

Japan - Singapore International Skin Conference 2019

CONFERENCE PROGRAMME

WEDNESDAY 10th APRIL - DAY 1

08:00 – 16:00 **REGISTRATION**

09:00 **CONFERENCE OPENING AND WELCOME**

Oliver DREESEN

Skin Research Institute of Singapore, A*STAR,
Singapore

Daisuke NANBA

Tokyo Medical and Dental University, Japan

09:15 – 10:35 **SESSION 1: SKIN AGING AND HOMEOSTASIS**

Chairs: David LANE and Daisuke NANBA

09:15 – 09:40 **Emi NISHIMURA**, Tokyo Medical and Dental
University, Japan

*Stem cell competition underlies skin homeostasis and
aging*

09:40 – 09:55 **Pritinder KAUR**, Curtin University, Australia

*Decreased tissue regenerative potential of aging
human skin can be attributed partly to changes in the
dermal microenvironment*

09:55 – 10:20 **Oliver DREESEN**, Skin Research Institute of
Singapore, Singapore

*The role of heterochromatin in the accelerated aging
syndrome Hutchinson-Gilford Progeria (HGPS)*

10:20 – 10:35 **Kentaro KAJIYA**, Shiseido Global Innovation Center,
Japan

*3-dimensional visualization of vasculature in skin and
its relevance in skin aging*

10:35 – 11:05 *Morning tea break*

11:05 – 12:40 **SESSION 2: STEM CELLS AND REGENERATION I**

Chairs: Nick BARKER and Aiko SADA

11:05 – 11:30 **Sophie BELLANGER**, Skin Research Institute of
Singapore, Singapore

Nicotinamide metabolism modulates the proliferation-

differentiation-senescence balance in human primary keratinocytes

11:30 – 11:45 **Hirota TAKEUCHI**, POLA Chemical Industries Inc, Japan
Mechanism of skin aging (wrinkle and sagging) – Focusing on dermis and hypodermis

11:45 – 12:00 **Ken NATSUGA**, Hokkaido University, Japan
Epidermal responses to physical stimuli

12:00 – 12:15 **Toru HIRATSUKA**, King's College London, UK
Pulse kinetics of ERK MAPK controls epidermal stem cell states

12:15 – 12:40 **Toshio SUDA**, National University of Singapore, Singapore
Quiescence and cell metabolism in stem cells

12:40 – 14:15 *Lunch break*

14:15 – 16:00 SESSION 3: STEM CELLS AND REGENERATION II

Chairs: Yann BARRANDON and Ken NATSUGA

14:15 – 14:40 **Nick BARKER**, Institute of Medical Biology, Singapore
LGR5+ stem cells in epithelial maintenance, repair and cancer of the stomach

14:40 – 14:55 **Ryuichiro KURATA**, Osaka University, Japan
Sweat gland stem cells in human sweat glands

14:55 – 15:20 **Daisuke NANBA**, Tokyo Medical and Dental University, Japan
Tracing stem cell motion in human keratinocyte colonies using deep learning-based object tracking

15:20 – 15:35 **Jun-ichi SAKABE**, Institute of Medical Biology, Singapore
Breaking boundaries: The tale of thymus and epidermis

15:35 – 16:00 **Aiko SADA**, University of Tsukuba, Japan
Maintenance of heterogeneous epidermal stem cell populations by the distinct niche

16:00 – 18:00 Poster Session

Wine and cheese

End of Day 1

THURSDAY 11th APRIL - DAY 2

08:30

REGISTRATION

09:00 – 10:35

SESSION 4: SKIN CANCER

Chairs: Oliver DREESEN and Pritinder KAUR

09:00 – 09:25

David LANE, A*STAR, Singapore

Regulation of expression of wild type and mutant p53 proteins in normal skin and in skin cancer

09:25 – 09:40

Audrey WANG, Skin Research Institute of Singapore, Singapore

A diagnostic toolkit to detect and quantify senescent cells in age-related skin pathologies

09:40 – 10:05

Kiarash KHOSROTEHRANI, The University of Queensland, Australia

Molecular determinants of endothelial cell hierarchy and plasticity: Functional consequences in skin and skin cancer

10:05 – 10:20

Daisuke UTSUMI, University of the Ryukyus, Japan

Identifying the origin of metastatic skin carcinoma of unknown primary site using machine learning approach based on transcriptome data

10:20 – 10:35

Karen CRASTA, Nanyang Technological University, Singapore

Cell non-autonomous effects of chemotherapy-induced delayed wound healing

10:35 – 11:05

Morning tea break

11:05 – 13:00

SESSION 5: SKIN DISEASES

Chairs: Riichiro ABE and Hideyuki UJIIE

11:05 – 11:30

Birgitte LANE, Skin Research Institute of Singapore, Singapore

What keratins do in skin

11:30 – 11:45

Osamu ANSAI, Niigata University, Japan

Aberrant keratin assembly causes impaired mitochondrial movement and function: Implications for epidermolysis bullosa simplex pathogenesis

11:45 – 12:10

Hideyuki UJIIE, Hokkaido University, Japan

Mechanism of autoantibody production in bullous pemphigoid

12:10 – 12:35

Riichiro ABE, Niigata University, Japan

Necroptosis in Stevens-Johnson syndrome/toxic epidermal necrolysis

12:35 – 13:00

Maurice VAN STEENSEL, Skin Research Institute Singapore, Singapore

Zebrafish in dermatology: Cans and cannots

13:00 – 14:30

Lunch break

14:30 – 16:05 SESSION 6: SKIN IMMUNOLOGY I

Chairs: Baptiste JANELA and Mariko MORIYAMA

- 14:30 – 14:55 **Masayuki AMAGAI**, Keio University, Japan
Stratum corneum as niche to control skin microbiota
- 14:55 – 15:10 **Satoshi NAKAMIZO**, Skin Research Institute Singapore & Singapore Immunology Network, Singapore
Neutrophilic folliculitis is facilitated by a Western diet via induction of follicular hyperkeratosis and activation of sebaceous cells
- 15:10 – 15:25 **Sayuri YAMAZAKI**, Nagoya City University, Japan
Skin dendritic cells expressing a unique set of genes associated with immunological tolerance are specialized to expand thymus-derived Foxp3+ regulatory T cells upon ultraviolet B exposure
- 15:25 – 15:40 **Chisa NAKASHIMA**, Kyoto University, Japan
Both basophils and peripheral nerves are involved in the development of Staphylococcus aureus-induced skin inflammation
- 15:40 – 16:05 **Niranjan NAGARAJAN**, Genome Institute of Singapore, Singapore
Skin microbiome dermatotypes in atopic dermatitis are linked to host immunity and microbial virulence

16:05 – 16:35 *Afternoon tea break*

16:35 – 17:45 WOMEN IN SCIENCE KEYNOTE LECTURE

David LANE – Introduction

Yoshiko TAKAHASHI, Kyoto University, Japan
To live with neural crest cells, without which no one is happy

End of Day 2

FRIDAY 12th APRIL - DAY 3

08:30

REGISTRATION

09:00 – 10:20

SESSION 7: SKIN IMMUNOLOGY II

Chairs: Satoshi NAKAMIZO and Takehiko YOKOMIZO

09:00 – 09:25

Kenji KABASHIMA, Kyoto University, Japan

Cutaneous immune responses to external stimuli

09:25 – 09:40

James WELLS, The University of Queensland, Australia

Peripheral CD4+CD8+ T cells are a stable population that emerge from CD4+ T cells to mediate CD8+ T cell regulation in the skin

09:40 – 09:55

Mika TAKAICHI, Osaka City University, Japan

The effect of CRH on connective tissue- and mucosal-type mast cells degranulation and proliferation in situ ~CRH is a stimulator for mast cells~

09:55 – 10:20

Baptiste JANELA, Skin Research Institute Singapore & Singapore Immunology Network, Singapore

Skin dendritic cells: The sentinel paradox

10:20 – 10:50

Morning tea break

10:50 – 12:35

SESSION 8: TECHNOLOGIES TO STUDY SKIN HEALTH

Chairs: Sierin LIM and James WELLS

10:50 – 11:15

Takehiko YOKOMIZO, Juntendo University, Japan

Roles of 12-HHT/BLT2 axis in skin

11:15 – 11:30

Daniel LIO, Nanyang Technological University, Singapore

Temporal pressure enhanced transdermal delivery through micropore formation

11:30– 11:55

Sierin LIM, Nanyang Technological University, Singapore

Protein cages for consumer care formulation

11:55 – 12:10

Yingrou TAN, Singapore Immunology Network & National Skin Center, Singapore

Three-dimensional optical clearing and imaging of pruritic atopic dermatitis and psoriasis skin reveals downregulation of epidermal innervation

12:10– 12:35

Markus WENK, National University of Singapore, Singapore

Translation of lipidomic technologies towards quantification of blood lipids.

12:35 – 14:05

Lunch break

14:05 – 15:30 SESSION 9: HAIR BIOLOGY AND SKIN BARRIER

Chairs: Carlos CLAVEL and Mayumi ITO

- 14:05 – 14:30 **Colin JAHODA**, Durham University, UK
The multifaceted roles of hair follicle mesenchymal cells and their epigenetic status in vivo and in vitro
- 14:30 – 14:45 **Chin Yan LIM**, Skin Research Institute of Singapore, Singapore
Dynamic changes in chromatin mediate epidermal development and keratinocyte function
- 14:45 – 15:00 **Mikiro TAKAISHI**, Kochi University, Japan
Ahed, an uncharacterized nuclear protein, is required for epidermal cell growth and differentiation
- 15:00 – 15:15 **Nikolaos PANTELIREIS**, Imperial College London, UK
Modelling epigenetic changes regulating hair follicle induction
- 15:15 – 15:30 **Joy NG**, Skin Research Institute of Singapore, Singapore
Sox2 in the dermal papilla regulates hair follicle pigmentation
- 15:30 – 16:00 *Afternoon tea break*

16:00 – 17:40 SESSION 10: HAIR BIOLOGY

Chairs: Colin JAHODA and Emi NISHIMURA

- 16:00 – 16:25 **Mayumi ITO**, New York University, USA
SHH signal in hair follicle neogenesis
- 16:25 – 16:40 **Etienne WANG**, National Skin Centre, Singapore
Oncostatin M from a distinct subset of TREM2+ macrophages inhibits hair follicle stem cells proliferation during telogen
- 16:40 – 16:55 **Kenneth LAY**, Institute of Medical Biology, Singapore
Hair follicle stem cells repurpose proliferation and recruit immune cells to contain a breach in their niche barrier
- 16:55 – 17:20 **Hironobu FUJIWARA**, RIKEN Center for Biosystems Dynamics Research, Japan
Developmental origin and induction processes of hair follicle stem cells
- 17:20 – 17:40 **PRIZE CEREMONY AND CONFERENCE CLOSING**

Thomas DAWSON, President, Skin Research Society Singapore

End of conference

CONFERENCE DINNER @ Privé, Asian Civilisations Museum