The 66th Annual
Montagna Symposium on the Biology of Skin

presents

Precision Dermatology: Next Generation Prevention, Diagnosis, and Treatment

October 12 – 16, 2017
Skamania Lodge, Stevenson, Washington, USA

Program Chair
Jakub Tolar, MD, PhD

Symposium Director
Molly Kulesz-Martin, PhD

Program

Thursday, October 12

THURSDAY EVENING

4:00 p.m.
Hotel check-in (front desk) and Symposium check-in (outside Stevenson B-C-D)

6:00 p.m.
Opening Reception (in Stevenson A and Conference Center Lobby)

KEYNOTE SESSION
(in Stevenson B-C-D)

7:00 p.m.
Jakub Tolar, MD, PhD (University of Minnesota)
Welcome and introductions

7:15 p.m.
Keynote: Marina Sirota, PhD
Assistant Professor of Pediatrics, University of California, San Francisco
"Drug discovery in the era of precision medicine"
Friday, October 13

FRIDAY MORNING

7:00 – 8:00 a.m.  Breakfast (in Stevenson A)

8:00 a.m.  Molly Kulesz-Martin, PhD (Oregon Health & Science University)
Welcome and thanks (in Stevenson B-C-D)

I. GENES

*Digital code — Genetically defined diagnosis and therapy*
*(in Stevenson B-C-D)*

*Session Chair: John A. McGrath*

8:15 a.m.  Jakub Tolar, MD, PhD, and John A. McGrath, MD
Session introduction and clinical vignette

**Diagnosis**

8:30 a.m.  John A. McGrath, MD (*King’s College London*)
“Gene hunting”

9:00 a.m.  Boris C. Bastian, MD, PhD (*University of California, San Francisco*)
“Melanomas and their precursors”

9:30 a.m.  Raymond J. Cho, MD (*University of California, San Francisco*)
“Transcriptional programming of human epidermis at single-cell resolution”

10:00 a.m.  Amy C. Foulkes, BMBS, PhD, MRCP (*University of Manchester*)
“Pharmacogenomics”

10:30 a.m.  Break (in Conference Center Lobby)

**2020 Vision Soap Box Talks — Cancer**

10:45 a.m.  Kenneth Y. Tsai, MD, PhD (*H. Lee Moffitt Cancer Center & Research Institute*)
“Drivers of cutaneous squamous cell carcinoma revealed by comparative genomics”

**Therapy**

10:55 a.m.  Johann Bauer, MD (*SALK/Paracelsus Medical University*)
“Spliceosome-mediated RNA trans-splicing (SMaRT)”

11:25 a.m.  Mark J. Osborn, PhD (*University of Minnesota*)
“Genome and cellular engineering for recessive dystrophic epidermolysis bullosa”

11:55 a.m.  Debate/Discussion Session 1: “Precision or imprecision dermatology?”
Proposers:  John A. Armstrong, PhD (*Galderma International*)
Boris C. Bastian, MD, PhD
Moderator:  John A. McGrath, MD

12:25 – 1:15 p.m.  Lunch (in Stevenson A)
FRIDAY AFTERNOON

II. CELLS

Biobricks — Cells as living medications
(in Stevenson B-C-D)

Session Chair: Daniel Kaplan

1:15 p.m. Jakub Tolar, MD, PhD, and Daniel Kaplan, MD, PhD

Session introduction and clinical vignette

Discovery

1:30 p.m. Anthony Oro, MD, PhD (Stanford University)

"Using chromatin dynamics during epidermal differentiation to improve cell therapies"

2:00 p.m. Kenji Kabashima, MD, PhD (Kyoto University)

"T cell-mediated immune responses to external stimuli: Proposal of inducible skin-associated lymphoid tissue (iSALT)"

2:30 p.m. Paola Di Meglio, PhD (King’s College London)

"Environmental signals transmitted by the Aryl Hydrocarbon Receptor (AhR) in keratinocytes ameliorates skin inflammation"

3:00 p.m. Daniel Kaplan, MD, PhD (University of Pittsburgh)

"Control of skin immunity by non-immune cells"

3:30 p.m. Break (in Conference Center Lobby)

Translation

3:45 p.m. Jakub Tolar, MD, PhD (University of Minnesota)

"Outcomes of bone marrow/cord blood transplantation (BMCBT) in severe generalized epidermolysis bullosa"

4:15 p.m. Markus H. Frank, MD (Harvard Medical School)

"ABCB5-positive dermal cells for regenerative wound healing – translation to human clinical trials"

4:45 p.m. Aimee S. Payne, MD, PhD (University of Pennsylvania)

"Precision medicine for pemphigus therapy"

(Non-CME talk)

POSTER SESSION

5:15 p.m. Molly Kulesz-Martin, PhD (Oregon Health & Science University)

Presentation of

- Society for Investigative Dermatology Eugene M. Farber Travel Awards for Young Investigators
- Epidermolysis Bullosa Medical Research Foundation Travel Awards for Young Investigators
- National Psoriasis Foundation Travel Grants
- Japanese Society for Investigative Dermatology Travel Awards

5:20 – 7:00 p.m.

Poster Session and Reception (in Stevenson B-C-D & Conference Center Lobby)

Funding for this conference was made possible (in part) by (2 R13AR009431-52) from the National Institute Of Arthritis and Musculoskeletal and Skin Diseases (NIAMS) and all cofunding support provided the National Institute on Aging (NIA). The views expressed in written conference materials or publications and by speakers and moderators do not necessarily reflect the official policies of the Department of Health and Human Services; nor does mention by trade names, commercial practices, or organizations imply endorsement by the U.S. Government.
Saturday, October 14

SATURDAY MORNING
7:00 – 8:00 a.m. Breakfast (in Stevenson A)

III. TISSUES

**Bioplastics — Engineering new skin**
(in Stevenson B-C-D)

*Session Chair: Johann Bauer*

8:00 a.m. **Jakub Tolar, MD, PhD,** and **Johann Bauer, MD**
Session introduction and clinical vignette

8:15 a.m. **M. Peter Marinkovich, MD** *(Stanford University)*
“Gene therapy for recessive dystrophic epidermolysis bullosa”

8:45 a.m. **Johann Bauer, MD** *(SALK/Paracelsus Medical University)*
“Junctional epidermolysis bullosa (JEB) grafting”

9:15 a.m. **Break (in Conference Center Lobby)**

9:25 a.m. **Michele De Luca, MD** *(University of Modena and Reggio Emilia)*
“Combined ex vivo cell and gene therapy of epidermolysis bullosa by transgenic epidermal stem cells”
(Non-CME talk)

9:55 a.m. **Michael C. McAlpine, PhD** *(University of Minnesota)*
“3D printed skin electronics”

10:25 a.m. **Break (in Conference Center Lobby)**
SATURDAY MORNING, continued

2020 Vision Soap Box Talks — Cancer

10:35 a.m.  Catherine Lee, MS, MS (University of Minnesota)

"Multitask clustering of single-cell RNA-seq data identifies markers of squamous cell carcinoma in recessive dystrophic epidermolysis bullosa fibroblasts"

10:45 a.m.  Molly Kulesz-Martin, PhD (Oregon Health & Science University)

"Targeting pathways: Bioinformatics of patient-specific genomic - functional context for precision medicine of head and neck and skin cancers"

10:55 a.m.  Kavita Sarin, MD, PhD (Stanford University)

"Germline mutations in DNA repair genes in individuals who develop frequent basal cell cancers"

11:05 a.m.  Naoki Oshimori, PhD (Oregon Health & Science University)

"Molecular characterization of TGFβ-responding cancer stem cell signature genes"

11:15 a.m.  Mohammed Dany, MD, PhD Candidate (Medical University of S. Carolina)

"Fighting cancer with fat: Utilizing ceramide lipid to induce lethal mitophagy"

11:25 a.m.  Saranya Wyles, MD, PhD (Mayo Clinic Minnesota)

"Novel patient-specific qPCR-based method to risk stratify cutaneous melanoma at diagnosis"

11:35 a.m.  Kelly Griffith-Bauer, MD (University of California, San Francisco)

Perspective Talk: “The Scar Project”
(Non-CME talk)

11:45 a.m. – 1:15 pm  Lunch on own

SATURDAY AFTERNOON

1:20 p.m.

Beacon Rock hike (Carpools to hike trailhead gather at Conference Center entrance)

OR free time

SATURDAY EVENING

6:15 p.m.

Banquet Dinner (in Stevenson B-C-D)

Dinner Speaker: Douglas R. Lowy, MD

Acting Director, National Cancer Institute

“Precision medicine in cancer prevention, screening, and treatment:
The HPV paradigm”
(Non-CME talk)
Sunday, October 15

SUNDAY MORNING
7:00 – 8:00 a.m.  Breakfast (in Stevenson A)

IV. DEVICES

Living software – Big data, bigger picture
(in Stevenson B-C-D)

Session Chair: Sancy A. Leachman

8:00 a.m.  Jakub Tolar, MD, PhD, and Sancy Leachman, MD, PhD

Session introduction and clinical vignette

Knowhow

8:15 a.m.  Joe Gray, PhD (Oregon Health & Science University)

“The OHSU SMMART Program – Achieving durable and tolerable control of advanced cancers”
(Non-CME talk)

8:45 a.m.  Alexander Witkowski, MD, PhD (University of Modena and Reggio Emilia)

“The future of non-invasive skin cancer imaging: Dermoscopy, confocal microscopy and optical coherence tomography”

9:15 a.m.  Tracy Petrie, PhD (Oregon Health & Science University)

“Enabling mobile apps with ResearchKit™ and ResearchStack”

9:45 a.m.  Break (in Conference Center Lobby)

Data amplification

10:00 a.m. Sancy A. Leachman, MD, PhD (Oregon Health & Science University)

“Mole Mapper™ and the War on Melanoma”

10:30 a.m. Andre Esteva, PhD (Stanford University)

“Dermatologist-level classification of skin cancer with deep neural networks”

2020 Vision Soap Box Talks – Big data

11:00 a.m. Yoshihiro Ishida, MD (Kyoto University)

“Photoacoustic imaging for dermatologic diseases - hearing under the skin”

11:10 a.m. Debate/Discussion Session 2: “Blind men and an elephant”

Proposers: Sancy A. Leachman, MD, PhD

Amy S. Paller, MD

Moderator: Johann Bauer, MD

11:40 a.m. – 1:00 pm  Lunch (in Stevenson A)

SUNDAY AFTERNOON
V. PEOPLE
Patients — Adaptive Clinical Trials
(in Stevenson B-C-D)

Session Chair: Amy S. Paller

1:00 p.m. Jakub Tolar, MD, PhD, and Amy S. Paller, MD
Session introduction and clinical vignette

1:15 p.m. Eddy Wang, PhD (Columbia University Medical Center)
"Efficacy of JAK inhibitors in the treatment of alopecia areata"

1:45 p.m. Amy S. Paller, MD (Northwestern University Feinberg School of Medicine)
"Adaptive clinical trials: Ichthyosis"

2:15 p.m. Break (in Conference Center Lobby)

2:25 p.m. Joyce Teng, MD, PhD (Stanford University)
"Genetic variation, signaling activation, and management of vascular malformation"

2:55 p.m. Roger Lo, MD, PhD (University of California, Los Angeles)
"Adapting melanoma therapeutics by anticipating resistance mechanisms"

3:25 p.m. Break (in Conference Center Lobby)

2020 Vision Soap Box Talks — Stem Cells

3:35 p.m. Eunjeong Kwon, PhD (Massachusetts General Hospital)
"YBX1 mediated translational control of the senescence secretome in epidermal progenitors"

3:45 p.m. Yosuke Ishitsuka, MD, PhD (University of Tsukuba)
"Loss of loricrin exacerbates psoriasis-like skin inflammation through altered dendritic cell homeostasis"

3:55 p.m. Kristen P. Hook, MD (University of Minnesota)
"Cutaneous and pathologic findings in graft versus host disease in six patients receiving hematopoietic stem cell transplant for recessive dystrophic epidermolysis bullosa"

4:05 p.m. Ayman Grada, MD (Boston University)
"The use of autologous cultured bone marrow-derived mesenchymal stem cells to treat venous ulcers: A pilot study"

4:15 p.m. Natasha Y. Frank, MD (Harvard Medical School)
"ABCB5 promotes cutaneous wound healing through regulation of angiogenesis"

SUNDAY EVENING

6:00 p.m.

Dinner at the Columbia Gorge Interpretive Center
Museum visit 6:00–6:15 p.m.; Buffet dinner 6:15–7:30 p.m.
Monday, October 16

7:30 – 8:30 a.m.

Breakfast (in Stevenson Ballroom A)

8:45 a.m.

Airport bus loading (outside Conference Center entrance)

9:00 a.m.

Airport bus departs