UCI SKIN
A Skin Biology Resource Center

October 2025

A MESSAGE FROM THE DIRECTOR

Bogi Andersen, MD

Welcome to our third newsletter edition. The UC Irvine Skin Biology Center strives to push skin biology and disease research boundaries through cross-disciplinary collaboration, integrating multiple scientific disciplines in systems biology. Thank you for your support.

UPCOMING EVENTS:

DISTINGUISHED SEMINAR SERIES:

OCT 24, 2025, 11am (all PST): Dr. Courtney Johnson, John Hopkins. Title: "Mapping Stromal-Immune Communication in Cutaneous T-Cell Lymphoma"

NOV 14, 2025, 11am: Dr. Pooja Flora, University of California, Riverside. Title: "Decoding the epigenetic blueprint in control of stem cell function and longevity"

DEC 5, 2025, 11am: Dr. Shobhan Gaddmeedhi, NC State University. Title: "Circadian Disruption, Genomic Instability, & Their Impact on Skin Carcinogenisis"

JAN 23, 2026, 11am: Dr. Yuxuan Miao, University of Chicago: Title: "Dissect the inflammatory adaptation circuit of epithelial cells"

MAR, 20 2026, 11am: Dr. John Seykora, University of Pennsylvania Title: "New insights into UV-induced skin cancer and atopic dermatitis"

APR 24, 2026, 11am: Dr. Megan Orzalli, University of Massachusetts Title: "Regulation of cutaneous antiviral immunity"

May 22, 2026, 11am: Dr. Marjana Tomic-Canic, University of Miami Title: "TBD"

We encourage our external members to join these online:

Zoom Link: https://uci.zoom.us/j/96362697873

Meeting ID: 963 6269 7873

SAVE THE DATES:

9th Annual UCI Skin Symposium: February 13, 2026

1st Skin Metabolism Mini-Symposium: May 7, 2026

IN THIS ISSUE:

NEW ROUND OF ENRICHMENT OFFERINGS AVAILABLE!

We have reopened our comprehensive enrichment programs designed to support and energize our community, including Pilot and Feasibility (P&F) Awards, manuscript/grant revision support awards, and travel grants for both external members and workshop attendance for the 2025-2026 year. Additionally, we're introducing trainee meeting attendance support to foster the growth of our upcoming researchers.

ENCOURAGE YOUR COLLABORATORS TO BECOME UCI SKIN EXTERNAL FACULTY MEMBERS

We are happy to welcome new external faculty members to the UCI P30 Skin Center. Please encourage your collaborators from other institutions to consider joining. They can follow this link to apply.

SEED GRANT RECIPIENTS ANNOUNCED

We're happy to announce our latest seed grant recipients! Following our recent applications call, we've selected the following researchers:

- **Qixuan Wang, Maksim Plikus**—"Leading Edge Propagation Mechanism of Human Keloid Scars"
- **Cholsoon Jang—**"Elucidating the impact of insulin resistance on skin wound metabolism in pigs"
- **Piotr Konieczny—**"Decoding Inflammatory Signals that Direct Stem Cells and Repair Niche During Skin Repair"
- **Olivia Lee, James Jester—**"Meibomian Gland Disease and Rosacea: Correlation of clinical findings and proteomic analysis of human meibum"
- **Medha Pathak, John Lowengrub**—"PIEZO1 Mechanotransduction in Human in Humane Migration and Wound Repair"

FEATURED PUBLICATION:

Uncovering Minimal Pathways in Melanoma Initiation

UCI researchers have discovered that melanomas can develop slowly from a single BRAF mutation through a rare cellular state resembling "neural crest-like" cells, which may serve as precursors to malignancy and represent an important source of tumor heterogeneity.

CORE SERVICES

IMAGING-ENGINEERING CORE

The goal of the Imaging Core is to enable skin biology researchers to incorporate the latest imaging technology into their research, whether it be in vivo in humans or animals, or ex vivo using live or fixed tissues/cells. The core is specifically adept at engineering new imaging solutions to fit a particular application, enhancing the impact and innovation of publications. We help skin biologists:

- Identify the right technology for their experiments and aid in experimental design.
- Train them and their teams in hands on use of the imaging devices.
- Review data acquired to troubleshoot and enhance data acquisition.
- Develop an analytic framework for their studies, together with the systems biology core.

MULTIOMICS CORE

The core functions to promote genomics approaches to skin biology and disease research by enabling investigations that dissect molecular and cellular heterogeneities within skin in order to predict lineages, cell state transitions and cellular interactions. Specifically, the core supports technologies to genomic DNA sequencing; bulk, single cell, and spatial transcriptomic sequencing; as well as bioinformatic analysis of sequencing data across these platforms.

SYSTEMS BIOLOGY CORE

The goal of the Systems Biology Core is to enable skin biology researchers to incorporate systems biology approaches into their research, enhancing productivity and the impact of publications. We help skin biologists:

- Derive meaningful models from data, including large, high-dimensional data;
- Build and analyze explicit, quantitative models;
- Use models to interpret, analyze, and integrate data (including data generated by other cores);

Use models to generate and prioritize testable hypotheses about function; Better understand and utilize literature that draws upon systems biology ideas and approaches.

ADMINISTRATIVE CORE

The Administrative Core provides centralized administrative, clerical, logistical and organizational services and resources to meet the needs of the Center and associated research personnel. The Administrative Core personnel facilitate interactions with members of local and national biomedical research communities in areas within the mission of NIAMS.

SKIN GENES DATABASE

www.skingenes.net

RESEARCH FOCUS AREAS

Epidermal biology group: The broad theme for the research of this group of investigators is to understand how skin homeostasis is maintained, and how the skin, including the epidermis, responds to injury and insults. Developing from the surface ectoderm during embryogenesis, the primitive epidermis has different fates, including the interfollicular epidermis and appendages such as hair follicles; we seek to understand how the different fates are specified.

Pigment and Merkel cell biology group: Melanocytes in the epidermis respond to UV damage by activating DNA damage repair and ROS detoxification, and by inducing cell division (nevus generation) and the production of more melanin; this and how melanocytes develop from the neural crest are this group's research themes. Epidermal Merkel cells connect to sensory nerves and mediate touch sensation. They are also thought to be the source of Merkel cell carcinoma.

Skin vascular biology group: The main theme of this group is to understand the pathogenesis of vascular abnormalities in skin and the development of effective treatments for these conditions, as well as understanding the vascular response in wounding and other types of injury.

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Enrichment Program Offerings In Detail:

The enrichment program offers a range of initiatives designed to support research and collaboration.

Additional offerings include manuscript/grant revision support awards ranging from $5,000 to $10,000, travel grants for external members at $3,000, and workshop/travel grants for theme-focused team building at $6,000. Trainee meeting attendance grants of $1,000 are also available. These grants support various aspects of research and collaboration, fostering a dynamic research environment.

Enrichment Program Application Links:

- **Manuscript/Grant Revision Support Awards:** https://app.smartsheet.com/b/form/07920944f91c44e5ac7e6e3369618b03
- **Travel Grants for External Members:** https://app.smartsheet.com/b/form/a322e64c3729419687130e9b8df526b6
- **Workshop/travel grants for theme-focused team building:** https://app.smartsheet.com/b/form/9b2fe3875a50447583d29d3d5c91d605
- **Trainee meeting attendance**: https://app.smartsheet.com/b/form/e5675485e864427eafac0208dbf9d165

Falling Leaves Foundation Medical Innovation Building

Update: Our team has successfully relocated to the new facility and is now fully operational in our new research space. This move represents an important step forward in expanding our skin science research capabilities and fostering new collaborative opportunities.

The Interdisciplinary Skin Science Program has been chosen as one of 12 high-impact research initiatives to be housed in the new Falling Leaves Foundation Medical Innovation Building. This unique facility will accommodate world-class research programs and, upon completion, will span 215,000 square feet. It will be one of the largest buildings on the West Coast dedicated to basic and translational research and training.

Introducing New Faculty Members

Please welcome three distinguished researchers to our community and their research topics:

- **Flora Pooja, PhD (UC Riverside)** —Epigenetic mechanisms governing tissue regeneration and aging
- **Piotr Konieczny, PhD (UC Irvine)** —Epithelial stem cell adaptation to inflammation and damage
- **Alan Barbour, MD (UC Irvine)** —Vector-borne diseases including Lyme disease and relapsing fever.

Their expertise will further strengthen our collaborative research mission. Welcome!