Keratinocyte migration and squamous cell carcinoma invasion is enhanced by microRNA-205. RM Lavker, Q Ruan, S Getsios and J Yu. Chicago, IL.
- 159** Overexpression of Δ Np63 α negatively regulates multiple protease inhibitors in keratinocytes. KE King, D Muraleedharan, RM Ponnampuruma, MJ Gerdes and WC Weinberg. Bethesda, MD and Niskayuna, NY.
- 160*** Plakophilin 3 acts as a tumor suppressor gene in oral cancer. J.Chen, C O'Shea, A Schmidt and PJ Koch. Aurora, CO and Marburg, Germany.
- 161*** Heterogeneity in mutant Ha-ras expression within cutaneous papillomas in mice. S Li, H Park, CS Trempus, D Gordon, LC King, G Cotsarelis and RJ Morris. New York, NY; Research Triangle Park, NC; Piscataway, NJ and Philadelphia, PA.
- 162** Identification of novel biomarkers for keratinocyte malignant transformation by analysis of cutaneous squamous cell carcinoma degradome. R Ala-aho, J Joutsa, A Stokes, C Pennington, R Grenman, J Peltonen, D Edwards and V.Kähäri. Turku, Finland and Norwich, United Kingdom.
- 163** JunB and c-Jun display opposite effects on epidermal growth and neoplasia. JY Jin, B Leshin, H Ke and JY Zhang. Durham, NC.
- 164** Multiple dermatofibrosarcoma protuberans (DFSP) in patients with adenosine deaminase deficiency associated severe combined immunodeficiency (ADA-SCID). EW Cowen, C Kesserwan, R Sokolic, E Garabedian, K Baird, A Wayne, S Pittaluga, D Lopez-Terrada, J Bridge and F Candotti. Bethesda, MD; Houston, TX and Omaha, NE.
- 165** Stable overexpression of Δ Np63 α blocks senescence and supports long-term proliferation in keratinocytes. L.Ha, R Ponnampuruma and W Weinberg. Bethesda, MD.
- 166*** Repression of protein kinase C delta gene expression in human squamous cell carcinomas by a novel Ras \rightarrow NF- κ B signaling pathway. V.Yadav, NC Yanez and MF Denning. Maywood, IL.
- 167*** Oral and topical small molecule hedgehog antagonists reduce BCCs in Ptch1+/- K14Cre-ER2 p53 fl/fl mice. JY Tang, T Tang, TZ Xiao, A Wu, E Shpall, C Callahan, F de Sauvage and EH Epstein. Oakland, CA; Stanford, CA and South San Francisco, CA.

Carcinogenesis and Cancer Genetics

All orals [designated with an asterisk (*)] listed below are presented in the Carcinogenesis and Cancer Genetics Minisymposium on Friday, May 8, 2009 from 2:00-5:30 p.m. in Room 519 A/B, Palais des congrès. Orals designated by two asterisks (***) will be presented during a Plenary Session.

- 141** Deficient deletion of apoptotic cells by macrophage migration inhibitory factor (MIF) overexpression accelerates photocarcinogenesis. A Honda, R Abe, Y Yoshihisa, T Makino, K Matsunaga, H Shimizu and T.Shimizu. Toyama, Japan and Sapporo, Japan.
- 142** Frequency of BRAFV600E mutation in atypical genital nevi. LP Nguyen, A Emley, N Wajapeyee and M Mahalingam. Boston, MA and Worcester, MA.
- 143** Controlled study on the relationship between vitamin D levels in tissue and blood in patients with non melanoma skin cancer. BH Mahmoud, A Unnikrishnan, S Siddiqui, DJ Kouba, HW Lim, A Heydari and IH Hamzavi. Detroit, MI.
- 144** Stem cell gene module map guides creation of epidermal cancer stem cells. DJ Wong, H Liu, TW Ridky, D Cassarino, E Segal and HY Chang. Stanford, CA and Rehovot, Israel.
- 145** Interleukin-12-deficiency enhances 12-O-tetradecanoylphorbol-13-acetate-induced skin tumor promotion and malignant progression of papillomas to carcinomas in DMBA-initiated mouse skin. SK Katiyar, N Katiyar, H Xu and SM Meeran. Birmingham, AL.

- 168 **Impaired lariat-loop formation causing abnormal XPC pre-mRNA splicing resulted in xeroderma pigmentosum.** [SG Khan](#), K Oh, H Inui, S Emmert, D Tamura, JJ DiGiovanna, T Shahlavi, CC Baker, TD Schneider and KH Kraemer. Bethesda, MD; Frederick, MD and Providence, RI.
- 169 **High definition clonal analyses of human melanoma.** A Sekulic, [A Miller](#), A Mengos, M Barrett and M Pittelkow. Scottsdale, AZ and Rochester, MN.
- 170* **Identification of the core gene expression signature and key cell-signaling pathways associated with Ras driven squamous cell carcinoma invasion.** TW Ridky, D Wong and [PA Khavari](#). Stanford, CA.
- 171 **Epigenetic effects of manufactured human extra cellular matrix (hECM) on tumor cell phenotype.** [E Pinney](#), A Schenone, M Montes-Camacho, F Zeigler, RS Kellar and G Naughton. San Diego, CA.
- 172 **Ras driven genetically defined invasive human carcinomas generated from primary human epidermal, head and neck, cervical, esophageal, prostate, and breast epithelial cells established within in a three-dimensional organotypic human tissue platform.** [TW Ridky](#), J Chow and PA Khavari. Stanford, CA.
- 173 **Novel approach to genomic profiling in Sezary Syndrome.** [RG Pomerantz](#), ED Mirvish, G Erdos, AD Donnenberg, LD Falo, Jr and LJ Geskin. Pittsburgh, PA.
- 174 **Increased tumor burden and tumor progression in mice lacking the PAF receptor.** [RL Konger](#), A Kozman, Y Yao, JB Travers and SJ Warren. Indianapolis, IN.
- 175 **Beta human papillomavirus (beta-HPV) types are common in persistent warts in HAART treated HIV positive individuals.** R Meys, KJ Purdie, MN de Koning, QG Wim, C Alison, M Atkins, FM Gotch, [CA Harwood](#) and CB Bunker. London, United Kingdom and Voorburg, Netherlands.
- 176* **Langerhans cells are necessary for chemical mutagenesis.** [J Neustadter](#), S Roberts, R Filler, B Kwong, J Lewis, A Galan, S Reddy, R Tigelaar, P Fu, D Kaplan, A Hayday and M Girardi. New Haven, CT; Jefferson, AR; Minneapolis, MN and London, United Kingdom.
- 177 **Psph is a protein phosphatase that stimulates UVB-induced apoptosis and is dysregulated in cutaneous squamous cell carcinoma.** [MA Bachelor](#), D Ratner, EB Desciak, YD Eliezri and DM Owens. New York, NY.
- 178* **Srcasm inhibits Fyn-induced skin carcinogenesis-a role for Notch 1.** L Zhou, W Li, C Marshall, R Hick, T Dentchev, A Werth, E Williams, C Miller, W Pear and [J Seykora](#). Philadelphia, PA.
- 179* **Hairless Is repressed by tumor necrosis factor-alpha via activation of NFκB.** [H Kim](#), A Casta, MA Bachelor, A Englehard, DM Owens and AM Christiano. New York, NY.
- 180* **Increased expression and ectodomain shedding of Dsg2 in skin carcinomas.** [D Brennan](#) and MG Mahoney. Philadelphia, PA.
- 181 **In vivo cell origin of basal cell carcinomas (BCCs) in Ptch1+/- p53fl/fl mice.** [GY Wang](#) and EH Epstein. Oakland, CA.
- 182 **Retinoid inhibition of IGF/PI3K/Akt signaling is a likely mechanism of its anti-Basal cell carcinoma effects.** [P So](#) and EH Epstein. Oakland, CA.
- 183 **Reduced skin tumor formation in CHOP/GADD153 deficient mice exposed to chemical carcinogens.** [S Anand](#), A Paliwal and E Maytin. Cleveland, OH.
- 184 **Multiple signaling pathways contribute to apoptosis induced by ABT-737 and Mcl-1 siRNA in melanoma cell lines.** [AM Keuling](#), VA Tron and SE Andrew. Edmonton, Canada and Kingston, Canada.
- 185 **Transcriptional repression of ODC by Hairless.** [C Luke](#), A Casta, H Kim, S Gilmour and A Christiano. New York, NY and Wynnewood, PA.
- 186* **Silencing of FAK and Src kinases normalizes human, 3D tissue models of squamous cell carcinoma harboring E-cadherin-deficient tumor cells.** [A Alt-Holland](#), A Sowalsky, Y Zwec-Levin, Y Shamis, L Feig and JA Garlick. Boston, MA.
- 187 **Aquaporin-3 and phospholipase D2 protein expression in basal and squamous cell carcinoma.** [K Voss](#), N Fussell, C By, RJ Bollag, DJ Sheehan and WB Bollag. Augusta, GA.
- 188* **Hedgehog signaling of BCC is inhibited by Vitamin D: Implication for a chemopreventive agent against BCC carcinogenesis.** [TZ Xiao](#), JY Tang, A Wu, E Shpall, I Khaimsky, P So and EH Epstein. Oakland, CA.
- 189 **The reciprocal roles of cellular senescence on the UVB response of the skin.** [D Spandau](#), Q Yi and D Lewis. Indianapolis, IN.
- 190 **Decreased T cell expression of the anti-apoptotic protein Ku70 in CTLCL skin lesions.** [K Ferenczi](#), J Ohtola, P Aubert, M Kessler, H Sugiyama, S Matsuyama, T McCormick and KD Cooper. Cleveland, OH.
- 191* **The immunosuppressive surface ligand CD200 regulates immune privilege in metastatic squamous cell carcinoma.** [M Stumpfova](#), D Ratner, EB Desciak, YD Eliezri and DM Owens. New York, NY.
- 192* **Genomic instability and cMyc amplification are associated with the p53^{R172H} gain of function mutation in mouse skin SCCs.** [EC Torchia](#), S Acin, C Caulin and DR Roop. Aurora, CO and Houston, TX.
- 193 **Recruitment and redistribution of nucleotide excision repair factors in XP-E cells.** [K Oh](#), K Imoto, S Emmert, D Tamura, JJ DiGiovanna and KH Kraemer. Bethesda, MD; Goettingen, Germany and Providence, RI.
- 194 **A novel role for Bid in promoting UV-induced cell cycle checkpoint function and suppression of skin carcinogenesis.** H Kim, Y Tsuruta, CM Martin, J Wu, AA Andea, WE Grizzle, NS Fineberg, SK Katiyar, CA Elmets, M Athar and [L Timares](#). Birmingham, AL.
- 195* **Human papilloma virus increases skin cancer risk in organ transplant recipients by substituting for somatic alterations of the CDKN2A locus.** [K Ridd](#), S Vemula, G Palmedo, H Kutzner, R Roy, RJ Akhurst, A Balmain, E Epstein and BC Bastian. San Francisco, CA and Friedrichshafen, Germany.
- 196 **Genetic abnormalities associated with FAS-low CTCL.** [J Wu](#) and GS Wood. Madison, WI.
- 197 **Loss of immune function genes and gain of non-lymphoid genes in Sezary Syndrome.** TM Germeroth, HM Gibson, AJ Wilson, BF Chong and [HK Wong](#). Detroit, MI.
- 198 **The role of p53 in melanoma tumor suppression.** [T Terzian](#), S Robinson, R Stiegmann, G Lozano, D Roop, W Robinson and N Box. Aurora, CO and Houston, TX.
- 199 **Cyclosporine A (CsA), an immunosuppressant, transforms squamous cell carcinoma (SCC) to a more invasive phenotype: A non-immunological effect.** [SE Beatrous](#), J Xu, H Xu, AR Kurundkar, A Maheshwari, L Kopelovich, CA Elmets and M Athar. Birmingham, AL and Bethesda, MA.
- 200 **TRPV1, the transient receptor potential type V1, interacts with and down-regulates the epidermal growth factor receptor (EGFR) and suppresses skin carcinogenesis.** [ME Ericson](#), BM Bode, C Yong-Yeon, Z Duo, F Zhu, W Ma, K Yao and Z Dong. Minneapolis, MN and Austin, MN.
- 201 **MicroRNA profiling of squamous cell carcinomas of the skin: miR-21 expression is inversely correlated with SATB1 expression.** L Luan, M Teta, J Seykora, SE Millar and [T Andl](#). Nashville, TN and Philadelphia, PA.
- 202 **Squamous cell carcinoma cell lines deficient in p53, p63 and global genomic DNA repair.** TK Dong and [DH Oh](#). San Francisco, CA.
- 203 **Stem cell origin and microenvironment contributions for NF1-associated dermal neurofibromas.** [LQ Le](#), T Shipman, C Liu, DK Burns and LF Parada. Dallas, TX.
- 204 **Resveratrol suppresses ultraviolet B (UVB)-induced basal cell carcinoma (BCC) growth via cyclin D1 modulation in Ptc1+/-SKH-1 mice.** X Tang, [Y Zhu](#), JH Back, L Kopelovich, M Athar, AL Kim and DR Bickers. New York, NY; Birmingham, AL and Bethesda, MD.
- 205 **Nicotinic acid receptors in skin differentiation and skin cancer.** [Y Bermudez](#) and EL Jacobson. Tucson, AZ.
- 206 **p53-modulating compounds inhibit ultraviolet B (UVB)-induced skin cancer development in genetically engineered murine models.** [DR Bickers](#), X Tang, Y Zhu, ME Daly, WJ Liu, L Kopelovich, AL Kim and M Athar. New York, NY; Birmingham, AL and Bethesda, MD.
- 207 **Differential proteomic analysis of the effects of immunosuppressant, Cyclosporine A and rapamycin, on squamous cell carcinoma by 2D difference gel electrophoresis and mass spectrometry.** [C Wang](#), S Barnes, S Beatrous, R Herring, L Wilson, C Elmets and M Athar. Birmingham, AL.
- 208 **Cell-type specific RAGE signaling drives carcinogenesis by sustaining inflammation and tumor angiogenesis.** [C Gebhardt](#), A Riehl, J Németh, J Hess, K Müller-Decker, F Kiessling, PP Nawroth, A Bierhaus, B Arnold, A Enk and P Angel. Heidelberg, Germany.

Cell Adhesion and Matrix Biology

All orals [designated with an asterisk (*)] listed below are presented in the Cell Adhesion and Matrix Biology Minisymposium on Friday, May 8, 2009 from 2:00-5:30 p.m. in Room 516 C/D/E, Palais des congrès. Orals designated by two asterisks (**) will be presented during a Plenary Session.

- 209* **Hyaluronan (HA) fragment-CD44 interactions selectively regulate keratinocyte proliferation, differentiation, wound healing and permeability barrier homeostasis in aged versus young epidermis.** [LY Bourguignon](#), W Xia, G Wong, G Wei, E Gilad, J Youm, P Elias and W Holleran. San Francisco, CA.
- 210* **SERCA2, the intracellular calcium pump targeted in Darier's disease, is necessary for proper regulation of PKC signaling, keratin organization and desmosome assembly.** [RP Hobbs](#), LM Godsel, MF Denning and KJ Green. Chicago, IL.

- 211 **Factors modulating a directional hypermotility response that is a feature of keratinocytes and all p63+/K14+ epithelial cell types.** W Wei, S Dabelsteen, P Barron and [JG Rheinwald](#). Boston, MA.
- 212 **Enhancements of a composite skin equivalent using acellular dermal matrix as the scaffold for full-thickness burns.** [J Lee](#), D Lee, I Kim, H Jeong, M Lee, T Sohn, C Yoon, J Lee, J Lee and K Kang. Daejeon, South Korea; Seoul, South Korea and Cheongju, South Korea.
- 213 **Hormonal regulation of hyaluronate synthesis in a human dermal equivalent.** [T Pouyvanj](#) and BH Sadaka. Boston, MA.
- 214 **Platelet mediated adhesion of tumor cells promotes metastasis of B16 melanoma cells.** [AS Lonsdorf](#), AH Enk and HF Langer. Heidelberg, Germany and Tuebingen, Germany.
- 215* **Critical roles for EpCAM (epithelial cell adhesion molecule) for early embryogenesis and placental development.** [K Nagao](#), J Zhu, J Hanson, MI Morasso, L Tassarollo, S Mackem and MC Udey. Bethesda, MD and Tokyo, Japan.
- 216 **Effects of hyaluronan on collagen synthesis and MMP-1 activity in stress-induced premature senescent dermal fibroblasts.** N Boubekeur, M Charveron, [N Castex-Rizzi](#) and P Bogdanowicz. Toulouse, France.
- 217* **p38MAPK signaling and desmoglein-3 internalization are linked events in pemphigus acantholysis.** [P Jolly](#), P Berkowitz, H Lee, M Chua, L Diaz and DS Rubenstein. Chapel Hill, NC.
- 218 **Sodium butyrate inhibits hyaluronate synthesis in a human dermal equivalent.** [T Pouyvanj](#) and BH Sadaka. Boston, MA.
- 219 **Enhanced skin elasticity with *Cotinus coggygia* extracts.** R Zhao, E Bruning, [D Rossetti](#), B Starcher, M Seiberg and V Iostova-Stone. Skillman, NJ and Tyler, TX.
- 220 **Fetal dermal fibroblasts cultured *in vitro* produce an organized extracellular matrix.** [T Pouyvanj](#). Boston, MA.
- 221 **Collagen XVII participates in keratinocyte adhesion to collagen IV, and in p38-MAPK-dependent migration and cell signaling.** [H Qiao](#), A Shibaki, HA Long, G Wang, Q Li, W Nishie, R Abe, M Akiyama, H Shimizu and JR McMillan. Sapporo, Japan.
- 222* **The elastin receptor mediates endocytosis of elastin to lysosomes and the subsequent degradation of elastin by cathepsin K.** [SD Gan](#), K Codriansky and TM Ruenger. Boston, MA.
- 223 **Effect of L-4-Thiazolylalanine, a non-proteogenic amino acid, on biological processes essential for maintaining skin elasticity and improving the appearance of the skin.** D Ptchelintsev, S Chen, [JW Lyga](#), U Santhanam, R Wyborski and Q Zheng. Suffern, NY.
- 224* **The ultrastructure of acantholysis in pemphigus vulgaris.** [MF Jonkman](#), GF Diercks, G van der Wier and HH Pas. Groningen, Netherlands.
- 225 **Extracellular nucleotides inhibit EGF-induced hemidesmosome disassembly in keratinocytes.** [E Faure](#), F Garrouste, F Parat, S Taboubi, S Monferran, G Pommier, JC Hubaud and M Lehmann. Marseille, France and Aix-en-Provence, France.
- 226 **Fate of the subepidermal nerve plexus of human skin in culture.** [CM Reinisch](#) and E Tschachler. Vienna, Austria and Neuilly, France.
- 227* **MMP-2, but not MMP-9, is required for pemphigus foliaceus induction in mice.** [N Li](#), Z Liu, M Park, Z Werb and LA Diaz. Chapel Hill, NC and San Francisco, CA.
- 228* **Catenin control of desmocollin gene expression.** [E Tokonzaba](#), X Cheng and PJ Koch. Aurora, CO.
- 229 **Type VII collagen enhances the osteogenic potential of human mesenchymal stem cells through an ERK-dependent pathway.** [X Wang](#), J Cogan, H Zhou, Y Hou, W Li, D Woodley and M Chen. Los Angeles, CA.
- 230 **Type VII collagen promotes osteogenic differentiation of human dermal fibroblasts: Potential application to bone tissue engineering.** D Woodley, [J Cogan](#), X Wang, J Burnett, T Wu and M Chen. Los Angeles, CA.
- 231* **Embryonic trafficking of T cells to skin is dependant on E/P selectin ligands and CCR4.** X Jiang, JJ Campbell, C Gerard and [TS Kupper](#). Boston, MA.
- 232* **Involvement of increased versican expression in the pathogenesis of keloids.** [E Araki](#), M Naitoh, S Aota, S Matsui, S Suzuki, Y Miyachi and A Utani. Kyoto, Japan and Kobe, Japan.
- 233 **An acellular dermal equivalent derived from fibroblast cultures alone.** [D Lee](#) and J Yang. Seoul, South Korea.
- 234* **Collagen XXIII - novel ligand for integrin $\alpha 2\beta 1$ in epidermis.** [G Veit](#), B Eckes, J Käpylä, A Ishada-Yamamoto, T Krieg, J Heino, JA Eble and M Koch. Cologne, Germany; Turku, Finland; Asahikawa, Japan and Frankfurt, Germany.
- 235* **BPAG1e regulates $\beta 4$ integrin dynamics at the leading edge of migrating keratinocytes.** [KJ Hamill](#), SB Hopkinson, PJ DeBiase and JC Jones. Chicago, IL.
- 236 **Type VII collagen increases invasion and migration of squamous cell carcinoma keratinocytes isolated from patients with recessive dystrophic epidermolysis bullosa.** [C Pourreyron](#), C Hogan, C Cole, K Purdie, L Bruckner-Tuderman, J McGrath, I Leigh and A South. Dundee, United Kingdom.
- 237 **$\alpha 6$ integrin supports keratinocyte motility.** [KR Kligny](#), Y Wu, SB Hopkinson and JC Jones. Chicago, IL.
- 238 **Synergistic action of a triple peptide complex (TPC) on an essential extracellular matrix (ECM) protein exhibits significant anti-aging benefits.** [A Laloef](#), T Al-Bader, A Byrne and AV Rawlings. Stockholm, Sweden; Dublin, Ireland and Northwich, United Kingdom.
- 239 **Effects of a selected peptidic fragment from Dermatopontin on cultured human dermal fibroblasts.** [G Menon](#), J Botto, C Serre, C Plaza, N Garcia, C Gondran, N Domloge and DJ Moore. Wayne, NJ and Sophia Antipolis, France.
- 240* **Differentiation of mouse bone marrow-derived stem cells and iPS cells into keratinocytes and other skin components.** [M Itoh](#) and AM Christiano. New York, NY.
- 241** **Oxidative stress impairs TGF- β responsiveness by coordinate down-regulation of Type II TGF- β receptor and Smad3 in primary human skin fibroblasts.** [T He](#), T Quan, JJ Voorhees and GJ Fisher. Ann Arbor, MI.
- 242* **Classical cadherins as key regulators of keratinocyte intercellular junctions.** C Michels, T Buchta, W Bloch, T Krieg and [CM Niessen](#). Cologne, Germany.
- 243* **Plakophilin 2 integrates intracellular signals required for actomyosin remodeling necessary for desmosome assembly and focal adhesion dynamics in epithelial cells.** [L Godsel](#), A Bass-Zubek, R Hobbs, V Todorović, N Garcia and K Green. Chicago, IL.

Clinical Research and Therapeutics

All orals [designated with an asterisk (*)] listed below are presented in the Clinical Research and Therapeutics Minisymposium on Thursday, May 7, 2009 from 2:00-5:30 p.m. in Room 524 A/B/C, Palais des congrès. Orals designated by two asterisks (**) will be presented during a Plenary Session.

- 244 **Characterization of cellular environment in post-therapeutic disease recurrence associated with efalizumab.** [CA Pensabene](#), K Pierson, T Kikuchi, M Sullivan-Whelan, P Gilleaudeau, I Novitskaya, A Khatcherian, AE Cruz-Inigo, M Suárez-Fariñas, JG Krueger and MA Lowes. New York, NY and Stony Brook, NY.
- 245 **How to improve quality of life in patients with recurrent genital herpes.** [G Taldibaeva](#), M Gomberg and L Bardenshteyn. Moscow, Russia.
- 246 **Rosacea unresponsive to oral zinc sulfate, a randomized controlled clinical trial.** [JT Bamford](#), CE Zessert, IV Haller and K Kruger. Duluth, MN.
- 247 **A prospective clinical trial of open label etanercept for the treatment of hidradenitis suppurativa.** [E Dommasch](#), RA Lee, J Treat, J Sciacca-Kirby, S Chachkin, J Williams, DB Shin, J Leyden, C Vittorio and JM Gelfand. Philadelphia, PA and Hershey, PA.
- 248 **4-Hydroxy-oxindole-3-acetic acid: A new natural skin whitener.** [JJ Wille](#) and MA Berhow. Eastampton, NJ and Peoria, IL.
- 249 **Hair care practices and the development of Central Centrifugal Cicatricial Alopecia.** [AO Kyei](#), W Bergfeld, S Harrison and M Piliang. Cleveland, OH.
- 250 **Sentinel node biopsy and post-surgical adjuvant therapy in metastatic melanoma.** [E Minutilli](#), U Trefzer, E Stockfleth and W Sterry. Rome, Italy and Berlin, Germany.
- 251 **Development and assessment of onion extract cream with sun protection factor for the improvement of the appearance of post surgical scars.** [ZD Draelos](#), B Hardas, M Kaur, W Jones and W Murray. High Point, NC and Greensboro, NC.
- 252 **LBH-589 inhibits NF- κ B signaling pathway and synergizes with bexarotene to induce apoptosis in CTCL cell lines and patients' Sézary cells.** [C Zhang](#), X Zhang, T Trynosky, S Molavi, E Gupta, A Villa-Prados and M Duvic. Houston, TX.
- 253 **Modification of the cutaneous dermatomyositis disease area and severity index, an outcome instrument.** [M Yassaee](#), D Fiorentino, L Taylor, C Coley, AB Troxel and V Werth. Philadelphia, PA Palo Alto, CA.
- 254 **Pityriasis versicolor: A systematic review of interventions.** [SW Hu](#) and M Bigby. Boston, MA.

- 255 **Psoriatic patients with positive psychological factors have high serum level of β -endorphin and poor sleep quality.** [Y Li](#), D Li, H Ma and X Yang. Beijing, China.
- 256 **Diversity profile of the human skin microbiome.** [HH Kong](#), EA Grice, SP Conlan, C Deming, AC Young, GG Bouffard, RW Blakesley, ED Green, PR Murray, L Mijares, ML Turner and JA Segre. Bethesda, MD.
- 257 **Changes in the circulating leukocyte profile of subjects on lenalidomide for cutaneous lupus erythematosus.** [I Braunstein](#), NG Goodman, M Rosenbach, J Okawa, C Kovarik, ET Luning Prak and V Werth. Philadelphia, PA.
- 258 **Anti-fungi property of China-Hemp fiber and its texture against Dermatophyte.** [Y Dang](#), Y Li, D Li, H Ma and X Yang. Beijing, China.
- 259* **Topical 5-FU improves photoaging.** [D Sachs](#), S Kang, C Hammerberg, Y Helfrich, D Karimipour, J Orringer, T Johnson, T Hamilton, G Fisher and J Voorhees. Ann Arbor, MI and Baltimore, MD.
- 260 **Poor correlation between specific IgE values and food reactions in young children with atopic dermatitis.** [LE Keck](#), EL Simpson, TM Berry and JM Hanifin. Portland, OR.
- 261 **Treatment of melonental fold rhytides with nonanimal sourced hyaluronic acid combined with botulinum toxin A compared with nonanimal sourced hyaluronic acid alone.** [T Custis](#), D Beynet, D Carranza, G Lask and J Kim. Los Angeles, CA.
- 262 **Treatment of cutaneous malignant myoepithelioma on the nasal ala using mohs micrographic surgery in a two and a half year old child.** [A Bajoghli](#) and J Limpert. Washington, DC and Falls Church, VA.
- 263* **Th17 T-cells are reduced in atopic dermatitis (AD) lesions compared to psoriasis vulgaris.** [K Nograles](#), LC Zaba, A Shemer, T Kikuchi, M Ramon, I Cardinale, R Bergman, JG Krueger and [E Guttman-Yassky](#). New York, NY; Ramat Gan, Israel and Haifa, Israel.
- 264 **A clinical and mycological assessment of patients with Tinea Pedis receiving topical treatment of anti fungal drugs using newly developed medium which contains deactivator drugs toward antifungal agents.** [M Adachi](#). Kawasaki, Japan.
- 265 **Increased Syndecan4 expression in malignant T-lymphocytes is associated with progression in Mycosis Fungoides.** [A Dougherty](#), L Shiuie, V Prieto, R Bassett, X Ni and M Duvic. Houston, TX.
- 266* **A priming *in vitro* step greatly enhances the repertoire of key genes involved in epidermal proliferation and migration in bioengineered skin.** [T Kwak](#), T Yufit, P Carson, A Michalowska and V Falanga. Providence, RI; Bethesda, MD and Boston, MA.
- 267 **Development of a good manufacturing practice (GMP) facility.** [T Yufit](#), P Carson, T Kwak, S Iwamoto, D Fiore and V Falanga. Providence, RI and Boston, MA.
- 268* **Aberrant toll-like receptor signaling increases kallikrein in rosacea.** [K Yamasaki](#), K Kanada, S Morizane, AL Cogen, T Nakatsuji and RL Gallo. San Diego, CA.
- 269 **Mechanism of suppressive effect of lipoic acid on the UVB-induced erythema reaction *in vivo*.** [T Bito](#), S Fukamachi, T Mori, R Yoshiki, T Shimauchi, M Nakamura, C Nishigori and Y Tokura. Kitakyushu, Japan and Kobe, Japan.
- 270* **Predictors of retinoid dermatitis.** [KC Lee](#) and MA Weinstock. Chicago, IL and Providence, RI.
- 271 **Increased levels of CD4+25high regulatory T cells in patients with cutaneous T-cell lymphoma after extracorporeal photopheresis.** [LH Shiuie](#), E Aakhus, P Arias-Mendoza, M Duvic and X Ni. Houston, TX.
- 272* **Obesity increases the risk of psoriatic arthritis among psoriasis patients.** [R Soltani-Arabshahi](#), B Wong, B Feng, S Ahmed, DE Goldgar, K Callis Duffin and GG Krueger. Salt Lake City, UT.
- 273* **Clinical efficacy and tolerability of repeat course of total skin electron beam therapy (TSEBT) in mycosis fungoides (MF).** [YS Levin](#), D Navi, N Riaz, NC Sullivan, RT Hoppe and YH Kim. Stanford, CA.
- 274 **Sudden skin appearance change in skin aging; skin elasticity tipping model as a key indicator of the skin aging progression.** [K Miyamoto](#), O Kuwazuru and N Yoshikawa. Kobe, Japan; Fukui, Japan and Tokyo, Japan.
- 275 **Sequential therapy with cyclosporine and adalimumab in patients with severe plaque psoriasis: A series of five cases.** [S Gattu](#), JJ Wu and JY Koo. Irvine, CA; San Francisco, CA and Los Angeles, CA.
- 276 **D1-like dopamine receptor-mediated activation of mast cells and Th2 cells and augmentation of immediate and late-phase cutaneous reactions.** [T Mori](#), K Kabashima, K Sugita, R Yoshiki, J Sakabe, S Fukamachi, M Kobayashi and Y Tokura. Kitakyushu, Japan.
- 277 **Atopic dermatitis (AD) keratinocytes exhibit normal Th17 cytokine responses.** [KE Nograles](#), M Suarez-Farinas, A Shemer, LC Zaba, I Cardinale, T Kikuchi, M Ramon, R Bergman, JG Krueger and E Guttman-Yassky. New York, NY; Ramat-Gan, Israel and Haifa, Israel.
- 278 **Compression regimen for venous leg ulcer patients requiring dressing changes at least once a day.** [S Hammerman](#), P Carson, J Panunialman, D Herring and V Falanga. Providence, RI and Boston, MA.
- 279* **Photochemical tissue bonding for closure of excision wounds: A first-in-human clinical trial.** [S Tsao](#), M Yao, FP Henry, H Tsao, RW Redmond and [IE Kochevar](#). Boston, MA.
- 280 **NF- κ B- and STAT3-dependent cytokine production by circulating CCR6+CD4+ Th17 cells is increased in psoriasis, and decreases with effective therapy.** [S Kagami](#), H Rizzo, J Lee, Y Koguchi and A Blauvelt. Portland, OR.
- 281 **Wound edge biopsy sites in chronic wounds heal rapidly and do not result in delayed wound healing.** [J Panunialman](#), S Hammerman, P Carson and V Falanga. Providence, RI and Boston, MA.
- 282 **Structure-activity studies of novel oxaborole dual inhibitors of PDE4 and IL-23 release.** [T Akama](#), J Antunes, Y Freund, R Kimura, C Dong, V Sanders, G Graves, X Lu, R Sharma, M Sales, J Nieman, R Singh, C Ding and J Plattner. Palo Alto, CA and Edmonton, Canada.
- 283 **CCL26 and CCL11 produced by lesional fibroblasts increase CCR3+ lymphocytes both in the lesional skin and in the peripheral blood in patients with CTCL.** [T Miyagaki](#), M Sugaya, H Fujita, H Ohmatsu, T Kakinuma, T Kadono and K Tamaki. Tokyo, Japan.
- 284 **Histologic and clinical evaluation of hidradenitis suppurativa following treatments with the long-pulsed Nd:YAG 1064nm laser.** [D Rucker Wright](#), L Xu, B Mahmoud, D Mehregan, D Ozog and I Hamzavi. Detroit, MI.
- 285 **Epilepsy as an initial presentation in bullous systemic lupus erythematosus.** [M Pan](#), R Shi and J Zheng. Shanghai, China.
- 286 **Ubiquitin-proteasome system activation protects from UV damage: *In vivo* study.** [Y Guerif](#), G Oberto, C Gondran, E Bauza, J Botto, A Berghi, K Cucumel, C Dal Farra and N Domloge. Sophia-Antipolis, France and Wayne, NJ.
- 287 **Psoriatic predisposition protects against acne in cross-national comparison.** [JM Yost](#), DL Sachs, M Ramos-e-Silva, TA Hamilton, JJ Voorhees and S Kang. Ann Arbor, MI; Baltimore, MD and Rio de Janeiro, Brazil.
- 288 **Topical application with DHMEQ, a novel NF- κ B inhibitor, improves atopic dermatitis in murine model.** [R Abe](#), A Hamasaka, N Yoshioka, S Kishino, K Umezawa, M Ozaki, S Todo and H Shimizu. Sapporo, Japan; Tokyo, Japan and Yokohama, Japan.
- 289 **Diagnostic accuracy of using telemedicine to evaluate vesicular or pustular rash illnesses.** [M Yassaee](#), J Albrecht, S Hutchins, J Okawa, Z Bonilla Martinez, S Moghadam-Kia, L Taylor, C Coley and V Werth. Philadelphia, PA; Chicago, IL; Atlanta, GA and Miami, FL.
- 290 **Colorimetric and spectroscopic analysis of postinflammatory pigmentation.** [J Zhao](#), H Alkhayat, A Al Robaee, H Zeng and [H Lui](#). Vancouver, Canada.
- 291 **Effect of Rhus verniciflua Stokes (RVS) water extracts on the photoaged skin.** [M Jung](#) and E Choi. Wonju, South Korea.
- 292 **99mTc-ethyl cysteinate dimer (ECD) single photon emission computed tomography (SPECT) with acetazolamide administration revealed hyperfusion to the frontal lobe of patients with primary hyperhidrosis.** [T Tanaka](#), T Satoh and H Yokozeki. Tokyo, Japan.
- 293 **The effect of topical application and intraperitoneal injection of oregonin on atopic dermatitis (AD) in NC/Nga mice.** [M Jeong](#), J Park and [S Seo](#). Seoul, South Korea.
- 294 **Adipose-derived stem cell would be a new therapeutic modality for the aged skin.** [J Kim](#), M Jung, H Kim and E Choi. Wonju, South Korea.
- 295 **Clinical efficacy of wrinkle decrement in functional serum application.** [G Yeom](#), J Kwon, D Yun, I Kang, Y Kim and T Yoon. Anseong, South Korea.
- 296 **The possibility of valproic acid as a therapeutic agent against natural killer (NK) lymphoproliferative disorders.** [K Fujii](#), N Suzuki, T Yamamoto, Y Hirai, T Kaji, K Tsuji and K Iwatsuki. Okayama, Japan.
- 297 **Effects of vitamin D products in a psoriasis plaque test and a psoriasis xenograft mouse model—comparison of biomarker responses.** [PH Kvist](#), K Kemp, L Svensson, O Hagberg, V Hoffmann and MA Røpke. Ballerup, Denmark.

- 298 **Toll-like receptor (TLR) agonists synergize with interleukin-15 (IL-15) and interferon gamma (IFN gamma) to boost cell mediated immunity (CMI): Relevance to treatment of cutaneous T-cell lymphoma (CTCL).** M Wysocka, LC Showe, B Benoit, AB Troxel, JM Gelfand and [AH Rook](#). Philadelphia, PA.
- 299 **Topical Ammonium-trichlorotellurate (AS101) in the treatment of mild plaque- type psoriasis: Double-blind placebo controlled study.** [L Akerman](#), B Sredni, M Albeck and M David. Petach-Tikva, Israel and Ramat-Gan, Israel.
- 300 **A noninvasive clinical method to assess biomarkers in human skin.** [M Garay](#), H Kenney, P Lyte and M Southall. Skillman, NJ.
- 301 **Exploiting the DC-HIL/syndecan-4 pathway to treat cutaneous T cell lymphoma.** [J Chung](#), L Shiu, M Tomihari, M Duvic, PD Cruz and K Ariuzumi. Dallas, TX and Houston, TX.
- 302 **Workflow tracking of dermatopathology consultation cases.** LM Drogowski, J Martina and [DM Jukic](#). Pittsburgh, PA.
- 303 **Dermatology through the eyes of family practice: A regional survey.** [LL Rosamilia](#), SA Klepeiss and JJ Miller. Hershey, PA.
- 304 **Statins, inhibitors of cholesterol synthesis, accelerate wound healing via farnesyl pyrophosphate.** S Vukelic, [O Stojadinovic](#), I Pastar, S Das, H Samuels, A Krzyzanowska, H Brem and M Tomic-Canic. Miami, FL and New York, NY.
- 305 **Nonablative collagen remodeling In photoaged skin: A comparative study.** M El-Domyati, [W Medhat](#), T El-Amawi, O Moawad, D Brennan, MG Mahoney and J Uitto. Al-Minya, Egypt; Philadelphia, PA and Cairo, Egypt.
- 306 **Curcumin improves radiation dermatitis in breast cancer patients: Interim analysis of randomized, double-blind, placebo-controlled clinical trial.** [JL Ryan](#), L Marsh, M Ling, J Williams, P Okunieff, GR Morrow and AP Pentland. Rochester, NY.
- 307* **African Americans display a significant lack of hyperalgesia and neurogenic inflammation in response to topical capsaicin.** [H Wang](#), A Papoiu, R Coghill, T Patel and G Yosipovitch. Winston Salem, NC.
- 308 **Development of novel calcium carbonate-coated tretinoin nanoparticles.** [E Hsia](#), J Therrien, M Larm, E Millerman, W Chern and H Hofland. Palo Alto, CA.
- 309 **ABT-737 synergizes with Paclitaxel and Bortezomib to kill melanoma cells by neutralizing multiple anti-apoptotic defenses.** YG Shellman, NB Goldstein, LA Miller, S Smith, M Fujita and [DA Norris](#). Aurora, CO.
- 310 **Development of the CLASI as a tool to measure responsiveness to therapy in cutaneous lupus erythematosus.** [RS Klein](#), S Moghadam-Kia, J LoMonico, K Chielek, E Gaines, L Taylor, C Coley, J Okawa and VP Werth. Philadelphia, PA.
- 311 **The role of infant skin care in atopic dermatitis development.** SF Baig-Lewis, TM Berry, ME Rendell, MA Denny, PA Brown, BM Simpson, SJ Tofte, JM Hanifin and [EL Simpson](#). Portland, OR.
- 312 **Effects of bath-PUVA on circulating regulatory T cells and malignant lymphoma cells in patients with mycosis fungoides.** [C Saito](#), H Kato, A Maeda, Y Shintani and A Morita. Nagoya, Japan.
- 313 **Polysomnography of patients with psoriasis show prolonged Stage I sleep and lower oxygen levels compared to controls.** [B Wong](#), T Downing, R Simpson, GG Krueger and KC Duffin. Salt Lake City, UT.
- 314* **Actinic keratoses are intermittently present during the natural course of their disease.** [W Cantrell](#), JW Turnham, AA Andea and CA Elmetts. Birmingham, AL.
- 315 **The morphologic and immunohistochemical overlap between cutaneous marginal zone lymphoma and cutaneous chronic lymphocytic leukemia.** [C Levin](#), N Mizramani, J Zwerner, Y Kim and U Sundram. Stanford, CA and Minneapolis, MN.
- 316 **The importance of dendritic cells in the clearing of psoriatic skin lesions by Adalimumab.** [RE Schopf](#) and G Ceri. Mainz, Germany.
- 317 **Low-dose total skin electron beam therapy (TSEBT): A revisited paradigm in management of mycosis fungoides (MF).** [J Young](#), D Navi, N Riaz, RT Hoppe and YH Kim. Stanford, CA.
- 318 **A unique case of an erythrodermic TCRγδ+ peripheral T cell lymphoma with TH2 phenotype.** [W Bauer](#), D Spazierer, I Klein, G Stary, S Woehrl, S Wagner, L Müllauer and G Stingl. Vienna, Austria.
- 319 **The natural healing ability of chronic pressure ulcer—the demonstration of VEGF165 in its exudate and slough.** [M Takayama](#), Y Kuramoto and S Aiba. Sendai, Japan.
- 320 **Differences in facial sensitive epidermal nerves between Japanese and French women with sensitive skin.** [O De Lacharriere](#), F Salas, C Saito, K Kawashima, C Bredoux, O Jammayrac, P Bastien and A Morita. Clichy, France and Nagoya, Japan.
- 321 **Trafficking of 8-MOP/UVA treated leukocytes after photopheresis in humans.** U Just, E Dimou, [R Knobler](#), G Klosner, H Greinix, A Becherer and F Trautinger. Vienna, Austria; Feldkirch, Austria and St Pölten, Austria.
- 322* **Mutation-specific siRNA resolves callus in a pachyonychia congenita patient.** [SA Leachman](#), RP Hickerson, ME Schwartz, EE Bullough, SL Hutcherson, KM Boucher, CD Hansen, MJ Eliason, GS Srivatsa, DJ Kornbrust, FD Smith, W McLean, LM Milstone and RL Kaspar. Salt Lake City, UT; Santa Cruz, CA; Richmond, VA; Encinitas, CA; Reno, NV; Dundee, United Kingdom and New Haven, CT.
- 323 **Safety and tolerability of topical botulinum toxin type A in healthy adults.** T Jones, J Scott, [D Tranowski](#) and T Joshi. College Station, TX and Newark, NJ.
- 324* **Malignant clonal T cells in Leukemic (L-)CTCL/Sezary Syndrome (SS) exhibit a unique cell surface profile: high and uniform expression of CCR4 and central memory markers CCR7, L-selectin, and CD27.** JJ Campbell, D Soler, R Clark and [T Kupper](#). Boston, MA.
- 325* **The cyclooxygenase-2 inhibitor celecoxib effectively suppresses the development of nonmelanoma skin cancers: Results of a phase II/III clinical trial.** [CA Elmetts](#), JL Viner, AP Pentland, W Cantrell, H Bailey, S Kang, KG Linden, M Heffernan, D Madeleine, B Elewski, A Umar, H Lin, W Bell and G Gordon. Birmingham, AL; Madison, WI; Ann Arbor, MI; Irvine, CA; St. Louis, MO; Houston, TX; Bethesda, MD; Skokie, IL and Rochester, NY.
- 326 **Effective utilization of cyclosporine in an efalizumab-associated generalized inflammatory flare unresponsive to adalimumab.** [R Pugashetti](#), E Becker, R Greenberg and J Koo. San Francisco, CA and San Ramon, CA.
- 327* **Polymorphisms in TNFAIP3 as a predictor of response to TNF blockade in psoriasis.** [T Tejasvi](#), PE Pstuart, RP Nair, JJ Voorhees and JT Elder. Ann Arbor, MI.
- 328** **Adult stem cells for treatment of Recessive Dystrophic Epidermolysis Bullosa (RDEB).** [JE Wagner](#), A Ishida-Yamamoto, JA McGrath, D Keene, M Hordinsky, BR Blazar and J Tolar. Minneapolis, MN; Asahikawa, Japan; London, United Kingdom and Portland, OR.
- 329* **Increased vitamin D deficiency in cutaneous T-cell lymphoma: From theory to therapy.** [KM Cox](#), R Talpur, P Liu and M Duvic. Houston, TX.
- 330 **Immunotherapy of solid tumors utilizing PLGA/ tumor lysate nanoparticles to stimulate TIL and circulating CD8+ tumor-specific T cells.** [DJ Hanlon](#), S Prasad, V Patriub and M Saltzman. New Haven, CT and Bristol, United Kingdom.
- 331 **Interactions of IL-17, IL-22 and TNF in regulation of keratinocyte-mediated inflammatory networks.** [A Chiricozzi](#), KE Nograles and JG Krueger. New York, NY and Rome, Italy.
- 332 **Digital pathology diagnosis of melanocytic lesions via conventional and immunohistochemical techniques.** [LM Drogowski](#), J Ho, A Radfar and DM Jukic. Pittsburgh, PA.
- 333 **Dynamic area telethermometry determines the skin inflammatory response intensity induced by imiquimod on human basal cell carcinoma treatment.** RC Souza, M Cimbalista, VO Carvalho and [HC Lima](#). Curitiba, Brazil and Boston, MA.
- 334 **A comparison of key photochemical marker compounds in pomegranate variety “wonderful” from mid and late season harvest.** [J Leverett](#), J Balles, J Rana and G Seehra. Ada, MI.
- 335 **Automatic detection, quantification and tracking of emerging acne vulgaris lesions.** [GO Cula](#), PR Bargo and N Kollias. Skillman, NJ.
- 336 **Reduced intensity conditioning and allogeneic stem cell transplantation in Recessive Dystrophic Epidermolysis Bullosa.** [AM Christiano](#), JA McGrath, E Hillman, E Philipone, K Ventura, A Ishida-Yamamoto, D Keene, S Foley, E Smilow, E Morris, C Fanelli, K Morel, J Uitto and MS Cairo. New York, NY; Asahikawa, Japan; London, United Kingdom; Portland, OR and Philadelphia, PA.
- 337 **The human cutaneous SCC microenvironment is associated with CD163+ macrophages, IL-10 and MMPs 1, 3, 9, 10, 11, 13 and 14.** [A Pitts-Kiefer](#), MJ Bluth, L Fan, MA Lowes and JA Carucci. New York, NY.
- 338 **Method of assessing the pre-clinical drying/scaling effects occasioned by alcohol-based hand disinfectants.** [I Sadiq](#), M Crossby, J Nicholson and MV Shelanski. Conshohocken, PA.
- 339 **Human cutaneous squamous cell carcinoma is associated with increased density of lymphatics in the tumor microenvironment and upregulated lymphangiogenic genes.** [D Moussai](#), S Mayte, C Irma and JA Carucci. New York, NY.

- 340 Myeloid dendritic cells from human squamous cell carcinoma are poor stimulators of T cell proliferation.** [MJ Bluth](#), LC Zaba, D Moussai, M Suarez-Farinas, A Pitts-Kiefer, L Fan, KC Pierson, E Guttman-Yassky, JG Krueger, MA Lowes and JA Carucci. New York, NY.
- 341 Antimicrobial activity of chitosan against cutaneous pathogens.** [J Champfer](#), X Ye, NB Fernando, JG Patel and J Kim. Los Angeles, CA.
- 342 Differences in c-Kit mutations may dictate different treatments for adult-onset mastocytosis.** [I Chan](#) and MD Tharp. Chicago, IL.
- 343 Safety and efficacy of a non-steroidal anti-inflammatory agent (WBI-1001) as a novel topical treatment for psoriasis and atopic dermatitis.** [R Bissonnette](#), M Lyle, Y Wanggui, B Li, G Chen, L Tang and J Webster. Montreal, Canada and Burbaby, Canada.
- 344 Characterization of VB-129, a cathepsin S inhibitor efficacious in a mouse model of psoriasis.** [U Holsinger](#), S Mocci, JO Link, K Elrod, MJ Green, R Booth and SA Dalrymple. Menlo Park, CA; Foster City, CA and South San Francisco, CA.
- 345 Foreign body granuloma due to injectable polymethylmethacrylate microspheres.** [CF Estes](#) and AA Bajoghli. Washington, DC and Falls Church, VA.
- 346 Treatment of epidermal growth factor-induced rash with colloidal oatmeal extract: An extended follow-up.** [DT Alexandrescu](#), LC Kauffman and [CA Dasanu](#). San Diego, CA; Washington, DC and Hartford, CT.
- 347 Upregulation of pro-inflammatory markers in open and closed comedones in acne vulgaris.** [W Lee](#), T Do, F Wang, G Fisher, J Voorhees and S Kang. Ann Arbor, MI; Daegu, South Korea and Baltimore, MD.

Epidemiology and Health Services Research

All orals [designated with an asterisk (*)] listed below are presented in the Epidemiology and Health Services Research Minisymposium on Saturday, May 9, 2009 from 2:00-5:30 p.m. in Room 519 A/B, Palais des congrès. Orals designated by two asterisks (***) will be presented during a Plenary Session.

- 348* Measuring negative body image among patients with acne vulgaris: Validation of the Body Image Disturbance Questionnaire in a clinical population.** [WP Bowe](#), A Doyle, C Crerand, DJ Margolis and AR Shalita. Brooklyn, NY and Philadelphia, PA.
- 349* Increasing burden of melanoma in the United States.** [E Linos](#), S Swetter, M Cockburn, G Colditz and C Clarke. Stanford, CA; Los Angeles, CA and St Louis, MO.
- 350 A genetic epidemiologic investigation of gestational outcomes associated with the DNA repair disorder, trichothiodystrophy.** [R Moshleji](#), C Signore, D Tamura, JL Mills, JJ DiGiovanna, MA Tucker, J Troendle, A Goldstein and KH Kraemer. Bethesda, MD and Albany, NY.
- 351 Cutaneous lymphoma incidence patterns in the United States: A population-based study of 3,884 cases.** [P Bradford](#), SS Devesa, WF Anderson and JR Toro. Rockville, MD and Bethesda, MD.
- 352 Itch and perceived self-efficacy among adolescents: Results from a cross-sectional study.** [F Dalgard](#) and R Stern. Boston, MA and Oslo, Norway.
- 353** A cohort study of vitamin D intake and melanoma risk.** [MM Asgari](#), SS Maruti, LH Kushi and E White. Oakland, CA; San Francisco, CA; Seattle, WA.
- 354 Global access to dermatopathology services.** [MW Tsang](#) and CL Kovarik. Minneapolis, MN and Philadelphia, PA.
- 355 Patient preferences for dermatology visits.** [JY Yoo](#), DL Pancir and AB Kimball. New York, NY and Boston, MA.
- 356 Reliability and validity of the Patient Report of Extent of Psoriasis Involvement (PREPI) for determining psoriasis severity.** [E Dommensch](#), [DB Shin](#), AB Troxel, DJ Margolis and JM Gelfand. Philadelphia, PA.
- 357 Assessment of dermatology-domain specific term coverage in ICD-9 and SNOMED-CT using a dermatology textbook index.** [N Shah](#) and M Pittelkow. Rochester, MN.
- 358 Exposure to particle pollution is associated with skin aging in elderly women.** [A Vierkötter](#), T Schikowski, U Ranft, D Sugiri, M Matsui, A Morita, U Krämer and J Krutmann. Düsseldorf, Germany; Melville, NY and Nagoya, Japan.
- 359 Advanced glycation end products crosslinks breaker: A new approach for improvement of aged skin.** [A Tada](#), A Kanamaru, M Oyobikawa, T Maeda and H Oshima. Yokohama, Japan.
- 360* Effects of chronic pruritus on depression, activities of daily living, and quality of life.** [L Kamalpour](#), PD Harvey, E Veledar, S Kini, M McIlwain, L Van, R Berrios, T Finch, L Delong and SC Chen. Atlanta, GA.
- 361 Pyoderma gangrenosum: A tertiary care experience.** AM Binus, AA Qureshi, VW Li and [LS Winterfield](#). Boston, MA.
- 362 The safety and efficacy of the scoop-shave for pigmented lesions of the skin.** [G Mendese](#), J Bordeaux and M Maloney. Boston, MA; Cleveland, OH and Worcester, MA.
- 363* Tumor infiltrating lymphocytes are a prognostic marker for survival in patients who develop melanoma metastases.** [CC Wriston](#), AB Troxel, DB Shin, A Schaffer, AI Rubin, JA Brauer and [ME Ming](#). Philadelphia, PA.
- 364* United States patients with severe psoriasis have an risk of increased all cause but not increased cardiovascular mortality.** [RS Stern](#) and A Huibregtse. Boston, MA.
- 365* Depression and incident diabetic foot ulcers: A prospective cohort study.** [LH Williams](#), CM Rutter, WJ Katon, GE Reiber, P Ciechanowski, SR Heckbert, EH Lin, EJ Ludman, MM Oliver, BA Young and M Von Korff. Seattle, WA.
- 366 What form of informed consent?** B Stoff, [J Shih](#), E Veledar and SC Chen. Atlanta, GA.
- 367 Prevalence and effects of adult atopic dermatitis in Taiwan: A pilot study on validation of diagnostic questionnaires and impacts of life quality.** [CE Lan](#), H Yu, C Wu and G Chen. Kaoshiung, Taiwan.
- 368 Development and acceptability of a new international quality of life instrument specific to physical appearance: BeautyQoL.** [A Beresniak](#), P Auquier, G Duru, GG Krueger, S Talarico, K Tsutani, Y de Linares and G Berger. Geneva, Switzerland; Marseille, France; Tokyo, Japan; Salt Lake City, UT; Sao Paulo, Brazil; Lyon, France and Paris, France.
- 369 Agreement between pruritus patients' self-reports of medications and doctor visits when compared with electronic medical records.** [RL Berrios](#), LK Delong, E Veledar, A Seidler and SC Chen. Atlanta, GA.
- 370 Assessment of quality of life of patient members of a web-based hydroa vacciniforme support group.** [RH Huggins](#), LA Leithauser, MJ Eide, CL Hexsel, G Jacobsen and HW Lim. Detroit, MI.
- 371 Identification of patients with nonmelanoma skin cancer using HMO claims data.** [MJ Eide](#), R Krajenta, D Johnson, J Long, G Jacobsen and CC Johnson. Detroit, MI.
- 372 Eczema prevalence in the United States: Data from the 2003 National Survey of Children's Health.** [TE Shaw](#), GP Currie and EL Simpson. Portland, OR.
- 373 Resource utilization and quality of life in the congenital ichthyoses.** L Kamalpour, [BL Gammon](#), KH Chen, E Veledar, Z Rice, M Pavlis and SC Chen. Atlanta, GA; New Orleans, LA and Taichung, Taiwan.
- 374 Validation of psoriasis self-reports and phenotypes in the nurses health study 2.** [PL Dominguez](#), HK Choi, G Curhan and AA Qureshi. Boston, MA.
- 375* Alcohol intake and risk of incident psoriasis in us women: A prospective study.** [AA Qureshi](#), PL Dominguez, G Curhan and HK Choi. Boston, MA.
- 376* Risk of cardiovascular mortality in patients with severe psoriasis.** [RS Azfar](#), AL Neimann, DB Shin, AB Troxel and JM Gelfand. Philadelphia, PA and New York, NY.
- 377 Associated conditions in psoriasis and inflammatory bowel disease.** [AM Binus](#), AA Qamar, EA Mody, LS Winterfield and AA Qureshi. Boston, MA.
- 378* Association between serum vitamin D3 levels and non-melanoma skin cancer.** [JY Tang](#), N Parimi, A Wu, J Boscardin, M Chren, SR Cummings, EH Epstein and DC Bauer. Stanford, CA; San Francisco, CA and Oakland, CA.
- 379 Length-of-wait: A novel measure for access to ambulatory care in dermatology.** [P Agarwal](#), T Lugdon, L Wang, M Rubenstein, H Haynes, T Kupper and A Qureshi. Boston, MA.
- 380 Resistance to microbial penetration by acellular dermal matrices.** [M Alam](#), E Fahrenbach, JY Kim and C Qi. Chicago, IL and Maywood, IL.
- 381 Treatment of rare and uncommon nonmelanoma tumors by Mohs surgery: A meta-analysis of 1232 cases.** [M Alam](#), C Wickman, D Danahey, NA Kim, S Yoo and A Rademaker. Chicago, IL.
- 382 Treatment of primary mucinous carcinoma of the skin: Meta-analysis of 189 cases.** [M Alam](#), R Trela, N Kim, S Yoo and A Rademaker. Chicago, IL.
- 383* Co-morbidity of psychiatric conditions skin disease in the United States: A population-based cross-sectional analysis of the 2007 National Health Interview Survey.** [N Smith](#) and F Tausk. Rochester, NY.
- 384* Tumor recurrence after treatment of keratinocyte carcinoma.** [MM Chren](#), JS Torres, SE Stuart, RJ Labrador, D Bertenthal and WJ Boscardin. San Francisco, CA.
- 385 Vitamin D Levels and photoprotective behavior in patients with NMSC.** [N Hill](#), L Delong, V Tangpricha, B Gammon, M Kumari, E Veledar and SC Chen. Boston, MA and Atlanta, GA.
- 386* Health care delivery system effect on disparities in melanoma outcomes among medicare-aged hispanic patients.** [P Rouhani](#), K Arheart and RS Kirsner. Miami, FL.

- 387** **Three case reports of metastatic basal cell carcinoma.** AA Bajoghli, Q Olowoyeye, N Dash, N Sadeghi and V Giannelli. Falls Church, VA; Fredericksburg, MD; Washington, DC.
- 388*** **Topical tretinoin and prevention of keratinocyte carcinoma.** MA Weinstock, SF Bingham, R Hall, D Eilers, R Kirsner, M Naylor, J Kalivas, G Cole, K Marcolivio, JJ DiGianna and JE Vertrees. Providence, RI.
- 389** **Psoriasis is associated with disruption in religious affiliation and marital status during early adulthood.** EM Seidler and AB Kimball. Boston, MA.
- 390** **Pemphigus vulgaris differs among males and females.** A Sachdev, DG Bhanusali, L Gill, J Shah, K Seiffert-Sinha and AA Sinha. East Lansing, MI.
- 391*** **Accuracy of teledermatology for pigmented neoplasms.** E Warsaw, F Lederle, J Grill, A Gravely, A Bangerter, L Fortier, K Bohjanen, K Chen, P Lee, H Rabinovitz, R Jorh, V Kaye, S Bowers, R Wenner, S Askari, D Kedrowski and D Nelson. Minneapolis, MN; Miami, FL; Springfield, IL and St. Louis, MO.
- 392** **Accutane and Botox video information on YouTube.** KK Vance, W Howe and RP Dellavalle. Aurora, CO and Denver, CO.
- 393*** **Cardiovascular risk factors and stroke are increased in psoriasis patients compared to the US population.** I Grozdev, LY Cao, DC Babineau, EF Kern, TS McCormick, KD Cooper and NJ Korman. Cleveland, OH.

Epidermal Structure and Function

All orals [designated with an asterisk (*)] listed below are presented in the Epidermal Structure and Function Minisymposium on Thursday, May 7, 2009 from 2:00-5:30 p.m. in Room 519 A/B, Palais des congrès. Orals designated by two asterisks (**) will be presented during a Plenary Session.

- 394** **Decreased cutaneous resonance running time in cured leprosy subjects.** S Song, PM Elias, Q Hou, C Lv, Y Shi, KR Feingold and M Man. San Francisco, CA; Dalian, China and Zhangjiajie, China.
- 395** **Variation of skin surface pH, sebum content, and stratum corneum hydration with age and gender in Chinese population.** S Gong, C Lv, KR Feingold, X Zhang, S Xin, C Tu, L Sui, PM Elias and M Man. Dalian, China; San Francisco, CA and Zunyi, China.
- 396** **The presence of N^ε (Carboxymethyl) lysine in the epidermis.** K Kawabata, H Yoshikawa, K Saruwatari, Y Akazawa, T Inoue, T Sayo and Y Sugiyama. Odawara, Japan.
- 397** **TGF-β1 upregulates Semaphorin 7A on keratinocytes, which promotes Interleukin-8 production from monocytes through β1-integrin.** M Kamata, H Uratsuji, T Kawashima, Y Tada and K Tamaki. Tokyo, Japan.
- 398** **Expression profile of a profilaggrin-like protein, hornerin, in oral mucosa.** T Makino, T Yamakoshi, S Inoue, M Noguchi, N Huh and T Shimizu. Toyama, Japan and Okayama, Japan.
- 399** **LaPlace's Law and its potential relevance in comedo formation.** C Kroodsma. Peoria, IL.
- 400** **Are advanced glycation (AGEs) and oxidation products (OP) measured by skin fluorescence?** P Beisswenger, S Howell, T Mackenzie, H Corstjens, N Muizzuddin and MS Matsui. Hanover, NH; Melville, NY and Oevel, Belgium.
- 401** **Epidermal lipids: Differences between age, region and color skin in Brazilian voluntaries.** LB López, MB Roedel, R Borojevic, FC Guma, SH Medina, VM Sá-Rocha and JL Gesztesj. Cajamar, Brazil; Rio de Janeiro, Brazil and Porto Alegre, Brazil.
- 402** **The changes of the stratum corneum constituents in the skin barrier dysfunction model mice.** T Midorikawa, F Yamaguchi, K Ishida, M Yumoto, T Asanuma, T Yoshino, M Ohdera and Y Kitajima. Odawara, Japan and Gifu, Japan.
- 403** **Effects of retinoic acid on keratinocyte proliferation and differentiation in a psoriatic skin model.** J Jean, J Soucy, FA Auger and R Pouliot. Quebec, Canada.
- 404*** **Vitamin D receptor and coactivators SRC 2 and 3 regulate barrier sphingolipid production and epidermal permeability barrier formation.** Y Uchida, Y Oda, S Moradian, D Crumrine, PM Elias and DD Bikle. San Francisco, CA.
- 405*** **Ceramide metabolites in epidermal permeability barrier function and atopic dermatitis.** N Loiseau, S Moradian, PM Elias, WM Holleran and Y Uchida. San Francisco, CA and Toulouse, France.
- 406*** **Pemphigus vulgaris antibodies (PV IgG and AK23) antagonize differentiation-dependent onset of Wnt signaling via constitutive c-Myc in keratinocyte cultures.** A Galichet, L Williamson, C Kolly, K Schulze, H Posthaus, E Boitier, MM Suter and EJ Müller. Bern, Switzerland and Anthony, France.
- 407*** **Caspase-14 is associated with DNA degradation in differentiated keratinocytes.** M Yamamoto, J Hosoi, C Katagiri and T Hibino. Yokohama, Japan and Tokyo, Japan.
- 408** **STRA6 a potent novel transporter for the active influx of retinol in human epidermal keratinocytes.** C Skazik, R Heise, S Joussem, Y Marquardt, HF Merk and JM Baron. Aachen, Germany.
- 409*** **The profilaggrin N-terminus interacts, and is co-expressed, with two novel nuclear proteins in keratinocytes.** RB Presland, OT Lawrence, J Huard and H Kortgere. Seattle, WA.
- 410** **The tight junction protein Claudin-1 is a susceptibility gene in Atopic Dermatitis with relevance for cutaneous barrier function.** A De Benedetto, A Ivanov, S Vidyasagar, M Bolognino, KW Bundy, M Boguniewicz, T Hata, L Schneider, J Hanifin, R Gallo, NM Rafaels, C Cheadle, P Gao, KC Barnes, DY Leung and LA Beck. Rochester, NY; Denver, CO; San Diego, CA; Boston, MA; Portland, OR and Baltimore, MD.
- 411** **THP-1 cells as an in vitro model for subacute toxicity assay.** L Garcia, C Pouzet, M Arcioni, E Bauza and N Domloge. Sophia-Antipolis, France.
- 412** **Modulating aconitase expression and activity reduces oxidative stress and skin damage.** G Obero, Y Guerif, C Gondran, E Bauza, J Botto, G Bressier, A Berghi, K Cucumel, C Dal Farra and N Domloge. Sophia-Antipolis, France and Wayne, NJ.
- 413** **Involvement of Aquaporin-3 in cold stress resistance in normal human keratinocytes and human skin.** L Mur, F Labarrade, C Serre, C Gondran, J Botto, F Portolan, C Dal Farra and N Domloge. Sophia-Antipolis, France and Wayne, NJ.
- 414** **Skin protection by modulation of peripheral proteins implicated in circadian rhythms.** E Bauza, J Botto, R Chabert, F Labarrade, C Gondran, G Bressier, I Imbert, C Dal Farra, N Pernodet, D Maes and N Domloge. Sophia-Antipolis, France; Wayne, NJ and Melville, NY.
- 415** **Use of IL-1α release in HaCaT cells for skin irritation evaluation.** S Duveau, I Garcia, M Arcioni, E Bauza and N Domloge. Sophia-Antipolis, France.
- 416** **Modulation of transglutaminase isoform expression and activity in human keratinocytes and skin biopsies.** L Mur, A Perrin, C Gondran, J Botto, N Garcia, F Portolan, C Dal Farra and N Domloge. Sophia-Antipolis, France and Wayne, NJ.
- 417** **Role of telomere-associated protein TRF2 in cell aging.** A Amoyel, L Bergeron, C Gondran, J Botto, N Garcia, I Imbert, C Dal Farra and N Domloge. Sophia-Antipolis, France and Wayne, NJ.
- 418** **Mitochondrial mass is related to a protective effect against UV-induced apoptosis.** J Botto, E Bauza, G Menon, R McMullen, G Bressier, C Gondran, C Dal Farra and N Domloge. Sophia-Antipolis, France and Wayne, NJ.
- 419** **Flow cytometric assessment of protection of skin fibroblasts from oxidative stress and UV-induced apoptosis.** J Botto, E Bauza, C Gondran, R Chabert, N Garcia, C Dal Farra and N Domloge. Sophia-Antipolis, France and Wayne, NJ.
- 420** **Modulation of caspase-14 expression plays a key role in DNA repair and protection.** L Bergeron, F Labarrade, A Amoyel, C Serre, C Gondran, J Botto, N Garcia, C Dal Farra and N Domloge. Sophia-Antipolis, France and Wayne, NJ.
- 421*** **SNAP29, a protein deficient in CEDNIK syndrome, is expressed in the lamellar granules and is regulated during epidermal differentiation in a PPAR-γ dependent fashion.** D Fuchs, J Lugassy, M Indelman, H Stewart and E Sprecher. Tel Aviv, Israel; Haifa, Israel and Oxford, United Kingdom.
- 422** **IGFBP7, a biomarker deficient in psoriatic plaques and induced by UVB phototherapy, regulates keratinocyte proliferation, differentiation and apoptosis.** J Nouisbeck, O Sarig, N Avidan, M Indelman, R Bergman, M Ramon, C Enk and E Sprecher. Haifa, Israel; Tel Aviv, Israel and Jerusalem, Israel.
- 423** **Glucocorticoid receptor enhances the keratinocyte differentiation in a ligand-independent manner.** H Yoon, K Sohn, D Choi, C Hwang, Y Lee, T Yoon, Y Lee, C Kim and J Lee. Daejeon, South Korea and Jinju, South Korea.
- 424** **Sequential down-regulation of the skin barrier homeostasis in Otsuka Long-Evans Tokushima Fatty (OLETF) rat, type 2 diabetes animal model, with age.** H Park, M Jung, C Chung and E Choi. Wonju, South Korea.
- 425** **Role of Brn2 in keratinocyte differentiation.** G Shi, K Sohn, D Choi, N Kim, K Lee, Y Lee, T Yoon, Y Lee, C Kim and J Lee. Daejeon, South Korea and Jinju, South Korea.
- 426** **Cannabinoid receptors 1 and 2 oppositely regulate permeability barrier status and epidermal differentiation.** T Roelandt, S Bedrif, C Heughebaert, C Giddelo, C Baudouin, P Miska, PM Elias, D Roseeuw and J Hachem. Brussels, Belgium; Epernon, France and San Francisco, CA.

- 427 **Sweat is the origin of natural moisturizing factors such as lactate and potassium: A study on the patients with localized anhidrosis.** [A Watabe](#), M Ozawa, K Kikuchi, T Sugawara, S Sakai and S Aiba. Sendai, Japan and Odawara, Japan.
- 428 **Localization of MFG-E8 (milk fat globule-associated protein with EGF- and Factor VIII-like domains) in normal murine skin.** [S Motegi](#), C DeWitt, W Leitner, K Nagao and MC Udey. Bethesda, MD.
- 429* **Abnormal lamellar body formation and secretion in Sjögren-Larsson syndrome is responsible for the defective epidermal water barrier.** [WB Rizzo](#), D S'Aulis, MA Jennings, D Crumrine, ML Williams and PM Elias. Omaha, NE and San Francisco, CA.
- 430 **Did stress to the barrier influence the development of pigmentation in humans?** [PM Elias](#), G Menon and JW Williams. San Francisco, CA; Wayne, NJ and Madison, WI.
- 431 **Topical imiquimod and calcipotriol stimulate antimicrobial peptide expression in mouse epidermis.** [M Rodriguez-Martin](#), M Hupe, M Man, J Naya and PM Elias. San Francisco, CA; Tenerife, Spain and Barcelona, Spain.
- 432 **Barrier injury to the stratum corneum by acetone causes a marked increase in hyaluronan that is mediated via the EGF receptor pathway in a 3-D epidermal keratinocyte model.** [J Monslow](#), G Ajani and EV Maytin. Cleveland, OH.
- 433 **Epidermal barrier dysfunction in HIV: Relationship to immune status, antiretroviral therapy, and atopy.** R Gunathilake, M Schmutz, [TC Scharschmidt](#), TM Mauro, TA Maurer, LS Kieron and PM Elias. San Francisco, CA and Innsbruck, Austria.
- 434* **Ceramide stimulates ABCA12 expression via PPAR-beta in human keratinocytes.** Y Jiang, Y Uchida, B Lu, P Kim, C Mao, M Akiyama, PM Elias, [WM Holleran](#), C Grunfeld and KR Feingold. San Francisco, CA; Charleston, SC and Sapporo, Japan.
- 435 **Keratin network mediates the stiffness of human keratinocytes.** V Lulevich, [H Yang](#), RR Isseroff and G Liu. Davis, CA.
- 436* **Ovol2 inhibits transient expansion and terminal differentiation of epidermal progenitor cells by repressing c-Myc and Notch1.** J Wells, [B Lee](#), A Cai, W Lee, L Rugg, S Sinha, Q Nie and X Dai. Irvine, CA and Buffalo, NY.
- 437 **Detection of calcium gradients in live *ex vivo* human epidermis using a novel approach based on phasor analysis of two-photon excitation Fluorescence Lifetime Imaging (FLIM).** [A Celli](#), SA Sanchez, M Behne, T Hazelet, E Gratton and T Mauro. San Francisco, CA; Irvine, CA and Hamburg, Germany.
- 438 **Activation and translocation of PKC β II in response to pro-differentiative AQP3/PLD2 signaling in primary mouse keratinocytes.** [L Bailey](#) and WB Bolla. Augusta, GA.
- 439 **Analysis of tight junction function in explanted and xenografted human skin.** [T Yuki](#), A Hachiya, P Sriwiriyanont, M Vissher and Y Sugiyama. Odawara, Japan; Haga, Japan and Cincinnati, OH.
- 440 **(Neuro-)endocrine control of keratin expression in human skin *in situ*.** [Y Ramot](#), K Foitzik, E Gáspár, E Bodó, S Tiede, V Goffin, L Langbein and R Paus. Lübeck, Germany; Jerusalem, Israel; Hamburg, Germany; Paris, France; Heidelberg, Germany and Manchester, United Kingdom.
- 441 **Up-regulation of serpin SCCA1 disrupts barrier function.** [C Katagiri](#), M Sugahara, T Iida, M Kaneko, M Ooguri and T Hibino. Yokohama, Japan.
- 442 **Anti-itching properties of a natural extract.** S Bredif, C Baudouin and [P Msika](#). Epernon, France.
- 443* **Knock-down of (pro)-filaggrin in an organotypic skin model reproduces some of the features observed in atopic dermatitis and Ichthyosis vulgaris.** [J Jin](#), M Mildner, L Eckhart, D Födinger, V Mlitz, C Ballaun and E Tschachler. Vienna, Austria and Neuilly, France.
- 444 **A potential regulatory role for cathepsin V and its cognate inhibitor cystatin M/E in epidermal desquamation.** [T Cheng](#), C Dolk, C Caubet, M Simon, C Watts, M Kamsteeg, G Serre, J Schalkwijk and PL Zeeuwen. Nijmegen, Netherlands; Toulouse, France and Dundee, United Kingdom.
- 445* **Acute and chronic skin barrier disruption leads to increased expression of murine β -defensin-1, -3, and -14.** K Hinrichsen, J Meingassner, J Harder and [E Proksch](#). Kiel, Germany and Vienna, Austria.
- 446 **Increased stratum corneum serine protease activities in acute eczematous atopic skin.** [R Voegeli](#), AV Rawlings, S Doppler and JW Fluhr. Basel, Switzerland; Northwich, United Kingdom; Jena, Germany and Hamburg, Germany.
- 447 **Upregulation of hyaluronan synthases during phorbol ester (TPA)-induced hyperplasia with potential functional compensation by Has2 in Has1/Has3 double knockout mice.** [R Feldman](#), J Monslow, N Itano, K Kimata and E Maytin. Cleveland, OH; Nagano, Japan and Aichi, Japan.
- 448 **A randomized, double-blind, vehicle-controlled, bilateral comparison trial of calcitriol vs vehicle in Pityriasis alba.** [B Moreno Cruz](#), B Torres-Alvarez, J Castaneda-Cazares and B Moncada. San Luis Potosi, Mexico.
- 449 **Urea revisited: A well known molecule with previously unrecognized gene regulatory properties.** [S Grether-Beck](#), I Felsner, H Brenden, K Reinhold, T Jaenicke, C Trullas, PM Elias and J Krutmann. Duesseldorf, Germany; Barcelona, Spain and San Francisco, CA.
- 450 **Notch ligands, jagged 1 and jagged 2 as well as the notch target gene, *hes-1* are expressed in human epidermis, hair follicle and sweat gland.** M Cleaton, F Ruge, TE Easter and [PE Bowden](#). Cardiff, United Kingdom.
- 451 **The aging secretome of skin cells.** [M Stichenwirth](#), M Mildner and E Tschachler. Vienna, Austria and Neuilly, France.
- 452 **Investigation of the relation between different parameters of skin barrier function.** [T Reuther](#), L Mose, S Schroeder and M Kerscher. Hamburg, Germany.
- 453 **Clinicopathologic and molecular significance of intra-epidermal type VII collagen in inherited skin blistering.** [N Almaani](#), L Liu, PJ Dopping-Hepenstal, PA Lovell, JE Mellerio and JA McGrath. London, United Kingdom.
- 454* **Desmoglein 1 interacts with erbin: A putative mechanism for inhibiting Erk signaling during epidermal differentiation and morphogenesis.** [R Harmon](#), C Simpson, S Getsios and K Green. Chicago, IL.
- 455 **Bath emollients prevent atopic dermatitis lesions in the NC/Nga mouse model.** [J Lenn](#), W Chern and H Hofland. Palo Alto, CA.
- 456 **Bad fur: A mutation affecting skin development that restores B cells to IL-7 deficient mice.** [BE Rich](#). Boston, MA.
- 457 **Japanese cheek skin has greater ASIC and heightened sensory thresholds compared to hairline skin.** [B Maddison](#), V Foy, J Stocks, S Singleton and F McGlone. Colworth, Sharnbrook, United Kingdom; Trumbull, CT and Port Sunlight, United Kingdom.
- 458* **Effect of overexpression of the N-Terminus of profilaggrin on epidermal biology in genetically modified living skin equivalent.** [S Aho](#), J Lee, H Meldrum and C Bosko. Trumbull, CT.
- 459 **Proteome changes in human epidermis induced by UVB irradiation.** [E Benhabib](#), MK Hordinsky, IG Panoutsopoulou, G Wendelschafer-Crabb, WR Kennedy and GL Wilcox. Minneapolis, MN.
- 460 ***In vivo* screening of cosmetic actives for enhanced effects of Vitamin A.** [J Lee](#), M McKinney, C Horbacewicz, J Bajor, W Lathrop, M Yeh, H Chen and H Meldrum. Trumbull, CT.
- 461 **Functional analysis of Pecanex, a *Drosophila* neurogenic gene, during epidermal morphogenesis.** [C Cela](#), K Fantauzzo, H Bazzi and AM Christiano. New York, NY.
- 462 **Cleansing without compromise: A novel lipid-rich moisturizing body wash technology.** [KP Ananthapadmanabhan](#), L Tsaur, V Villa, L Yang, S Mukherjee, C Vincent, K Vetro, V Foy, S Zhang, A Ashkenazi, E Pashkovski and V Subramanian. Trumbull, CT.
- 463 **Development of genetic modification capability in the living skin equivalent model to understand gene function.** [J Adamus](#), S Aho, J Lee, H Meldrum and C Bosko. Trumbull, CT.
- 464 ***In vitro* skin penetration of novel antimicrobial nanoemulsion formulations containing anti-fungal agents.** S Ciotti, R Eisma, [L Ma](#) and JR Baker. Ann Arbor, MI.
- 465 **Lateral diffusion of a novel nanoemulsion containing terbinafine hydrochloride.** [S Ciotti](#), R Eisma, L Ma and JR Baker. Ann Arbor, MI.
- 466* **A novel ABCA12 mutant mouse model provides new insight into the pathological mechanisms of Harlequin Ichthyosis.** [L Zhang](#), W Feng, L Niswander, D Roop and T Williams. Aurora, CO.
- 467 **Functional pathways of NAD biosynthesis in human keratinocytes.** L Signorello, R Azar, N Giridharan, DL Coyle and [MK Jacobson](#). Tucson, AZ.
- 468** **Grainyhead-like factor Get1/Grh13 is a shared transcriptional regulator for epidermal and urothelial differentiation.** Z Yu, J Mannik, [A Soto](#), K Lin and B Andersen. Irvine, CA.
- 469 **Potential role of TRPV5 and 6 in the formation of epidermal calcium gradients and keratinocyte differentiation.** [H Kim](#), S Jeong, J Kim, M Jeong and S Lee. Seoul, South Korea; Daejeon, South Korea.
- 470 **Folate metabolism in skin cells subjected to folate deficiency and ultraviolet radiation exposure.** [JD Williams](#) and MK Jacobson. Tucson, AZ.

- 471** The amiloride controls the antimicrobial peptide expressions of human primary keratinocyte. [H Kim](#), J Kim, S Jeong and S Lee. Seoul, South Korea and Daejeon, South Korea.
- 472*** A novel role for *Nrf2* in restoration of epidermal barrier function *in utero*. [AJ Huebner](#), P Koch, S Werner and D Roop. Aurora, CO and Zurich, Switzerland.
- 473** Characterization of human kallikrein-8, a keratinocyte-specific protease implicated in epidermis physiology and pathobiology. [A Eissa](#) and E Diamandis. Toronto, Canada.
- 474** Modeling of molecular properties leads to the development of a novel humectant system with enhanced stratum corneum hydration benefits. C Vincent, P Chandar, N Lu and [G Nole](#). Trumbull, CT.
- 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 7, 2009 from 2:00-5:30 p.m. in Room 516 C/D/E, Palais des congrès. Orals designated by two asterisks (**) will be presented during a Plenary Session.
- 475** Transglutaminase-1 gene mutations in autosomal recessive congenital ichthyosis: A report of 23 novel mutations and modeling of TGase-1. ML Herman, S Farasat, PJ Steinbach, M Wei, O Toure, P Fleckman, PW Blake, SJ Bale and [JR Toro](#). Bethesda, MD; Frederick, MD; Seattle, WA and Gaithersburg, MD.
- 476** CYLD missense mutations occur in USP domain and are associated with multiple familial trichoepithelioma. [PW Blake](#), PJ Steinbach and JR Toro. Bethesda, MD.
- 477** Identification of a nonsense ATP2C1 mutation in a Chinese family with Hailey-Hailey disease. [G Zhang](#), H Shi, M Shao, X Du, H Mu and P Xie. Wuxi, China.
- 478*** Phase I trial of H5.020CMV.PDGF-b for treatment of venous leg ulcer. [DJ Margolis](#), L Weinberg, M Curran, L Morris and T Crombleholme. Philadelphia, PA and Cincinnati, OH.
- 479*** Reduced FRAS1 expression underlies epithelial fragility in AEC syndrome. [SE Clements](#) and JA McGrath. London, United Kingdom.
- 480** Gene expression profiling as a tool to characterize the response of epidermal keratinocytes towards cholesterol depletion. [C Mathay](#), M Pierre, M Pittelkow, E Depiereux and Y Poumay. Namur, Belgium and Rochester, MN.
- 481** Fibroblast cell therapy for dystrophic epidermolysis bullosa: Long-term skin stability despite limited cell viability. [JS Kern](#), S Loeckermann, A Fritsch, ML Müller, I Hausser, P Ruther and L Bruckner-Tuderman. Freiburg, Germany and Heidelberg, Germany.
- 482*** Mutations in *FERMT1* in Kindler syndrome implicate a role for fermitin family homolog 1 in epidermal stem cell maintenance and integrin activation. [JE Lai-Cheong](#), A Tanaka, M Parsons and JA McGrath. London, United Kingdom.
- 483*** Conditional collagen VII inactivation allows analysis of anchoring fibril stability and function *in vivo* and reveals a major role of fibroblasts in collagen VII expression. [A Fritsch](#), JS Kern, S Loeckermann, D Velati, R Fässler and L Bruckner-Tuderman. Freiburg, Germany and Martinsried, Germany.
- 484** Novel mutations in the oncostatin M receptor- β underlie familial primary localized cutaneous amyloidosis. [A Tanaka](#), JE Lai-Cheong, N Nagy, P Van Den Akker, F Palisson, G Millington and JA McGrath. London, United Kingdom; Groningen, Netherlands; Santiago, Chile and Norwich, United Kingdom.
- 485*** Transcriptional coactivator DRIP/Mediator is involved in VDR function and regulates keratinocyte proliferation and differentiation. [Y Oda](#), RJ Chalkley, AL Burlingame and DD Bikle. San Francisco, CA.
- 486** A functional enhancer in the first intron contributes to the control of *PADI1* transcription. [S Ying](#), T Kojima, A Kawada, M Méchin, S Chavanas, G Serre, M Simon and H Takahara. Ami, Japan; Osaka, Japan and Toulouse, France.
- 487** Study by qRT-PCR of the epidermal differentiation of human keratinocytes after evaluation of candidate housekeeping genes using *geNorm* algorithm. F Minner, F Herphelin and [Y Poumay](#). Namur, Belgium.
- 488** Identification of five new mutations in ABCA12 gene of three Japanese cases of non-bullous congenital ichthyosiform erythroderma, suggesting a genotype-phenotype correlation. [S Fukuda](#), T Hamada, S Sakaguchi, K Sakai, S Yasumoto, M Akiyama, H Shimizu and T Hashimoto. Kurume, Japan and Sapporo, Japan.
- 489** Analysis of the HLA-Cw1—B46 psoriasis risk haplotype reveals allelic heterogeneity with HLA-Cw6. [RP Nair](#), PE Stuart, R Hiremagalore, P Kullavanijaya, T Tejasvi, JJ Voorhees and JT Elder. Ann Arbor, MI and Bangkok, Thailand.
- 490** Immunogenetics of HIV associated HPV disease after HAART. [R Meys](#), F Fowles, A Little, SG Marsh, D Asboe, DA Hawkins, FM Gotch and CB Bunker. London, United Kingdom.
- 491** Proximal transcription factor binding sites in the loricrin promoter are essential for regulating its expression *in vivo*. M Kawase, [J Chen](#), Y Kawachi, D Dai, M Longley, AJ Huebner, K Yamada, PJ Koch and DR Roop. Aurora, CO; Houston, TX; Tokyo, Japan and Tsukuba, Japan.
- 492** Targeted *ex vivo* gene therapy for epidermolytic hyperkeratosis. [J Chen](#) and DR Roop. Aurora, CO.
- 493** Kindlins: Novel proteins involved in epidermal adhesion, cell-matrix interactions and skin aging. [Y He](#), B Maertens, L Bruckner-Tuderman and C Has. Freiburg, Germany.
- 494*** Kindlin-1 is required for RhoGTPase-mediated lamellipodia formation in keratinocytes. [C Has](#), C Herz, E Zimina, H Qu, Z Zhang, T Wen, Y Gache, M Aumailley and L Bruckner-Tuderman. Freiburg, Germany; Cologne, Germany and Nice, France.
- 495** Inherited absence of dermal ridges — the immigration delay disease. [B Burger](#) and P Itin. Basel, Switzerland.
- 496** Increased pachyonychia congenita severity with concurrent keratin and filaggrin mutations. [R Gruber](#), FJ Smith, PO Fritsch and M Schmuth. Innsbruck, Austria and Dundee, United Kingdom.
- 497*** Over-expression of fetuin-A counteracts ectopic mineralization in a mouse model of pseudoxanthoma elasticum. [Q Jiang](#), F Dibra, MD Lee and J Uitto. Philadelphia, PA.
- 498*** The Pseudoxanthoma Elasticum phenotype in the *Abcc6*^{-/-} mice is modified by the *Ggca* gene and the genetic background (129X1). [Q Li](#), EA Grand-Pierre and J Uitto. Philadelphia, PA.
- 499** Characterization of the mouse Samd9L gene and its promoter region. [B Quaynor](#), Q Jiang, Q Li, E Sprecher and J Uitto. Philadelphia, PA and Tel-Aviv, Israel.
- 500*** Parabolic heterogenetic pairing of *Abcc6*^{-/-} and wild-type mice halts progression of ectopic mineralization in a murine model of pseudoxanthoma elasticum. Q Jiang, [R Oldenburg](#), S Otsuru, A Grand-Pierre, EM Horwitz and J Uitto. Philadelphia, PA.
- 501** Experimental diet with mineral modifications accelerates connective tissue mineralization in *Abcc6*^{-/-} mice—a model for testing PXE treatment strategies. Q Jiang, R Oldenburg, [A Grand-Pierre](#) and J Uitto. Philadelphia, PA.
- 502** Morpholino “knockdown” of the *Abcc6a* gene impairs zebrafish development — a model system for PXE. [S Sadowski](#), Q Li, A Varadi, SY Ho, M Dean and J Uitto. Philadelphia, PA; Budapest, Hungary and Frederick, MD.
- 503** Skin and adnexa diseases in the aging mouse: Analysis of 31 inbred strains. [JP Sundberg](#), KA Silva, V Kennedy, L Petell, B King, R Yuan, B Paigen and D Harrison. Bar Harbor, ME.
- 504** Fluorescence labeled reporter genes provide useful tools to investigate cutaneous innervations. [CM Webb](#), C Rosales, K Seburn, R Burgess and JP Sundberg. Bar Harbor, ME.
- 505** Narrowing the quantitative trait locus interval Alaa1 in the C3H/HeJ mouse model for Alopecia Areata. [C McPhee](#), V Kennedy, B King, L Rowe, L King, D Roopenian and J Sundberg. Bar Harbor, ME and Nashville, TN.
- 506** Mouse models for cicatricial alopecia. [K Wolk](#), KA Silva, C McPhee, LE King and JP Sundberg. Bar Harbor, ME; Nashville, TN and Columbus, OH.
- 507** Using the C3H/HeJ mouse model for Alopecia Areata in biomedical research. [KA Silva](#), C McPhee, LE King and JP Sundberg. Bar Harbor, ME and Nashville, TN.
- 508** Fox2 proteins parallel the effect of TIAs that enhance exon inclusion to give the alternatively-spliced long transcript of lysyl hydroxylase 2 that is increased in Scleroderma. [HN Yeowell](#), P Seth and LC Walker. Durham, NC.
- 509*** Characterization of molecular mechanisms underlying mutations in dystrophic epidermolysis bullosa using site-directed mutagenesis. [M Chen](#), Y Hou, E Cua, G Henderson, S Andrews and D Woodley. Los Angeles, CA.

- 510 Multiple independent loci within the major histocompatibility complex confer risk of psoriasis.** [B Feng](#), R Soltani-Arabsahi, AM Bowcock, RP Nair, JT Elder, SJ Schrodli, AB Begovich, GR Abecasis, KP Callis-Duffin, DE Goldgar and GG Krueger. Salt Lake City, UT; St. Louis, MO; Ann Arbor, MI and Alameda, CA.
- 511 Keratin 5 mutations in Epidermolysis Bullosa Simplex: Mutation-related differences in cellular fragility and the protective effects of trimethylamine N-oxide (TMAO) on heat-stressed EBS keratinocytes.** [J Chamcheu](#), M Virtanen, P Bowden, H Navsaria, A Vahlquist and H Törmä. Uppsala, Sweden; Cardiff, United Kingdom and London, United Kingdom.
- 512* Marie Unna hereditary hypotrichosis is caused by mutations of an upstream open reading frame in the human hairless gene.** [X Zhang](#), Y Wen, Y Liu, Y Xue, Y Zhao, R Hua, K Wang, M Sun, W McLean and C He. Beijing, China; Shenyang, China and Dundee, United Kingdom.
- 513 Inflammation in Bullous Congenital Ichthyosiform Erythroderma (BCIE) is composed of mast cell infiltration, possibly through bFGF and PGE2 enhancement by mechanical stimuli.** [M Komine](#), Y Hanakawa, K Wakatabi, H Yokokura, K Hashimoto, K Tamaki and M Ohtsuki. Shimotsuke, Japan; Tohon, Japan and Bunkyo-ku, Japan.
- 514 Inflammation mediates epidermal proliferation in Netherton syndrome through transforming growth factor β 1 and metalloprotease 9.** [M Lacroix](#), C Deraison, A Briot, C Bonnart, A Robin, C Besson, C Danne and A Hovnanian. Toulouse, France.
- 515* Atopic inflammation is an epidermal cell autonomous process in Netherton syndrome.** [A Briot](#), C Deraison, M Lacroix, C Bonnart, A Robin, C Besson and A Hovnanian. Toulouse, France.
- 516 Assessing the risk of an immune response to type VII collagen gene therapy in recessive dystrophic epidermolysis bullosa.** [V Pendaries](#), G Gasc, M Titeux, C Leroux, Z Vitezica, J Mejia, A Decha, P Loiseau, C Bodemer, C Prost-Squarcioni and A Hovnanian. Toulouse, France; Paris, France and Bobigny, France.
- 517 Level of type VII collagen at the basement membrane does not always correlate with clinical severity in a cohort of 13 Mexican patients with recessive dystrophic epidermolysis bullosa.** [J Garza-Gómez](#), J Salas-Alanis, M Gómez-Flores, A Campbell, C Pourreyron, J Ocampo-Candiani and A South. Monterrey, Mexico and Dundee, United Kingdom.
- 518 Compound heterozygous mutations in desmoplakin result in novel phenotypes of ectodermal dysplasia.** [MG Mahoney](#), S Sadowski, D Brennan, P Pikander, P Saukko, JK Wahl, H Aho, K Heikinheimo, L Bruckner-Tuderman, A Fertala, J Uitto and S Peltonen. Philadelphia, PA; Turku, Finland; Omaha, NE and Freiburg, Germany.
- 519** Filaggrin-deficient mice exhibit enhanced percutaneous antigen priming.** AD Irvine, PG Fallon, T Sasaki, A Sandilands, JJ Callanan, RB Presland, P Fleckman, J Kudoh, M Amagai and [W McLean](#). Dundee, United Kingdom; Dublin, Ireland; Tokyo, Japan and Seattle, WA.
- 520 The Darier's Disease phenotype may be modulated by changes in sphingosine and calcium signaling pathways.** [DS McKenzie](#), A Celli, Y Uchida, W Holleran, C Tu, D Bikle and T Mauro. San Francisco, CA.
- 521* Identification of downstream molecular targets of Trps1 during murine hair follicle morphogenesis.** [KA Fantauzzo](#), CA Jahoda and AM Christiano. New York, NY and Durham, NC.
- 522* A new role for Cockayne syndrome A and B in protection from mitochondrial aging of subcutaneous fat.** [Y Kamenisch](#), M Fousteri, J Knoch, A von Thaler, R Kuiper, M Schaller, H van Steeg, M Röcken, J Krutmann, LH Mullenders and M Berneburg. Tuebingen, Germany; Leiden, Netherlands; Utrecht, Netherlands and Duesseldorf, Germany.
- 523 SHARPIN is a critical regulator of NF κ B and MAPK signaling.** [Y Liang](#), R Seymour, V Kennedy, KA Silva, H HogenEsch and JP Sundberg. Bar Harbor, ME and West Lafayette, IN.
- 524 Dietary magnesium modulates connective tissue mineralization in a mouse model of pseudoxanthoma elasticum (*Abcc6*^{-/-}).** [J LaRusso](#), Q Li, Q Jiang and J Uitto. Philadelphia, PA.
- 525 Gene expression/qRT-PCR analysis in psoriatic disease: Translational approaches to identify responder from non-responder psoriasis patients treated with Anti-TNF α biologics.** SO Francis, M Fujita, R Dellavalle, DA Norris and [CK Edwards](#). Aurora, CO.
- 526 Evidence for a founder mutation in the cathepsin C gene in two families with Papillon Syndrome.** [L Bach](#), M Kurban, M Wajid, Y Shimomura, R Bahhady, A Kibbi and A Christiano. New York, NY and Beirut, Lebanon.
- 527 Mutations in the keratin 85 (KRT85/hHb5) gene underlie pure hair and nail ectodermal dysplasia: Evidence for clinical overlap with monilethrix.** [M Zhang](#), Y Shimomura, M Wajid, M Kurban, N Sato and A Christiano. New York, NY and Niigata, Japan.
- 528 Identification of mutations in the SLURP1 gene in three Pakistani families with Mal de Meleda.** [H Lam](#), Y Shimomura, M Wajid and AM Christiano. New York, NY.
- 529 Compound heterozygotes in consanguineous families? A cautionary tale from lipase H mutations in autosomal recessive woolly hair.** [M Wajid](#), L Petukhova, Y Shimomura, P Gorroochurn, SE Hodge and AM Christiano. New York, NY.
- 530 SNP linkage scan in Alopecia Areata families confirms susceptibility loci and identifies two novel regions.** [J Chen](#), L Petukhova, WV Chen, A Lee, CI Amos, M Hordinsky, D Norris, V Price, M Duvic, PK Gregersen and AM Christiano. New York, NY; Houston, TX; Manhasset, NY; Minneapolis, MN; Denver, CO and San Francisco, CA.
- 531 Proteasome inhibitor differentially targets Rel-transcription factors to suppress type 1 genes and stimulate type 2 genes.** [HM Gibson](#), TM Germeroth and HK Wong. Detroit, MI.
- 532 Withdrawn.**
- 533 Genetic architecture of Alopecia Areata: Common pathways among autoimmune diseases.** [L Petukhova](#), A Sinha, A Lee, J Freudenberg, M Olsen, M Hordinsky, D Norris, V Price, M Duvic, PK Gregersen and AM Christiano. New York, NY; East Lansing, MI; Manhasset, NY; Minneapolis, MN; Denver, CO; San Francisco, CA and Houston, TX.
- 534 Regulation of Desmoglein 4 by transcription factors implicated in hair shaft differentiation.** [H Bazzi](#), S Demehri, CS Potter, A Getz, A Awgulewitsch, R Kopan and AM Christiano. New York, NY; St. Louis, MO and Charleston, SC.
- 535 A genome-wide association study of gene expression in skin and psoriatic lesions.** [JE Gudjonsson](#), J Ding, RP Nair, L Liang, JJ Voorhees, GR Abecasis and JT Elder. Ann Arbor, MI.
- 536 Identification of cis-regulatory elements in the epidermal differentiation complex (EDC).** [C de Guzman Strong](#), K Sears and JA Segre. Bethesda, MD and Urbana, IL.
- 537* Further pre-clinical characterization of TD101 — the first siRNA to enter clinical trials for a skin disorder.** [RP Hickerson](#), SA Leachman, LN Pho, F Smith, W McLean, D Leake, LM Milstone and RL Kaspar. Santa Cruz, CA; Salt Lake City, UT; Dundee, United Kingdom; Lafayette, CO and New Haven, CT.
- 538 Characterization of a transgenic GFP mouse skin model for development of siRNA delivery technologies.** [EG Gonzalez](#), H Ra, RP Hickerson, Q Wang, W Piyawattanametha, MJ Mandella, GS Kino, D Leake, AA Avilion, O Solgaard, TC Doyle and RL Kaspar. Stanford, CA; Santa Cruz, CA; Phatum Thani, Thailand; Lafayette, CO and London, United Kingdom.
- 539 ABCA12 maintains the epidermal lipid barrier.** Y Zuo, DZ Zhuang, R Han, G Isaac, JJ Manning, M McKee, R Welti, JL Brissette, ML Fitzgerald and [MW Freeman](#). Boston, MA and Manhattan, KS.

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 8, 2009 from 2:00-5:30 p.m. in Room 516 A/B, Palais des congrès. Orals designated by two asterisks (**) will be presented during a Plenary Session.

- 540* Lysophosphatidic acid-evoked calcium fluxes promote keratinocyte migration through Orai1, lipid rafts and NFAT.** [R Jans](#), AM Brown, K Ross and NJ Reynolds. Newcastle upon Tyne, United Kingdom.
- 541 Requirement of G protein α 1 and 3 for UV radiation-induced activation of AKT/mTOR and MAPK signaling in cultured human skin keratinocytes.** [C Cao](#), S Lu, W Wang, S Sarkisian, R Kivlin, W Chu, A Xu and Y Wan. Providence, RI and Hangzhou, China.
- 542 G-protein α 1 and 3 are critical for arsenite-induced AKT/mTOR and MEK/ERK signaling in cultured human skin keratinocytes.** S Lu, C Cao, [W Wang](#), S Sarkisian, R Kivlin, B Wallin, A Bagdasarian, T Tamakloe, W Chu, A Xu and Y Wan. Providence, RI and Hangzhou, China.
- 543 In vitro characterization of Src phosphorylation of a physiological substrate, cortactin revealed intriguing features.** [X Lin](#), Y Wang and G Sun. Providence, RI and Kingston, RI.
- 544 Epidermal Growth Factor Receptor is internalized following stress condition in keratinocytes.** [S Lambert](#), A Frankart, M Hérin and Y Poumay. Namur, Belgium.

- 545 **Novel mechanism of downstream signaling from keratinocyte nicotinic receptors.** [A Chernyavsky](#), J Arredondo, J Qian, V Galitovskiy and S Grando. Irvine, CA.
- 546* **ER signaling is activated to protect human keratinocytes from UVB-induced ER stress.** [K Mera](#), K Kawahara, I Maruyama and T Kanekura. Kagoshima, Japan.
- 547 **Insulin growth factor-1 regulates age-related gene expression in skin.** [Y Chen](#) and R Wyborski. Suffern, NY.
- 548 **Regulation and function of kallikrein related peptidase 6 in malignant melanomas.** [S Krenzer](#), B Klucky, C Mauch, V Umansky, P Angel and J Hess. Heidelberg, Germany and Cologne, Germany.
- 549* **Protein phosphatase 1 is required for extracellular calcium-induced keratinocyte differentiation.** [Z Xie](#), SD Pennypacker and DD Bikle. San Francisco, CA.
- 550** **Inhibition of *Propionibacterium acnes*-induced inflammation by a selective inhibitor of p38 α mitogen-activated protein kinase.** [L Zhang](#), W Li, P Lyte, D Cavender, M Southall and M Eisinger. Skillman, NJ.
- 551* **Rho-mediated regulation of Ca²⁺-induced cell-cell adhesion and differentiation in keratinocytes.** [C Tu](#), W Chang and D Bikle. San Francisco, CA.
- 552* **Neutrophil-dominant psoriasis-like skin inflammation induced by epidermis-specific Raf expression in mice.** [M Tarutani](#), Y Imai, T Tsuda, K Nakanishi and K Yamanishi. Nishinomiya, Japan.
- 553 **Constitutive activation of STAT5A regulates the expression of VEGF family in human keratinocytes.** H Kim, H Lee, J Yang and [G Park](#). Seoul, South Korea.
- 554 **Cyclic AMP suppresses TNF-alpha-induced matrix metalloproteinase-1 expression through inhibition of MAPK and GSK-3beta.** [C Park](#), Y Moon, C Shin and J Chung. Seoul, South Korea.
- 555* **The direct binding of insulin-like growth factor-1 (IGF-1) to integrins plays a role in IGF signaling.** S Yamaji, J Saegusa, K Ieguchi, [YK Takada](#) and Y Takada. Sacramento, CA.
- 556 **Effect of bevacizumab on proliferation, migration, adhesion and apoptosis in HaCaT cells.** [C Li](#), W Li, X Yang, X Man, S Cai and M Zheng. Hangzhou, China.
- 557 **VEGF decrease adhesion of HaCaT cells through activation of MAP kinases and inhibition of $\alpha 6\beta 4$ integrin expression.** [S Cai](#), C Li, W Li, J Zhou, X Man, X Yang and M Zheng. Hangzhou, China.
- 558 **Promotion of stem cell proliferation by vegetable peptone.** [J Lee](#), J Lee, E Jung, S Huh and D Park. Gunpo, South Korea.
- 559 **Chronic heat treatment induced skin wrinkling, MMP-13 expression and depletion of antioxidant enzymes in hairless mice.** [M Shin](#), J Jung, J Seo, Y Kim and J Chung. Seoul, South Korea.
- 560* **Anthrallin inhibits store-operated calcium entry and STIM1 translocation through a superoxide-dependent mechanism.** S Milner, K Ross and [NJ Reynolds](#). Newcastle upon Tyne, United Kingdom.
- 561 **Genetic deletion of *Egfr* delays catagen entry associated with defective cell cycle regulation.** [KJ Bichsel](#), D Porto, C Foote and LA Hansen. Omaha, NE.
- 562 **Nerve growth factor, brain-derived neurotrophic factor and their high-affinity receptors are overexpressed in extramammary Paget's disease.** [S Takeuchi](#), Y Qian, S Chen, L Dugu, G Tsuji, T Nakahara, Y Moroi, Y Tu and M Furue. Fukuoka, Japan and Wuhan, China.
- 563* **CD109, a TGF- β co-receptor, regulates TGF- β receptor internalization and degradation in keratinocytes.** [AA Bizet](#), K Liu, N Tran-Khanh, A Saksena, M Buschmann and A Philip. Montreal, Canada.
- 564* **EphA2-mediated cell-cell communication regulates human keratinocyte differentiation.** [SY Lin](#), LJ Sheu, KS Bryce, F Shahjani, D Deb-Basu, DL Hirschberg, RM Lavker and S Getsios. Chicago, IL and Stanford, CA.
- 565 **Induction of apoptosis of human melanoma cells through modulation of Wnt/NF- κ B signaling by a dietary triterpene lupeol.** RS Tarapore, IA Siddiqui, M Saleem and [H Mukhtar](#). Madison, WI.
- 566* **Elucidation of the mechanisms by which SH2/SH3 adapters Nck α and Nck β connect PDGF-BB signaling to promote human dermal fibroblast migration.** S Guan, [J Fan](#), A Han, M Chen, D Woodley and W Li. Los Angeles, CA.
- 567 **STAT4 and proliferation of epidermal keratinocytes.** [C Ferreli](#), C Pickard, S August, Y Buggy, M Ardern-Jones, PS Friedmann and E Healy. Southampton, United Kingdom.
- 568* **Activation of the canonical Wnt pathway in keratinocytes by Mcl-1.** [LA Sitalo](#), P Sethupathi and MF Denning. Maywood, IL.
- 569 **Physical contact appears to change nitric oxide levels in humans.** [VB Morhenn](#), J Park and P Zak. San Diego, CA and Claremont, CA.
- 570* **The c-Jun N-terminal kinase 2 promotes human epidermal neoplasia.** [H Ke](#), RN Harris, J Coloff, JY Jin, B Leshin, P de Marval Miliani, S Tao, JC Rathmel, RP Hall and JY Zhang. Durham, NC and Palo Alto, CA.
- 571* **Regulation of ultraviolet irradiation induced epidermal growth factor receptor nuclear translocation by Receptor Protein Tyrosine Phosphatase-kappa in human keratinocytes.** [Y Xu](#), Y Shao, J Zhou, JJ Voorhees and GJ Fisher. Ann Arbor, MI.
- 572* **Downregulation of Src-family tyrosine kinases by Srcasm: The role of Grb2 and TSG-101.** [L Zhou](#), E Ayli, C Marshall, W Li, T Griffin, T Salah and J Seykora. Philadelphia, PA.
- 573 **Inhibition of human keratinocyte growth by amphiregulin-specific shRNA cannot be reversed by EGFR ligands.** [SW Stoll](#), L Rittié and JT Elder. Ann Arbor, MI.
- 574* **Small molecule suppression of ganglioside synthesis enhances keratinocyte wound healing by promoting insulin and epidermal growth factor receptor.** [AS Paller](#), S McDaniel, N Gatla, A Arora, H Iordanov and X Wang. Chicago, IL.
- 575 **Role of ATP release and purinergic receptors in irritant-induced EGFR activation.** [KJ White](#), VJ Maffei, M Newton-West and RA Swerlick. Atlanta, GA.
- 576 **TNF- α activation of MAPK/ERK: Dependence on protease-mediated EGFR signaling and divergence from NF- κ B signaling.** VJ Maffei, KJ White, M Newton-West and [R Swerlick](#). Atlanta, GA.
- 577 **Resveratrol regulates mTOR-dependent RhoA activity during induction of premature cellular senescence (PCS).** [JH Back](#), Y Zhu, M Athar, DR Bickers and AL Kim. New York, NY and Birmingham, AL.

Hair and Cutaneous Development

All orals [designated with an asterisk (*)] listed below are presented in the Hair and Cutaneous Development Minisymposium on Saturday, May 9, 2009 from 2:00-5:30 p.m. in Room 516 C/D/E, Palais des congrès. Orals designated by two asterisks (**) will be presented during a Plenary Session.

- 578 **History of atopy or autoimmunity and risk of Alopecia Areata.** [N Barahmani](#), MB Schabath and M Duvic. Houston, TX and Tampa, FL.
- 579 **Multipotent nestin-positive hair follicle stem cells can promote regeneration of impinged peripheral-nerve injury.** [Y Amoh](#), M Kanoh, K Tanabe, S Mii, S Niiyama, K Kawahara, RM Hoffman and K Katsuoka. Sagamihara, Japan and San Diego, CA.
- 580 **Activation of WNT and BMP signaling pathways and forced cell aggregation enabled the generation of human dermal papilla equivalent with trichogenic activity.** [M Ohyama](#), T Kobayashi, A Shimizu and M Amagai. Tokyo, Japan.
- 581 **13-cis Retinoic acid exerts an antibacterial effect through neutrophil gelatinase-associated lipocalin.** [KR Lumsden](#), AM Nelson, DA De Cotiis, KL Gilliland, Z Cong, AL Zaenglein and DM Thiboutot. Hershey, PA.
- 582 **Embryonic hair follicle fate change by augmented β -catenin through Shh and Brmp signaling.** [K Suzuki](#), Y Yamaguchi, M Villacorte, M Akiyama, H Shimizu, MM Taketo, N Nakagata, S Kato and G Yamada. Kumamoto, Japan; Nagoya, Japan; Hokkaido, Japan; Kyoto, Japan and Tokyo, Japan.
- 583 **PPAR γ agonists trigger a tissue-specific response in skin compared to adipose tissue in rats.** [M Rivier](#) and A Jomard. Biot, France.
- 584* **Evidence that Prostaglandin D₂ contributes to development of Androgenetic Alopecia.** [LA Garza](#), B Alagesan, JA Lawson, SM Norberg, T Zhao, HB Blat, DC Stanton, L Carrasco, FM Susan, GA FitzGerald and G Cotsarelis. Philadelphia, PA; Smithville, TX and Baltimore, MD.
- 585 **Hair follicle RANK-ligand regulates epithelial growth via Bcl-3.** [V Duhéron](#), L Amoasii, M Decossas, J Klatte, R Paus and CG Mueller. Strasbourg, France and Lübeck, Germany.
- 586 **Novel formulation API31543 protects from chemotherapy-induced Alopecia.** JJ Jimenez, JP McCook, LM Mauro and [NN Narain](#). Miami, FL and Cambridge, MA.
- 587 **Modulation of different hair follicle markers: Studies on human scalp skin grafts.** [A Perrin](#), C Meyrignac, C Piazza, C Gondran, R Chabert, S Pinacolo, C Dal Farra and N Domloge. Sophia-Antipolis, France and Wayne, NJ.
- 588 **Immunohistochemical studies and mapping of hair follicle markers in human scalp skin biopsies.** C Meyrignac, R Chabert, [C Gondran](#), N Garcia, A Amoyel, S Pinacolo, C Dal Farra and N Domloge. Sophia-Antipolis, France and Wayne, NJ.

- 589 **Survivin and other chromosomal passenger complex proteins are key regulators of adult epidermal stem cell differentiation.** F Labarrade, C Meyrignac, [A Lableu](#), J Botto, C Gondran, C Dal Farra and N Domloge. Sophia-Antipolis, France and Wayne, NJ.
- 590 **Distinguishing mouse strains by proteomic analysis of pelage hair.** [RH Rice](#), DM Rocke, HS Tsai, KA Silva, YJ Lee and JP Sundberg. Davis, CA and Bar Harbor, ME.
- 591 **The hair growth-promoting effects of adipose tissue-derived stem cells.** [D Lee](#), C Won, H Yoo, O Kwon, Y Kang, J Chung, B Park, J Sung, W Kim and K Kim. Seoul, Korea, SouthSouth Korea.
- 592* **Cross talk between p63 and IRF6 in the regulation of keratinocyte proliferation.** F Moretti, B Marinari, N Lo Iacono, E Botti, G Spallone, G Merlo, S Chimenti, L Guerrini and [A Costanzo](#). Rome, Italy.
- 593 **Identification of four structural families of selective high affinity PPAR γ agonists with tropism for sebocytes.** [P Mauvais](#), P Collette, J Aubert, P Grundt, L Clary, J Boiteau and J Voegel. Biot, France.
- 594 **A novel anti-catagen formulation.** G Giuliani, B Marzani, A Benedusi, M Traversa, S Carelli, A Gorio and [F Rinaldi](#). Milan, Italy.
- 595 **DNase1L2 has an essential role in the degradation of nuclear DNA in hair and nails.** [H Fischer](#), K Jaeger, H Rossiter, M Ghannadan, M Buchberger, M Hermann, E Wagner, E Tschachler and L Eckhart. Vienna, Austria; Madrid, Spain and Neuilly sur Seine, France.
- 596* **Transgenic mice delineate the functional properties of p63 isoforms in regulating keratinocyte differentiation.** [R Romano](#), K Ortt and S Sinha. Buffalo, NY.
- 597 **Role of vitamin D receptor in adult hair follicle cycling.** [AE Teichert](#), SM Chang, H Elalieh and DD Bikle. San Francisco, CA.
- 598 **Mouse models of RAS/MAPK syndromes reveal opposing effects of RAS on hair and skin development.** [A Mukhopadhyay](#), SR Krishnaswami, KM Haigis and BD Yu. San Diego, CA and Charlestown, MA.
- 599* **Regulation of bulge proliferation by RAS and its antagonists.** A Mukhopadhyay, SR Krishnaswami and [BD Yu](#). San Diego, CA.
- 600* **Inflammatory mediator TAK1 regulates hair follicle cycling.** [K Sayama](#), Y Shirakata, S Hirakawa, K Sugawara, P Chambon, S Akira, R Paus and K Hashimoto. Toon, Japan; Hamburg, Germany; Illkirch, France and Suita, Japan.
- 601 **TAp63 α initiates stratification in a cell context-dependent manner.** D Dai, MI Koster, J Chen, FJ DeMayo, SD Reynolds and DR Roop. Houston, TX; Aurora, CO and Denver, CO.
- 602 **TGF- β 2 is expressed in human dermal papilla cells and modulates folliculogenesis.** [K Inoue](#), N Aoi and K Yoshimura. Tokyo, Japan and New York, NY.
- 603 **Circadian clock genes play a role in regulation of timing of anagen progression in mouse hair follicles.** KK Lin, [M Geyfman](#), V Kumar, D Chudova, AT Ihler, P Smyth, R Paus, JS Takahashi and B Andersen. Irvine, CA; Evanston, IL; Luebeck, Germany and Manchester, United Kingdom.
- 604* **A role for p63 in establishing tissue-specific chromatin organization and high-order chromatin remodelling in epidermal keratinocytes during skin development.** M Fessing, A Mardaryev, M Gdula, A Sharov, T Sharova, A Panteleyev, C Missero and [V Botchkarev](#). Bradford, United Kingdom; Boston, MA; Dundee, United Kingdom and Napoli, Italy.
- 605 **Effect of glycyrrhizic acid on hair growth.** J Ivošević-Zaper, A Kakadjanova, J Pfeffer, S Kippenberger, R Kaufmann, J Bereiter-Hahn and [A Bernd](#). Frankfurt, Germany.
- 606 **Red deer (*Cervus elaphus*) hair follicles express the genes for at least two forms of potassium channels like human hair follicles.** K Zemaryalai, MJ Thornton and [VA Randall](#). Bradford, United Kingdom.
- 607 **Human scalp hair follicles express the genes for prostanoid FP receptor.** KG Khidhir, NP Farjo, DF Woodward, SM Picksley and [VA Randall](#). Bradford, United Kingdom; Manchester, United Kingdom and Irvine, CA.
- 608 **Effect of adenosine on androgenetic alopecia in Caucasian.** [T Iwabuchi](#), R Ideta, R Ehama, M Iino, J Nakanishi, Y Tsuji, T Kobayashi, M Ohyama and J Kishimoto. Yokohama, Japan; Tokorozawa, Japan and Tokyo, Japan.
- 609 **Bimatoprost, a prostaglandin analog (PGF2 α) for open-angle glaucoma, may have future use to treat androgenetic alopecia.** [MN Nguyen](#), C Chiang, TR Hata and AR Shirazi. La Jolla, CA and San Francisco, CA.
- 610 **Endocrine modulation of human hair follicle epithelial progenitor cells *in situ* and *in vitro*: Effects of thyroid hormones, TSH, and calcitriol.** [S Tiede](#), JE Klatte, B Wenzel, K Lynaugh and R Paus. Lübeck, Germany and Manchester, United Kingdom.
- 611 **Hedgehog signaling maintains hair follicle stem cell phenotype in young and aged human skin *in vivo*.** [L Rittié](#), SW Stoll, S Kang, AA Dlugosz, JJ Voorhees and GJ Fisher. Ann Arbor, MI.
- 612 **Murine eyelashes as a study model for hypertrichology or alopecia of eyelashes.** [M Tauchi](#), TA Fuchs, DF Woodward and E Lütjen-Drecoll. Erlangen, Germany and Irvine, CA.
- 613 **Thyrotropin-releasing hormone (TRH) as a novel, potent modulator of human hair follicle pigmentation and growth: Reminiscences of our amphibian past?** E Gáspár, E Bodó, C Hardenbicker, I Borbíró, T Bíró, A Kromminga and [R Paus](#). Lübeck, Germany; Manchester, United Kingdom; Debrecen, Hungary and Hamburg, Germany.
- 614* **Involvement of the Lhx2 transcription factor in the control of stem cells activity during epidermal development, tumorigenesis and wound healing.** [A Mardaryev](#), A Sharov, T Sharova, M Fessing and V Botchkarev. Bradford, United Kingdom and Boston, MA.
- 615 **Sweat gland morphogenesis: Classification of the developmental stages and expression patterns of cell-type specific markers.** [T Sharova](#), A Sharov, A Mardaryev and V Botchkarev. Boston, MA and Bradford, United Kingdom.
- 616 ***In vitro* susceptibility of *Propionibacterium acnes* and skin permeation of NB-00X formulations.** J Pannu, S Ciotti, R Eisma, L Ma and [J Sutcliffe](#). Ann Arbor, MI.
- 617 **Dynamic expression profiling of human dermal papilla signature during explant culture.** [C Higgins](#), K Fantuazzo, H Bazzi, G Richardson, R Bernstein, C Jahoda and A Christiano. New York, NY. and Durham, United Kingdom.
- 618 **Trichothiodystrophy patients with XPD mutations and features of COFS or features of Cockayne syndrome.** [M Sarihan](#), SG Khan, NJ Mendelsohn, J Boyle, D Tamura, JJ DiGiovanna, BP Brooks, M Merideth and KH Kraemer. Bethesda, MD; Minneapolis, MN and Providence, RI.
- 619 **Dissecting the role of cannabinoid receptor 1 (CB1) signaling in normal human skin mast cell (MC) biology *in situ*.** [K Sugawara](#), T Biro and R Paus. Luebeck, Germany; Debrecen, Hungary and Manchester, United Kingdom.
- 620 **Disruption of LIPH/LPA/P2Y5 pathway in autosomal recessive woolly hair/hypotrichosis.** [M Kurban](#), Y Shimomura, M Wajid, A Zlotogorski, M Ito and A Christiano. New York, NY; Jerusalem, Israel and Niigata, Japan.
- 621 **Chemotherapy-induced alopecia in a novel adult rat model: Relation to the hair follicle cycle.** [T Cao](#), E Alvarez-Connelly, J Simon, LM Mauro, G Elgart, EV Badiavas, LA Schachner, B Roberts, CI Perez and JJ Jimenez. Miami, FL and Newark, NJ.
- 622 **Identification of mutations in the hairless gene in Pakistani families with Atrichia and papular lesions.** [Y Kobayashi](#), M Kurban, M Wajid, Y Shimomura and A Christiano. New York, NY.
- 623* **SWAMP, a novel inhibitor of Wnt signaling, is mutated in Hereditary Hypotrichosis Simplex.** [Y Shimomura](#), D Agalliu, A Vonica, V Luria, A Baumer, S Belli, L Petukhova, M Wajid, A Schinzel, BA Barres and AM Christiano. New York, NY; Stanford, CA; Zurich, Switzerland and Trento, Italy.
- 624* **Fibroblast growth factor 9 from dendritic epidermal T cells promotes hair follicle neogenesis after wounding in adult skin.** [O Kwon](#), M Ito, Z Yang, F Wang, DM Ornitz and G Cotsarelis. Philadelphia, PA; Houston, TX and St. Louis, MO.
- 625* **Transgenic expression of Smad1 in keratinocytes impairs postnatal hair follicle cycling, wound healing and prevents tumorigenesis via functional restriction of epithelial stem cells.** TY Sharova, AN Mardaryev, VA Botchkarev and [AA Sharov](#). Boston, MA and Bradford, United Kingdom.
- 626* **MicroRNAs (miRNA) in hair-cycle-dependent gene regulation, hair growth control, and associated tissue remodeling.** A Mardaryev, M Ahmed, A Sharov and [N Botchkareva](#). Bradford, United Kingdom and Boston, MA.
- 627* **Role of Dlx3 in hair cycling.** J Kim, [J Hwang](#), J Suh and MI Morasso. Bethesda, MD and Seoul, South Korea.
- 628 **Delay of hair growth by oxidants in a neonatal rat model.** [JJ Jimenez](#), T Cao, J Simon, LM Mauro, CI Perez, B Roberts, G Elgart, E Alvarez-Connelly and LA Schachner. Miami, FL and Newark, NJ.
- 629 **Analysis of Scarf expression pattern in LacZ knockin mice.** [J Hwang](#), OE Kalinin, M Hwang and MI Morasso. Bethesda, MD.
- 630 **HSP-70 expression and Alopecia Areata development in C3H/HeJ mice.** T Cao, E Alvarez-Connelly, [J Simon](#), LM Mauro, G Elgart, LA Schachner, B Roberts, CI Perez, L Plano, J Chen and JJ Jimenez. Miami, FL and Newark, NJ.
- 631 **Cross-talk between AHR and PPAR gamma signaling pathways in Cicatricial Alopecia.** LF Xu, P Mirmirani, VH Price, TS McCormick, KD Cooper and [P Karnik](#). Cleveland, OH and San Francisco, CA.

- 632 **On the origin of hair: Comparative analyses suggest that a common ancestor of modern reptiles and mammals expressed hair keratins in the claws.** [L Eckhart](#), K Jaeger, S Szabo, L Dalla Valle, M Ghannadan, M Hermann, L Alibardi and E Tschachler. Vienna, Austria; Padova, Italy and Neuilly, France.
- 633 **Differences in the current perception thresholds (CPTs) of C nerve fibers in affected and unaffected scalp of patients with alopecia areata.** [R Farah](#), H Guo, N Gallus, R Farah, A Junqueira, M Ericson, C Boeck and M Hordinsky. Minneapolis, MN.
- 634** **The I-BAR protein Missing in Metastasis is required for primary cilia formation, Sonic Hedgehog signaling, and hair follicle regeneration.** [M Bershteyn](#), W Woo, H Zhen and AE Oro. Stanford, CA.
- 635* **Inducible expression of *Dickkopf1* reversibly inhibits hair growth without affecting stem cell maintenance.** [Y Choi](#), T Andl and SE Millar. Philadelphia, PA and Nashville, TN.
- 636 **Reciprocal requirements for Eda/Edar/NF- κ B and Wnt/b-catenin signaling pathways in hair follicle induction.** [Y Zhang](#), T Andl, ML Mikkola, P Overbeck, SE Millar and R Schmidt-Ullrich. Philadelphia, PA; Helsinki, Finland; Houston, TX and Berlin, Germany.
- 637* **Partial proteasome inhibitors induce hair follicle growth by maintaining β -catenin signaling.** [JS Van Arnam](#), PC Means, EG Huntzicker and AE Oro. Stanford, CA.
- 638* **Hedgehog signaling maintains the undifferentiated state of the follicle secondary hair germ during telogen.** ME Hutchin, [M Grachtchouk](#), J Liu, J Waldinger, A Wang, AB Glick and AA Dlugosz. Ann Arbor, MI and University Park, PA.
- 639 **Farnesyltransferase function is required for hair development.** [RC Lee](#), S Chang, SH Yang, C Coffinier, Y Tu, C Nobumori, M Allen, X Qiao, AC White, W Lowry, L Fong and SG Young. Los Angeles, 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 7, 2009 from 2:00-5:30 p.m. in Room 518 A/B/C, Palais des congrès. Orals designated by two asterisks (**) will be presented during a Plenary Session.

- 640 **Identification of novel dendritic cell maturation marker, mouse Transmembrane protein 123.** [T Takekoshi](#), Y Tada, T Watanabe, M Sugaya, M Komine, T Shimizu, A Asahina, T Yokomizo and K Tamaki. Tokyo, Japan; Fukuoka, Japan; Tochigi, Japan and Kanagawa, Japan.
- 641 **Immunomodulatory active ingredients for normalizing disrupted skin immune homeostasis.** [N Bechetoille](#) and V André. Lyon, France.
- 642* **Pituitary adenylate cyclase-activating peptide (PACAP) and vasoactive intestinal polypeptide (VIP) enhance Langerhans cell (LC) antigen presentation for an interleukin-17 (IL-17) response.** [W Ding](#), L Stohl, M Michela and RD Granstein. New York, NY.
- 643 **Systemic lupus erythematosus in China.** [C Ji](#), B Yang, Z Bi and Y Wan. Nanjing, China and Providence, RI.
- 644 **Elasticity of the T cell cholinergic system.** [J Qian](#), A Chernyavsky, V Galitovskiy and SA Grand. Irvine, CA.
- 645 **Abdominal breathing training improve lesions of psoriasis by improving regulation function of autonomic nervous system.** [Y Li](#), L Zhang and X Yang. Beijing, China.
- 646 **The establishment of animal model of psoriasis with streptococcal M6 protein: Implication in onset of guttate psoriasis.** [D Li](#), G Zhao, W Liu and H Ma. Beijing, China.
- 647 **Bites of pathogen-free Ixodes ricinus ticks produce a prominent innate and a Th2-polarized adaptive immune response in human skin.** [R Müllegger](#), M Glatz, K Jones, T Means, A Luster and AC Steere. Wiener Neustadt, Austria; Graz, Austria and Boston, MA.
- 648* **UV-induced regulatory T cells switch antigen-presenting cells from a stimulatory into a regulatory phenotype.** A Schwarz, W Schuller and [T Schwarz](#). Kiel, Germany.
- 649* **Attenuation of cutaneous dendritic cell functions by prostaglandin E₂-EP3 signaling.** [N Shiraishi](#), K Kabashima and Y Tokura. Kitakyusyu, Japan and Kyoto, Japan.
- 650 **The dermal microenvironment regulates the migration of dendritic cells.** [A Saalbach](#), C Klein, C Schirmer, W Briest, U Anderegg and JC Simon. Leipzig, Germany.
- 651* **IL-33 promotes dendritic cell development in a GM-CSF-dependent mechanism.** [N Mayuzumi](#), H Matsushima and A Takashima. Toledo, OH.
- 652 **CD44 regulated T cell proliferation: EGR-1 expression and the PI3K/Akt pathway play essential roles.** [L Zhang](#), H Ma, HJ Greyner, W Zuo and ME Mummert. Dallas, TX.
- 653 **Co-expression of HLA-DR and CD86 in skin resident T cells: Implications for cutaneous inflammation.** [M Lichtman](#), A Calarese, TS Kupper and RA Clark. Boston, MA and Dallas, TX.
- 654* **Imiquimod treatment of human squamous cell carcinomas enhances T cell IFN γ production and effector function.** [S Huang](#), G Murphy, C Schanbacher, C Schmults, T Kupper and RA Clark. Boston, MA.
- 655 **Skin resident T cells producing TNF α but not Th1, Th2, or Th17 cytokines: Their possible role as immune sentinels in skin.** [RA Clark](#), I Mollet, D Hijnen, A Calarese, R Purwar, M Lichtman and TS Kupper. Boston, MA; Ghent, Belgium and Utrecht, Netherlands.
- 656* **Initiation of inflammatory skin responses by promoting Th differentiation through prostaglandin I receptor IP.** [S Nakajima](#), T Honda, H Tanizaki, G Egawa, C Moniaga, S Narumiya, Y Miyachi and K Kabashima. Kyoto, Japan.
- 657 **Functional IL-31 receptor activation in keratinocytes mediates beta-endorphin production via STAT3 activation: A novel mechanism of IL-31 for development of pruritus in atopic dermatitis.** [C Lee](#), C Hong, M Yu, H Chuang, G Chen, T Yoshioka, M Sakata, W Liao, Y Ko and HYU. Kaohsiung, Taiwan.
- 658 **Heat shock proteins-27 and -70 have a functional role in cutaneous cell-mediated immune responses through effects on dendritic cells.** [N Yusuf](#), TH Nasti, AM Holzer, C Huang, L Timares, H Xu, M Athar and CA Elmets. Birmingham, AL and San Diego, CA.
- 659 **Mutant ras proteins are capable of eliciting allergic contact hypersensitivity responses.** [CA Elmets](#), N Yusuf, TH Nasti, AM Holzer, H Xu, M Athar and L Timares. Birmingham, AL.
- 660* **CD5 is expressed by dendritic cells and is a co-inhibitory molecule for T cell activation and immune responses.** D He, H Li, L Wu, CA Elmets, C Raman and [H Xu](#). Birmingham, AL.
- 661 **PXR activation modulates SOCS-1, NF- κ B and MEK1/2 signalling in T-lymphocytes.** [S Dubrac](#), A Elentner, E Susanne and M Schmutz. Innsbruck, Austria.
- 662* **CD4+CD25+ regulatory T cells suppress contact hypersensitivity reactions by blocking adhesion of T cells to vascular endothelium via a CD39, adenosine-dependent mechanism.** S Ring, SJ Oliver, BN Cronstein, AH Enk and [K Mahnke](#). New York, NY and Heidelberg, Germany.
- 663 **ATP dependent activation of naïve regulatory T cell *in vivo* during contact hypersensitivity reactions.** [S Ring](#), AH Enk and K Mahnke. Heidelberg, Germany.
- 664* **Targeting of a MOG-single chain fusion protein to DEC205+ dendritic cells *in vivo* ameliorates experimental autoimmune encephalomyelitis in C57BL/6 mice.** S Schmitt, S Ring, TS Johnson, V Storn, K Mahnke and [AH Enk](#). Heidelberg, Germany.
- 665 **The role of hapten-specific IL-10-producing CD4⁺CD25⁺ regulatory T cells in tolerance to contact allergens.** U Frankenberg, N Lorenz and [K Steinbrink](#). Mainz, Germany.
- 666** **Regulatory T cells expanded in skin-draining lymph nodes via RANK-RANKL-activated Langerhans cells suppress cutaneous inflammation and colitis.** [K Loser](#), A Luegering, T Sparwasser, TA Luger and S Beissert. Muenster, Germany and Hannover, Germany.
- 667 **ECP generates large numbers of clinically relevant dendritic cells.** [CL Berger](#), JM Remington and RL Edelson. New Haven, CT.
- 668** **Human skin langerhans cells and dermal dendritic cells show different capacity to initiate Th17 responses.** [AR Mathers](#), BM Janelsins, JP Rubin, OA Tkacheva, WJ Shufesky, SC Watkins, AE Morelli and AT Larregina. Pittsburgh, PA.
- 669 **Monocyte interaction with adsorbed fibronectin initiates the ECP pathway to dendritic cell differentiation.** [JM Remington](#), CL Berger and RL Edelson. New Haven, CT.
- 670 **Signaling dendritic cells via the neurokinin 1 receptor synergizes with agonistic CD40 ligation to promote dendritic cell survival and potent CTL responses.** [BM Janelsins](#), AR Mathers, OA Tkacheva, G Erdos, WJ Shufesky, AE Morelli and AT Larregina. Pittsburgh, PA.
- 671 **The oxidative defense and antioxidant pathway is implicated in monocyte protection from 8MOP/UVA.** [K Mutyambizi](#), CL Berger and RL Edelson. New Haven, CT.
- 672 **Specificity and dissemination of antigen-experienced, tissue-tropic T lymphocytes.** [JJ Campbell](#) and NJ Tubo. Boston, MA.
- 673 **Effects of activated T cells on multinucleated giant cells depend on how they are activated.** [K Mizuno](#), H Iwasaka, S Oe and H Okamoto. Moriguchi, Japan.

- 674 **Stromal cell expression of Toll-like receptor 9 is required for the topical adjuvant effect of CpG oligodeoxynucleotides.** W Cheng and JP Dutz. Vancouver, Canada.
- 675 **Effects of thymic stromal lymphopoietin on invariant natural killer T cell in atopic dermatitis.** W Wu, J Noh, S Oh, N Chang and K Lee. Seoul, South Korea.
- 676 **Monosodium urate crystals induces IL-18 production from mouse Langerhans cells.** T Kawashima, U Hideya, M Kamata, T Yayoi and T Kunihiko. Tokyo, Japan.
- 677 **The role of actin cytoskeleton formation through mDia1 in skin dendritic cells.** H Tanizaki, G Egawa, S Narumiya, Y Miyachi and K Kabashima. Kyoto, Japan.
- 678* **Lymphocyte cooperation in T cell homing: CD4 T cells help CD8 T cells traffic to skin.** X Jiang and TS Kupper. Boston, MA.
- 679 **Phosphodiester-CpG-ODN-mediated prevention of atopic dermatitis through IL-4 inhibition.** K Na, M Jeon and T Kim. Seoul, South Korea.
- 680 **α -Melanocyte stimulating hormone (α -MSH) treated CD8⁺ T cells control contact allergy and anti-tumoral immunity.** T Brzoska, TA Luger, S Beissert, C Abels and K Loser. Bielefeld, Germany and Muenster, Germany.
- 681 **Stat1-dependent apoptosis of antigen-presenting cells by peptide-specific T helper 1 lymphocytes.** H Braumueller, T Wieder, N Bauer and M Röcken. Tuebingen, Germany.
- 682 **The RhoA effector mDia1 regulate motility and function of T lymphocytes in cutaneous immune responses.** G Egawa, H Tanizaki, T Okada, S Narumiya, Y Miyachi and K Kabashima. Kyoto, Japan and Yokohama, Japan.
- 683 **Interferon-gamma induces cellular senescence in primary tumor cells *in vitro*.** T Wieder, H Braumueller, N Bauer, F Essmann, K Schulze-Osthoff and M Röcken. Tübingen, Germany.
- 684 **T cell hyporesponsiveness is induced by efalizumab *in vivo* and *in vitro*.** E Koszik, G Stary, N Selenko-Gebauer and G Stingl. Vienna, Austria.
- 685 **Topical application of novel mitochondrial antioxidants mitigates skin damage from ionizing radiation.** R Brand, M Epperly, A Radfar, NR Dodd, X Gao, S Li, S Huq, D Jukic, P Wipf, V Kagan, JS Greenberger and LD Faló. Pittsburgh, PA.
- 686 **CD8⁺ T cells infiltrating human cutaneous squamous cell carcinomas display IL-10 production and reduced cytotoxic potential.** S Reddy, R Filler, SJ Roberts, J Neustadter, S Aasi, DJ Leffell, R Clark and M Girardi. New Haven, CT and Boston, MA.
- 687* **Analysis of tumor-promoting CD8⁺ T cells reveals TH17 differentiation, regulatory capacity, and growth-factor potential.** B Kwong, S Roberts, T Silberzahn, R Filler, A Galan, J Neustadter, W Lin, S Reddy, A Hayday and M Girardi. New Haven, CT and London, United Kingdom.
- 688 **IL-15 regulates a critical checkpoint by stabilizing gene expression in autoreactive CD8 T cells.** F Miyagawa, A Terunuma, J Linton, A Player, D Edelman, S Davis, Y Wang, P Meltzer, Y Tagaya and S Katz. Bethesda, MD.
- 689 **Normal human lung is devoid of skin homing T cells, but like skin contains very large numbers of effector memory T cells at rest.** R Purwar, RG William, R Clark and T Kupper. Boston, MA.
- 690 **T cell-mediated immune memory, and not neutralizing antibodies, is necessary and sufficient for successful vaccination against viral pathogens.** L Liu, Q Zhong, K Dubin and TS Kupper. Boston, MA.
- 691 **Intrinsic properties of memory B cells.** MM Tomayko, SM Anderson, NC Steinel, S Sadanand, CE Brayton, MP Cancro, T Migone, TW Behrens and MJ Shlomchik. New Haven, CT; Rockville, MD and San Francisco, CA.
- 692* **Deficiency of Retinoid related Orphan Receptor (ROR) γ blocks the evolution of Th17 T cells and abrogates the contact hypersensitivity response (CHS), despite intact immunity and IFN γ production in response to CHS antigens.** R Purwar, A Jetten and TS Kupper. Boston, MA and Research Triangle Park, NC.
- 693 **Induction of regulatory T cells: A novel mechanism of glucocorticosteroid-induced immunosuppression?** G Stary, I Klein, S Kohlhofer, H Skvara, T Jung and G Stingl. Vienna, Austria and Basel, Switzerland.
- 694* **Skin-specific homing imprinting requires T cell priming during early stage of cutaneous infection.** Q Zhong, TS Kupper, K Dubin, M Wurbel and L Liu. Boston, MA.
- 695* **Efficient IL-4 therapy of psoriasis selectively abrogates IL-23 and Th17 responses in humans.** E Guenova, K Ghoreschi, W Hötzenecker, G Weindl, K Sauer, K Schäkel, M Schaller, M Röcken and T Biedermann. Tuebingen, Germany; Berlin, Germany and Dresden, Germany.
- 696 **Regulated proenkephalin expression in human skin and cultured skin cells.** AT Slominski, MA Zmijewski, B Zbytek, A Brozyna, J Granese, Z Janjetovic, A Szczesniowski and DJ Tobin. Memphis, TN; Torun, Poland; Schaumburg, IL and Bradford, United Kingdom.
- 697* **Psoriasis lesions contain distinct populations of CD4⁺ and CD8⁺ T cells producing interferon gamma, interleukin-17, and interleukin-22.** CJ Rubin, I Kryczek, JE Gudjonsson, A Johnston, W Zou, JT Elder and AT Bruce. Ann Arbor, MI.
- 698 **Dissolving microneedle arrays effectively deliver soluble and particulate biologically active molecules into the skin.** G Erdos, H Toussaint, M Williams, J Zhang, BO Ozdoganlar and LD Faló. Pittsburgh, PA.
- 699 **Determining the roles of FKBP52 and CD147-EMMPRIN in stimulated human T cells leading to macrophage activation and proinflammatory cytokine production.** KR Jonscher, L Li, E Eisenmesser, M Fujita, DA Norris and CK Edwards. Aurora, CO.
- 700 **Th-17/Tc-17 infiltration and associated cytokine gene expression in elicitation phase of allergic contact dermatitis.** Y Zhao, A Balato, R Fischelevich, A Chapoval, DL Mann and AA Gaspari. Baltimore, MD; Shenyang, China and Naples, Italy.
- 701 **Dermal microvascular endothelial cells enhance interleukin-17 production in an antigen-specific immune response.** M Manni, W Ding, L Stohl and RD Granstein. New York, NY.
- 702 **Evaluation of antigen loading strategies for dendritic cell vaccines in patients with metastatic melanoma.** LJ Geskin, J Kirkwood, L Butterfield, W Storkus, T Whiteside and LD Faló. Pittsburgh, PA.

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 9, 2009 from 2:00-5:30 p.m. in Room 514 A/B/C, Palais des congrès. Orals designated by two asterisks (**) will be presented during a Plenary Session.

- 703 **Disorganization of sweat innate immunity is seen in Pustulosis Palmaris et Plantaris (Localized palmoplantar pustular psoriasis).** M Murakami, T Ohtake, A Ishida-Yamamoto, RL Gallo and H Iizuka. Furano, Japan; Asahikawa, Japan and San Diego, CA.
- 704 **Expression of NO, TNF α , and IL-1 α in a modified co-culture system: Effect of UVR on human keratinocyte/monocyte.** Y Ee, S Geen, AR Shalita and WS Lee. Brooklyn, NY.
- 705* **Identification of Bcl-3 as a novel modulator of antimicrobial peptide production in atopic dermatitis.** AS Büchau, DT MacLeod, S Morizane, PF Kotol, T Ruzicka, T Hata and RL Gallo. San Diego, CA and Munich, Germany.
- 706* **Hyaluronan and CD44 direct specific inflammatory responses through TLR4.** J Muto, K Yamasaki and RL Gallo. San Diego, CA.
- 707* **Staphylococcus epidermidis antimicrobial peptide functions as a surface antibiotic and induces keratinocyte TLR2-mediated expression of defensins and cathelicidin.** AL Cogen, Y Lai, K Yamasaki, J Tanios, V Nizet and RL Gallo. La Jolla, CA and San Diego, CA.
- 708* **LL37 enhances TLR9 expression and activation in keratinocytes and is coordinately overexpressed in psoriasis.** S Morizane, K Yamasaki, M Murakami, K Iwatsuki and RL Gallo. San Diego, CA; Asahikawa, Japan and Okayama, Japan.
- 709 **Arginine residues in the COOH-terminal of human beta-defensin-3 are essential for salt-resistant, broad antimicrobial activities.** Y Sakagami, Y Shirafuji, T Oono and K Iwatsuki. Okayama, Japan.
- 710 **Optimal treatment approach in atopic dermatitis.** M Langner and H Maibach. San Francisco, CA.
- 711 **Molecular taxonomy of trichophyton mentagrophytes complex.** S Jee, P Sun and Y Ju. Taipei, Taiwan.
- 712 **Myxoma virus and heat-treated vaccinia induce type I interferon and TNF-alpha in human plasmacytoid dendritic cells through an endosomal TLR-mediated, PI3K/AKT-dependent signaling pathway.** H Cao, P Dai, H Li, Yuan, JW Young, R Condit, G McFadden, S Shuman and L Deng. New York, NY and Gainesville, FL.
- 713 **Heat-treated vaccinia virus induces antiviral innate immunity and apoptosis in macrophages.** P Dai, H Cao, F Wang, T Merghoub, A Houghton, A Rice, RW Moyer, S Shuman and L Deng. New York, NY and Gainesville, FL.
- 714* **Uric acid crystals induce inflammation in human keratinocytes through P2Y receptors.** H Uratsuji, Y Tada and K Tamaki. Tokyo, Japan.

- 715* **Real-time *in vivo* imaging of IL-1 beta producing cells in inflamed murine skin.** [H Matsushima](#) and A Takashima. Toledo, OH.
- 716** **A beneficial effect of *Staphylococcus epidermidis* by induction of antimicrobial defense through activation of TLR2 and P38 MAPK.** [Y Lai](#), K Radek, H Park, A Cogen, D Macleod, A Leichtle, AF Ryan, A Di Nardo and RL Gallo. San Diego, CA.
- 717 **A central role for transcription factor C-EBP-beta in regulating CD1d gene expression in human keratinocytes.** [H Sikder](#), Y Zhao, A Balato, R Fischelevich, P Gade, D Kalvakolanu, I Singh and A Gaspari. Baltimore, MD.
- 718 **The environmental contaminant, benzo(a)pyrene induced Interleukin-8 by normal human epidermal keratinocyte.** [G Tsuji](#), T Masakazu, H Uchi, S Takeuchi, Y Moroi and M Furue. Fukuoka, Japan.
- 719* **Integrated pathways of neutrophil-mediated tissue injury in immune complex disease.** [DJ Lee](#), H Li, MT Ochoa, M Tanaka, RJ Carbone, R Damoiseaux, A Burdick, TH Rea and RL Modlin. Los Angeles, CA; Kyoto, Japan and Miami, FL.
- 720 **IL-5 regulates antibody response in human leprosy.** [MT Ochoa](#), D Lee, B Haas, D Zaghi and RL Modlin. Los Angeles, CA and New York, NY.
- 721* **IL-17A enhances vitamin D3 induced expression of cathelicidin antimicrobial peptide in human keratinocytes.** M Peric, S Koglin, S Kim, S Morizane, R Besch, J Prinz, T Ruzicka, RL Gallo and [J Schaubert](#). Munich, Germany and San Diego, CA.
- 722 **Alternative pathway of IL-18 conversion by a lymphocyte-derived enzyme.** [Y Omoto](#), K Yamanaka, K Tokime, M Kakeda, H Kitagawa, I Kurokawa, K Yamanishi and H Mizutani. Tsu, Japan and Nishinomiya, Japan.
- 723 **Identification of Staphylococcal Protein A in infected atopic dermatitis lesions.** [JB Travers](#), A Kozman, Q Yi, M Al-Hassani and Y Yao. Indianapolis, IN.
- 724 **The functional spectrum of cytotoxic DCs: Different roles of IFN α and MHC I in pDCs and mDCs.** [M Kalb](#), G Stary, F Koszik and G Stingl. Vienna, Austria.
- 725 **Expression of molecules involved in the innate immunity is enhanced during lactation in mammary epithelium.** [M Mildner](#), A Abtin, J Jin, R Gläser, JM Schröder, J Pammer, V Mlitz, M Schmidt and E Tschachler. Vienna, Austria; Kiel, Germany and Neuilly, France.
- 726 **Propionibacterium acnes induces prostaglandin formation to auto-regulate inflammatory responses.** [R Sur](#), P Lyte, Vorobyeva-Schiano and M Southall. Skillman, NJ.
- 727 **DC-HIL on dendritic cells is a pattern recognition receptor for dermatophytes and its downstream effects may condition innate immunity against these pathogens.** J Chung, T Yudate, M Tomihari, PD Cruz and [K Arizumi](#). Dallas, TX and Osaka, Japan.
- 728* **HIV-1 induces Cdc42-dependent filopodia formation to facilitate Dendritic cell-T cell trans-infection.** [DS Nikolic](#), M Lehmann, E Garcia, FP Blanchet and V Piguat. Geneva, Switzerland.
- 729* **Langerhans cells regulate CHS responses via cognate CD4 interactions and LC-derived IL-10.** [B Igyarto](#), MC Jenison, A Roers, PA Koni, MJ Shlomchik and DH Kaplan. Minneapolis, MN; Cologne, Germany; Augusta, GA and New Haven, CT.
- 730 **Withdrawn.**
- 731* **Herpes simplex virus type 1 exploits scavenger receptors to infect human keratinocytes.** [DT MacLeod](#) and RL Gallo. La Jolla, CA.
- 732 **Propionibacterium acnes benefits from a host enzyme that amplifies its pathogenicity: Synergy between microbial CAMP factor co-hemolysin and host acid sphingomyelinase toxic properties.** [T Nakatsuji](#), RL Gallo and C Huang. San Diego, CA.
- 733* **Cholinergic activation decreases innate immune antimicrobial activity and barrier function to increase susceptibility to bacterial infection.** [KA Radek](#), SK Mahata, L Taupenot, DT O'Connor and RL Gallo. San Diego, CA.
- 734* **Gamma/delta T cells promote neutrophil recruitment in immunity against *Staphylococcus aureus* skin infection.** [LS Miller](#), EM Pietras, J Cho, D Farzam, HR Monroe, NC Garcia, G Cheng and RL Modlin. Los Angeles, CA.
- 735 **Free fatty lauric acid as an innate bactericide against *propionibacterium acnes*: In compliance with evolutionary medicine for treatment of acne vulgaris.** [T Nakatsuji](#), MC Kao, CC Zouboulis, L Zhang, RL Gallo and [E Huang](#). San Diego, CA and Dessau, Germany.
- 736 **Interference with the IL-1 network and cutaneous immunity to smallpox vaccine.** [T Tian](#), K Dubin, S Wong, L Liu, GF Murphy, TS Kupper and RC Fuhlbrigge. Boston, MA.
- 737* **Contrasting roles of the IL-1 and IL-18 receptors in myd88-dependent contact hypersensitivity.** [PA Klekotka](#), L Yang and WM Yokoyama. Saint Louis, MO.
- 738* **Exploring natural killer cells resident in normal human skin.** [AE Gehad](#), RA Clark, SL King, TS Kupper and RC Fuhlbrigge. Boston, MA.
- 739 **Association of *Staphylococcus aureus* exfoliative toxin A with a diminished local immune response in infected skin lesions.** [LW Plano](#), CE Rolle, J Chen, TC Cardenas, R Perez and SC Davis. Miami, FL.
- 740 **Is there a "gut-skin axis"?** [PC Arck](#), B Handjiski, E Hagen, J Bienenstock and R Paus. Hamilton, Canada; Berlin, Germany; Lübeck, Germany and Manchester, United Kingdom.
- 741 **The suppression of human keratinocyte Toll like receptor-mediated functional responses by alpha-melanocyte stimulating hormone.** S Ryu, AW Johnson, J An, Y Lu, CA Armstrong, [PI Song](#) and JC Ansel. Little Rock, AR.
- 742 **Chromatin remodeling by Kaposi's sarcoma-associated herpesvirus (KSHV) transcriptional factors.** [Y Izumiya](#). Sacramento, CA.
- 743 **Pseudomonas aeruginosa adhesion and cytotoxicity in eratinocytes and A549 pulmonary epithelial cells.** [JY Jung](#), EW Wang, T Sinwell, LA Cornelius and RA Chole. St. Louis, MO.
- 744 **Cytotoxic activity of invariant NKT cells in human allergic contact dermatitis.** [A Balato](#), Y Zhao, R Fischelevich and AA Gaspari. Baltimore, MD and Naples, Italy.
- 745 **Homoisoflavanone, an extract of *Cremastra appendiculata* Makino, inhibits inflammatory and allergic response in mast cell.** [S Hur](#) and T Kim. Seoul, South Korea.
- 746 **Differential regulation of P.Acnes in sebocytes compared to monocytes.** [CZ Fernandez](#) and J Kim. Los Angeles, CA.

Photobiology

All orals [designated with an asterisk (*)] listed below are presented in the Photobiology Minisymposium on Saturday, May 9, 2009 from 2:00-5:30 p.m. in Room 518 A/B/C, Palais des congrès. Orals designated by two asterisks (**) will be presented during a Plenary Session.

- 747 **Reversal of Ultraviolet B induced-immunosuppression via inhibition of extracellular signal-regulated protein kinase: An *in vivo* study by ERK mitogen-activated protein kinase inhibitor.** [X Luo](#) and H Leng. Shanghai, China.
- 748 **Critical roles of EGFR and Gi proteins in infrared radiation-induced signal transduction and skin cell damage.** [S Lu](#), C Cao, Z Chen, S Sarkisian, R Kivlin, A Bagdasarian, T Tamakloe, W Chu, J Zhang and Y Wan. Providence, RI and Beijing, China.
- 749 **Trans-Zeatin inhibits UVB-induced matrix metalloproteinase-1 expression via MAP kinase signaling in human skin fibroblasts.** B Yang, C Ji, [J Kang](#), W Chen, Z Bi and Y Wan. Nanjing, China and Providence, RI.
- 750 **Photobiologic effects of long wavelength UVA and visible light on melanocompetent skin.** BH Mahmoud, E Ruvolo, C Hessel, Y Liu, M Owen, N Kollias, HW Lim and [IH Hamzavi](#). Detroit, MI and Skillman, NJ.
- 751* **Delivery of Chlorella virus pyrimidine dimer glycosylase to skin cells to enhance repair of UVB-induced DNA dimers.** [JL Johnson](#), B Lowell, R Lloyd and A McCullough. Portland, OR.
- 752* **Inhibition of angiogenesis in UV-induced skin tumors by drinking green tea polyphenols requires IL-12.** [SM Meeran](#), T Punathil, S Katiyar, CA Elmets and SK Katiyar. Birmingham, AL.
- 753 **Antioxidant and photoprotective effects of CoffeeBerry® in human epidermis.** [J Therrien](#), E Millerman, H Hofland, W Chern and E Hsia. Palo Alto, CA.
- 754 **Generalized chrysiasis improved with pulsed dye laser.** [JJ Wu](#), NG Papajohn, JE Murase, W Verkruijse and KM Kelly. Los Angeles, CA; Mobile, AL; San Francisco, CA; Mountain View, CA and Irvine, CA.
- 755 **Proteomic profile of ultraviolet B induced photodamage and interference of epigallocatechingallate in human epidermal keratinocytes.** [D Luo](#), W Min, B Lin and W Li. Nanjing, China.
- 756 **Prevention of short-term ultraviolet B radiation mediated damages by baicalin in mice skin.** B Zhou and [D Luo](#). Nanjing, China.
- 757 **Topical application of a taurine precursor limits UVB-induced damages in reconstructed human epidermis.** M Fréchet, P Prouheze and [J Nicolay](#). Monaco, Monaco.
- 758 **The protective effects of ultraviolet A1 irradiation on spontaneous lupus erythematosus-like skin lesions in MRL/lpr mice.** [T Yoshimasu](#), N Mikita, N Kanazawa and F Furukawa. Wakayama, Japan.

- 759**** Endogenous survivin modulates survival and proliferation in normal human keratinocytes and during UVB irradiation. A Marconi, K Dallaglio, E Palazzo, M Dumas, F Truzzi, R Lotti, F Bontè and C Pincelli. Modena, Italy and St. Jean de Braye, France.
- 760** DNA repair in skin fibroblasts as function of age and chronic photo-exposure. T Oddos, S Sauvaigo, F Odin, S Caillat, A Nkengne and C Bertin. Val de Reuil, France and Grenoble, France.
- 761** Brown stem cell factor-transgenic (SCF-Tg) mice are useful for the research of skin damage by ultraviolet radiation. F Yamazaki, S Ohe, H Iwasaka, T Kunisada and H Okamoto. Moriguchi, Japan and Gifu, Japan.
- 762** Evidence for epidermal synergistic production of TNF- α in a patient with progression of toxic epidermal necrolysis following tanning bed exposure. J Travers, N Gatson, M Al-Hassani, SJ Warren and JB Travers. Indianapolis, IN and Columbus, OH.
- 763** Comparative proteomic analysis of inhibitory effects of baicalin on ultraviolet B induced photodamage in keratinocyte cell line. W Min, D Luo, B Lin and W Li. Nanjing, China.
- 764** UVB wavelength dependency of antimicrobial peptide induction for innate immunity in human normal keratinocytes. K Torii, A Maeda, C Saito, Y Shirakata and A Morita. Nagoya, Japan and Ehime, Japan.
- 765*** IL10 is required for UVA1-induced suppression of delayed type hypersensitivity (DTH) but not for suppression of contact hypersensitivity (CHS). Y Shintani, A Maeda, K Torii, C Saito and A Morita. Nagoya, Japan.
- 766*** The effect of a new photodynamic therapy with glycoconjugated fullerene. E Otake, S Sakuma, A Maeda, H Ooi, S Yano and A Morita. Nagoya, Japan and Kyoto, Japan.
- 767*** PUVA suppresses the initiation of EAE via inhibition of Th17-migration into CNS. T Furuhashi, A Maeda, K Torii, C Saito, Y Shintani and A Morita. Nagoya, Japan.
- 768** Possible involvement of Hsp27 oligomerization in UVB-induced apoptosis of keratinocyte. D Choi, K Sohn, Y Kwon, N Kim, A Cho, Y Lee, T Yoon, Y Lee, C Kim and J Lee. Daejeon, South Korea and Jinju, South Korea.
- 769** UV increased the cis-11,14,17-eicosatrienoic acid to prevent UV-induced skin damages. J Jung, X Jin, E Kim, Y Kim, I Oh and J Chung. Seoul, South Korea.
- 770** New screening for photoprotective compounds using zebrafish as a vertebrate model. Validation with a *Polypodium leucotomos* extract. J Rodriguez-Martin, L Araujo-Bazan, L Palacios, J Guinea, E Reyes, S Gonzalez and P Acebo. Madrid, Spain.
- 771** The proteasome is an integral part of the signaling cascade leading to solar UVA-induced gene expression. B Catalgol, I Ziaja, N Breusing, T Jung, A Höhn, B Alpertunga, P Schroeder, N Chondrogianni, ES Gonos, I Petropoulos, B Friguet, LO Klotz, T Grune and J Krutmann. Düsseldorf, Germany; Stuttgart, Germany; Istanbul, Turkey; Athens, Greece and Paris, France.
- 772** The roles of free fatty acids and triglycerides in photoaging of human skin. E Kim, X Jin, C Park, Y Kim, J Kim and J Chung. Seoul, South Korea.
- 773** Effect of Etanercept, TNF- α blocker on TNF- α -mediated photodamage/ photoaging. MR Sharma, B Werth, J LoMonico and VP Werth. Philadelphia, PA.
- 774*** Protein network analysis of acutely UV-irradiated mouse skin and human samples representing the progression of cutaneous SCC. JG Einspahr, V Calvert, E Olson, C Curriel-Lewandrowski, C Longo, J Deng, L Lance, G Pellicani, DS Alberts, R Krouse, A Prasad, GT Bowden and EF Petricoin. Tucson, AZ; Manassas, VA and Modena, Italy.
- 775** Glycoconjugated chlorin effectively enhances photodynamic therapy. S Sakuma, E Otake, A Maeda, H Ooi, S Yano and A Morita. Nagoya, Japan and Kyoto, Japan.
- 776*** Ultraviolet irradiation induces CYR61/CCN1, a novel mediator of collagen homeostasis, via activation of transcription factor AP-1 in human skin fibroblasts. TH Quan, Z Qin, Y Xu, T He, JJ Voorhees and GJ Fisher. Ann Arbor, MI.
- 777*** Time-dependent generation of ROS in HaCaT keratinocytes after UVB-irradiation is modulated by a Ca²⁺-dependent cascade. H Masaki and Y Okano. Tokyo, Japan.
- 778** Epidermal oxidative stress induces pro- and active MMP-1 production from fibroblasts through cross-talk of keratinocytes and fibroblasts. K Shimizu, S Yahagi, Y Izutsu, K Obayashi, Y Yamashita, Y Okano and H Masaki. Tokyo, Japan and Osaka, Japan.
- 779*** Oxidized phospholipids mediate responses to UVA-1 via the redox-sensitive transcription factor Nrf2. F Gruber, H Mayer, M Bilban, B Lengauer, JM Sanders, R de Martin, O Wagner, TW Kensler, N Leitinger and E Tschachler. Vienna, Austria; Charlottesville, VA; Baltimore, MD and Neuilly, France.
- 780** Soluble growth stimulation gene-2 (sST2) contributes to the immunosuppressive effects of UV-radiation. V Mlitz, M Mildner, K Hötzenecker, H Ankersmit and E Tschachler. Vienna, Austria and Neuilly, France.
- 781** Anti-aging effects of Unikamide-AA on photoaged skin in hairless mice is mediated through the transforming growth factor- β /Smad signaling. M Kwon, S Jeong, H Kim, B Park and S Lee. Daejeon, South Korea and Seoul, South Korea.
- 782** Impact of the arylhydrocarbon receptor ligand resveratrol on UV-induced immunosuppression after *in vivo* and *in vitro* administration. W Schuller, T Schwarz and A Schwarz. Kiel, Germany.
- 783** Melanin dispersion to basal keratinocytes may play a role in UV-induced long-lasting pigmentation in human skin. SG Coelho, SA Miller, BZ Zmudzka, JZ Beer and VJ Hearing. Bethesda, MD and Silver Spring, MD.
- 784** Human skin fibroblasts under post-menopausal conditions are more sensitive to UVA-induced MMP-1 expression. J Jian, Q Yang, X Huang, E Pelle, N Pernodet and D Maes. New York, NY and Melville, NY.
- 785*** Protein kinase C δ is critical for UV radiation induced cell cycle checkpoint activation. EL LaGory and MF Denning. Maywood, IL.
- 786*** UV irradiation induces Snail expression by MAPK/AP-1 signaling cascade in human keratinocytes. Y Li, Y Liu, Y Xu, S Kang, TM Johnson, JJ Voorhees and GJ Fisher. Ann Arbor, MI.
- 787*** Early critical events after photodynamic therapy with the silicon phthalocyanine Pc 4: Evidence for photodamage to ER proteins and Ca²⁺ depletion. M Lam, ME Rodriguez, SJ Howell, L Xue, MC Davis, CW Distelhorst, ME Kenney, NL Oleinick, TS McCormick, KD Cooper and ED Baron. Cleveland, OH.
- 788** Role of mast cells in platelet-activating factor-mediated ultraviolet B radiation-induced systemic immune suppression. Y Yao, M Al-Hassani, R Kapur and JB Travers. Indianapolis, IN.
- 789** Synergistic upregulation of TNF- α in response to UVB and IL-1 α is mediated by NF- κ B. MIM Bashir and VP Werth. Philadelphia, PA.
- 790*** Skin microbiota rescues melanocyte from UVB apoptosis. Y Lai, PF Kotol, RL Gallo and A Di Nardo. La Jolla, CA.
- 791*** Functional melanocortin 1 receptor activates signaling pathways that inhibit UV-induced genotoxicity in human melanocytes by enhancing DNA repair. A Kadekaro, R Starner, V Swope, P Cassidy, S Leachman, A Koshoffer, R Boissy and Z Abdel-Malek. Cincinnati, OH and Salt Lake City, UT.
- 792** On the evolution of stress response system: An update on the cutaneous hypothalamic-pituitary-adrenal (HPA) axis. A Slominski and DJ Tobin. Memphis, TN and Bradford, United Kingdom.
- 793*** The IGF-1/IGF-1R signaling axis in the skin: A new paradigm for aging-associated skin cancer. D Lewis, J Travers and D Spandau. Indianapolis, IN.
- 794** Expression of Sirtuins in keratinocyte responses to photodamage and in actinic keratoses (AK) and squamous cell carcinoma (SCC). EL Jacobson and CA Benavente. Tucson, AZ.
- 795** Photodynamic therapy with the silicon phthalocyanine Pc 4 induces Bcl-2 photodamage and reduction of CD45RB in the epidermis of Mycosis fungoides patients. M Deng, AH Hsia, M Lam, Y Liu, LY Xue, ME Kenney, NL Oleinick, KD Cooper and ED Baron. Cleveland, OH.
- 796** Effect of UVB irradiation on intracellular sodium level and chloride channel CFTR expression in normal human keratinocytes and skin biopsies. T Chen, L Singleton, I Imbert, A Perrin, C Gondran, R McMullen, C Dal Farra and N Domloge. Skillman, NJ; Los Angeles, CA; Sophia Antipolis, France and Wayne, NJ.

Pigmentation and Melanoma

All orals [designated with an asterisk (*)] listed below are presented in the Pigmentation and Melanoma Minisymposium on Thursday, May 7, 2009 from 2:00-5:30 p.m. in Room 516 A/B, Palais des congrès. Orals designated by two asterisks (**) will be presented during a Plenary Session.

- 797*** Mutations in genes regulating melanosome formation influence multi-drug resistance in melanomas and melanocytes. ML Wei, T Xie, T Nguyen and M Hupe. San Francisco, CA.

- 798* **Downregulation of Rap1GAP via promoter hypermethylation promotes melanoma cell proliferation, survival and migration.** [L Gao](#), Z Hong, L Yuan, H Zhao and L Cornelius. St.Louis, MO.
- 799 **Characterization and immunohistochemical evaluation of senile lentiginos.** [CB Lin](#), Y Hu, N Chen, D Cassarino and M Seiberg. Skillman, NJ and Los Angeles, CA.
- 800 **The Role of KGF and IL-1a in Melanogenesis: A possible mechanism for the initiation of hyperpigmentary lesions.** [N Chen](#), Y Hu, W Li, M Eisinger, M Seiberg and LB Connie. Skillman, NJ.
- 801 **PTHrP up-regulation is involved in EGF-induced cell migration in murine B16 melanoma cells.** C Ji, [B Yang](#), Z Bi and Y Wan. Nanjing, China and Providence, RI.
- 802 **Inhibitory effects of ellagic acid on melanogenesis and melanin transfer in human melanocytes *in vitro*.** [H Ma](#), G Zhao, W Liu, Y Li and D Li. Beijing, China.
- 803 **Diffuse reflectance spectrometry for skin phototype determination.** [M Martínez-Escanamé](#), F Gonzalez, R Muñoz, B Torres-Alvarez and B Moncada. San Luis Potosi, Mexico.
- 804* **Survivin promotes melanocyte migration through upregulation of α5 integrin.** J McKenzie, T Liu and [D Grossman](#). Salt Lake City, UT.
- 805 **Plexin B1 is a potential tumor suppressor receptor for melanoma.** [L Stevens](#), L McClelland, A Fricke and G Scott. Rochester, NY.
- 806 **Melanoma cells induce synthesis of hyaluronic acid by stromal fibroblasts leading to tumor cell proliferation, spreading and motility.** A Willenberg, JC Simon and [U Anderegg](#). Leipzig, Germany.
- 807* **GLI2, a TGF-beta inducible target, promotes melanoma invasion and metastasis.** V Alexaki, D Javelaud, L Van Kempen, KS Mohammad, S Dennier, F Luciani, Hoek, P Juarez, JS Goydos, PJ Fournier, C Sibon, C Bertolotto, F Verrecchia, S Saule, V Delmas, R Ballotti, L Larue, P Saiag, TA Guise and [A Mauviel](#). Paris, France; Nijmegen, Netherlands; Charlottesville, VA; Orsay, France; Zurich, Switzerland; New Brunswick, NJ; Boulogne, France and Nice, France.
- 808* **Doxycycline (Dox)-inducible expression of CXC chemokine receptor-4 (CXCR4) in B16 melanoma cells reveals roles for CXCR4 in lung and lymph node (LN) metastasis.** H Zhang, [V Lee](#) and S Hwang. Bethesda, MD.
- 809 **Retrospective analysis of lentigo maligna and lentigo maligna melanoma treated with modified Mohs micrographic surgery.** [SF Ibrahim](#), G Scott and MD Brown. Rochester, NY.
- 810 **Interferon signaling alterations in CCR7-expressing B16 murine melanoma cells that show diminished recruitment of intratumoral CD8+ T cells.** [L Fang](#) and ST Hwang. Bethesda, MD.
- 811 **Effect of nrf2 on the pigmentation.** [T Yoon](#), S Jung, T Choi, J Kim, M Kim, S Kim, J Lee and C Kim. Jinju, South Korea and Daejeon, South Korea.
- 812 **Knockdown of flotillin-2 by siRNA inhibits melanoma cell growth *in vitro* and *in vivo*.** [P Hazarika](#), P Richards, PE Vivas-Mejia, X Zhang and M Duvic. Houston, TX.
- 813 **Bayesian recognition of dermoscopic structures in skin lesions.** [P Wighton](#), TK Lee, H Lui, DI McLean and MS Atkins. Burnaby, Canada and Vancouver, Canada.
- 814 **High throughput integrated analyses for the tyrosinase-induced melanogenesis: Microarray, proteomics and interactomics studies.** Y Park, D Park, J Bhak, D Lee and [J Yang](#). Seoul, South Korea and Daejeon, South Korea.
- 815 **The effect of trifluoroethanol on tyrosinase activity and conformation: Inhibition kinetics and computational simulations.** [Y Park](#), D Park, J Bhak, D Lee and J Yang. Seoul, South Korea and Daejeon, South Korea.
- 816 **Expression of human endogenous retrovirus k (HERV-K) mRNA and production of putative viral particles by melanoma cell lines.** S Singh, [CB Bunker](#), S Kaye, M Tristem, ME Gore and MO McClure. London, United Kingdom.
- 817 **Quantification of human endogenous retrovirus k (HERV-K) expression in primary melanoma, normal skin and benign naevi.** [S Singh](#), S Kaye, ND Francis, D Peston, ME Gore, MO McClure and CB Bunker. London, United Kingdom.
- 818 **Improvement of keratinocyte-melanocyte interactions by PAR2 receptor activation.** [F Labarrade](#), M Bonnans, C Serre, C Plaza, J Botto, C Dal Farra and N Domloge. Sophia-Antipolis, France and Wayne, NJ.
- 819 **Modulation of skin pigmentation by modulation of the PAR2 receptor.** [M Bonnans](#), F Labarrade, C Plaza, J Botto, C Gondran, F Portolan, C Dal Farra and N Domloge. Sophia-Antipolis, France and Wayne, NJ.
- 820 **Narrow-band UVB stimulates the migration and functional development in Vitiligo IgG Antibody treated melanoblast cells.** [H Yu](#) and C Wu. Kaohsiung, Taiwan.
- 821 **Photoprotective roles of endothelin-1/stem cell factor induced heme oxygenase-1 expression in cultured human melanocytes.** [E Akasaka](#), H Nakano, K Sato-Jin, K Kimura, D Rokunohe, D Sawamura and G Imokawa. Hiroasaki, Japan and Tokyo, Japan.
- 822 **MKK6 increases the melanocyte dendricity through the regulation of Rho family GPTases.** [J Lee](#), M Kim, J Kim, T Choi, S Jung, Y Kim, Y Lee, Y Lee, C Kim and T Yoon. Daejeon, South Korea and Jinju, South Korea.
- 823 **The effect of yeast ferment filtrate on melanogenesis via suppressing expression of tyrosinase related proteins, Pmel-17 and melanin polymerization.** [T Hakozaki](#), T Laughlin, K Wakamatsu and RE Boissy. Cincinnati, OH and Toyoake, Japan.
- 824 **IL-12/23 suppresses the growth of melanocytic nevi in mice.** [AM Holzer](#), TH Nasti, N Yusuf, SK Katiyar, M Athar and CA Elmetts. Birmingham, AL.
- 825* **Both Erk1 and Erk2 regulate melanoma cell survival.** [J Qin](#), H Xin and BJ Nickoloff. Maywood, IL.
- 826 **Development of a human endothelialized reconstructed skin by tissue engineering to study melanoma biology.** [L Gibot](#), S Chabaud, V Moulin and F Auger. Quebec, Canada.
- 827 **Increased risk of second primary cancers after diagnosis of melanoma.** [PT Bradford](#), DM Freedman, AM Goldstein and MA Tucker. Bethesda, MD.
- 828 **Genetic instability in metastatic melanoma from a patient with xeroderma pigmentosum.** [Y Wang](#), JJ DiGiovanna, C Lee, SB Jere, M Raffeld, ES Jaffe and KH Kraemer. Bethesda, MD and Providence, RI.
- 829 **Monobenzyl ether of hydroquinone affects melanosomal protein expression.** V Hariharan, M Reust, J Klarquist and [IC Le Poole](#). Chicago, IL.
- 830 **Identification of miRNAs involved in melanoma tumorigenesis.** NB Goldstein, M Fujita, DA Norris and [YG Shellman](#). Aurora, CO.
- 831 **Repetitive ultraviolet irradiation induces fibroblast to secrete stem cell factor and senescence.** [J Shin](#), J Kim and E Kim. Incheon, South Korea.
- 832 **Initiation of the unfolded protein response in melanocytes and melanoma.** [SG Bis](#), KE Knoll, MS Lolis, SJ Orlow and P Manga. New York, NY.
- 833* **Genome-wide RNAi-based functional genomics identifies novel genes and pathways that regulate melanoma chemoresistance.** J Aruri, H Ho, MA White and [AK Ganesan](#). Irvine, CA and Dallas, TX.
- 834 **Hypopigmentary effect of platycodin D through inhibition of melanin synthesis and dendrite growth in melanocytes.** [E Jung](#), J Lee, S Huh, J Lee, Y Kim and D Park. Gunpo, South Korea.
- 835 **Clinical and pathological characteristics of melanoma in African American patients.** DT Alexandrescu, LC Kauffman, [FD Kabigting](#), CA Dasanu, H Farzanmehr and F Nelson. San Diego, CA; Washington, DC and Hartford, CT.
- 836 **Melanoma costs — a dynamic model comparing estimated overall costs of various clinical stages.** [DT Alexandrescu](#), LC Kauffman and FP Nelson. San Diego, CA and Washington, DC.
- 837 **Delays in treatment accompany an advanced presentation of melanoma in African American patients.** [FP Nelson](#), LC Kauffman, H Farzanmehr, B Sanderson, FD Kabigting, CA Dasanu and DT Alexandrescu. San Diego, CA; Washington, DC and Hartford, CT.
- 838 **Acral melanoma in African American patients: Clinico-biological parameters and impact on survival.** [CL Kauffman](#), FP Nelson, FD Kabigting, H Farzanmehr, GL Peck, B Sanderson, CA Dasanu and DT Alexandrescu. Washington, DC and San Diego, CA.
- 839* **Autophagy regulates melanoma glycogen synthase kinase-3-dependent survival.** [R Lo](#), R Nazarian, Y Zong, A Ribas and O Witte. Los Angeles, CA.
- 840 **NP-003, newly synthesized PAR-2 specific antagonist, has an inhibitory effect on skin pigmentation.** [S Jeong](#), J Jeon, M Kwon, J Bae, H Kim, H Kwak, B Park and S Lee. Daejeon, South Korea and Seoul, South Korea.
- 841 **Multiple pagetoid Spitz nevi.** [K Harris](#), SR Florell, J Papenfuss, W Kohlmann, GM Bowen and SA Leachman. Salt Lake City, UT and Norfolk, VA.
- 842 **Induction of pigmentation in human melanoma cells stimulates NFκB activity and affects the responsiveness to vitamin D3 derivatives.** [Z Janjetovic](#), RC Tuckey, LM Pfeffer and AT Slominski. Memphis, TN and Crawley, Australia.
- 843* **A novel player in the regulation of human pigmentation: Golgi-located N-acetylglucosaminyl 1-phosphotransferase (GNPTA) is involved in POMC processing and melanin production *in situ* and *in vitro*.** [S Tiede](#), T Braulke, S Pohl and R Paus. Lübeck, Germany; Hamburg, Germany and Manchester, United Kingdom.
- 844 **Development of a non-invasive genomic-based assay to detect melanoma.** [W Wachsmann](#), L Walls, T Palmer and S Chang. San Diego, CA and La Jolla, CA.

- 845*** **AP-1 inhibition identifies cooperation of INK4 and Cip/Kip signaling pathways to suppress human melanoma.** [A Jalili](#), C Wagner, KD Mertz, M Pashenkov, M Lupien, M Goiser, J Brunet, S Ramaswamy, TR Golub, G Stingl and SN Wagner. Vienna, Austria; Moscow, Russia; Boston, MA; Cambridge, MA and Charlestown, MA.
- 846** **The inflammasome, a molecular platform processing IL-1 β , mediates secretion of biologically-active IL-1 β from human melanoma cells.** [M Okamoto](#), DA Norris, CA Dinarello and M Fujita. Aurora, CO.
- 847** **Aldo-ketoreductase 1C2, a keratinocyte UV inducible enzyme, contributes to prostaglandin F2 α synthesis in the skin and is a potential mediator of post-inflammatory pigmentation.** [A Mantel](#), G Scott, J VanBuskirk, A Fricke and A Pentland. Rochester, NY.
- 848** **Synergy of skin lightening actives evaluated by a combined in silico and in vitro approach.** [DJ Moore](#), G Menon, J Botto, C Dal Farra, A Chakraborty, N Domloge and S Vali. Wayne, NJ; Sophia Antipolis, France; New Haven, CT and Bangalore, India.
- 849** **The prognostic relevance of the expression of mTOR signalling pathway markers in melanoma patients.** J Valencak, K Schmid, P Mastan, M Gonzalez Inchaurreaga, P Zampieri, M Raderer, W Sieghart, [R Knobler](#), H Pehamberger and H Kittler. Vienna, Austria and Merano, Italy.
- 850** **Melanin detection in human skin biopsies using multispectral imaging.** [K Kalleberg](#), K Gossage, S Wong and C Bosko. Trumbull, CT.
- 851** **ALDH activity defines tumor-initiating cells in human melanoma.** [K Dallaglio](#), M Okamoto, DR Roop and M Fujita. Aurora, CO.
- 852*** **Hyperactivation of oncogenic BRAF triggers autophagy and inhibits melanoma tumor growth.** [N Maddodi](#), W Huang, K Kim, JB Longley and V Setaluri. Madison, WI.
- 853*** **The dedifferentiating role of agouti signaling protein in murine melanocytes via the Mc1r assessed by microarray.** [E Le Pape](#), T Passeron, A Giubellino, JC Valencia, R Wolber and VJ Hearing. Bethesda, MD and Hamburg, Germany.
- 854** **Comparison of the effect of 30 compounds on the activity of human and mushroom tyrosinases.** L Shore, S Madison, [J Bajor](#) and C Bosko. Trumbull, CT.
- 855** **Yearly exposure of infant skin to solar ultraviolet radiation incurs partially irreversible changes in skin pigmentation.** [M Mack](#), NK Tierney, E Ruvolo, GN Stamatas, N Kollias and K Martin. Skillman, NJ and Issy-les-Moulineaux, France.
- 856** **Inhibition of cell proliferation by BMI-1 depletion in human melanoma cells.** [BM Zhao](#) and TJ Hornyak. Bethesda, MD.
- 857** **Antagonism of endothelin B receptors leads to hypopigmentation.** [SK Wong](#), S Arcella and J Nip. Trumbull, CT.
- 858** **Development and optimization of a serological assay for cytoplasmic melanoma-associated antigen, a potential early marker of response to treatment in resected melanoma.** [N Habib](#), M Lolis, S Ferrone and J Bystryn. New York, NY and Pittsburgh, PA.
- 859*** **A role for keratinocyte p53 in formation of pigmented lesions.** [N Box](#), T Terzian, R Stiegmann, L Crane, G Lozano and D Roop. Aurora, CO and Houston, TX.
- 860** **Clinical and dermoscopic changes in melanocytic nevi in a population-based cohort of children.** [A Scope](#). New York, NY.
- 861** **In vitro effects of EGCG and vorinostat on human melanoma.** M Nihal and [GS Wood](#). Madison, WI.
- 862** **Vascular endothelial growth factor (VEGF) signaling regulates melanogenesis in human melanocytes via intracellular calcium elevation.** [H Kim](#), S Jeong, J Kim, G Nam and S Lee. Seoul, South Korea.
- 863*** **Novel small molecule kinase inhibitors with potent and specific anti-melanoma activity.** [NK Haass](#), KS Smalley, JT Lee, W Weninger and M Herlyn. Newtown, Australia; Sydney, Australia; Philadelphia, PA and Tampa, FL.
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- 865** **Endothelin-1 regulates MITF expression and function in melanocytes.** [BR Litzner](#), JP Scheschuk and PE Burnett. Nashville, TN.
- 866*** **Deacetylation of ganglioside GM3 drives melanoma metastasis in vivo and distinguishes the metastatic phenotype.** [X Wang](#), J Liu, P Sun, Q Yan, A Hui, E Yoo and AS Paller. Chicago, IL.
- 867** **Is melanoma in African American patients biologically more aggressive? Analysis of survival in a prognostic factor-matched population.** DT Alexandrescu, FP Nelson, A Bidulescu, [H Farzanmehr](#), GL Peck and LC Kauffman. San Diego, CA; Atlanta, GA and Washington, DC.
- 868**** **Unscheduled melanogenesis in response to oncogenic Hedgehog signaling in skin.** SH Yang, [M Verhaegen](#), V Grachtchouk, A Wang, J Liu, L Syu, J Ferris and AA Dlugosz. Ann Arbor, MI.

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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 Sehgal
2007 Stuart Schreiber

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

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 / Philip Frost Leadership Lecture and Award

2008 Jouni Uitto

CALL FOR APPLICATIONS

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

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2005	Masayuki Amagai, M.D., Ph.D. Tokyo, Japan
2004	Thomas Schwarz, M.D. Kiel, Germany
2003	Angela M. Christiano, Ph.d., New York, USA
2002	Dennis R. Roop, Ph.D., Houston, USA
2001	Fiona M. Watt, D. Phil., London, UK
2000	Michael Karin, Ph.D., San Diego, USA
1999	Jonathan Rees, M.D., Edinburgh, UK
1998	Jean Krutmann, M.D., Düsseldorf, Germany
1997	Jens-Michael Schröder, Ph.D., Kiel, Germany
1996	Akira Takashima, M.D., Ph.D., Texas, USA

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