

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)*

“ABC5-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)*

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-respondering 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