

Shiseido Wins World-Leading 18th Top Award from IFSCC
— Sweeps Top Awards in Both Oral and Poster Presentations —

The 22nd IFSCC^{*1} 2013 Conference was held from October 30 (Wed) to November 1 (Fri), 2013, in Rio de Janeiro, Brazil. In this event, the world's excellent cosmetic development or skin research achievements are selected. Shiseido swept "top awards" in both oral and poster presentations among 228 theme presentations (26 oral presentations, 202 poster presentations) submitted from 22 countries^{*2} all around the world.

This latest award granted by the IFSCC to Shiseido is the 18th and Shiseido have the highest award count than any other cosmetic manufacturer. Awards of the IFSCC are evaluated by leading experts in cosmetic field, from the point of view of the effects, mechanisms and broad applications to expand cosmetics development, which promotes the spirit of innovation.

*1 The International Federation of Societies of Cosmetic Chemists

*2 Based on IFSCC official website (as of September 2013)

Oral Presentation: Overview of the Theme that Won the Top Award

[Theme] Visualization of water distribution in facial skin using novel high-sensitivity water imaging systems and application to cosmetics evaluation

[Award Recipient] Mariko Egawa, Vice Senior Scientist (Cosmetics Research & Development Center), Shiseido Research Center

[Summary] Shiseido developed "near-infrared camera system" and "near-infrared microscope system" using near-infrared light, which can create 2D images (imaging) of moisture that is the fundamental and important index indicating skin and hair condition. The "near-infrared camera system" succeeded in enabling high-sensitivity imaging of water distribution in skin and hair. We established the techniques to evaluate moisturizing effects with high-sensitivity images as well as enable water distribution measurement in facial skin, which varies depending on season and dry environment (Figure 1). Furthermore, the "near-infrared microscope system" enables water imaging for microscopic areas in skin after makeup application; therefore, the technique to evaluate how much cosmetics blend into skin has been established (Figure 2).

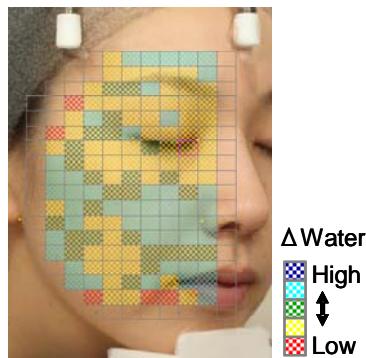


Figure 1. Difference in water distribution in facial skin after 80-min stay in 10% relative humidity conditions.

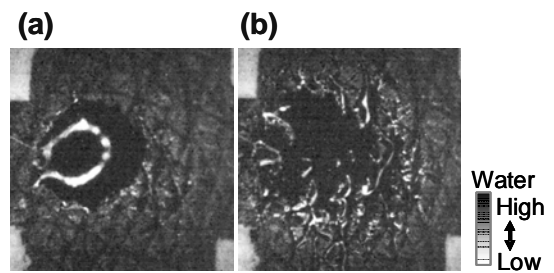


Figure 2. Microscopic water images of forearm skin. The images were obtained (a) just after and (b) 3 min after application of 1 μ L of commercially available serum.

Poster Presentation: **Overview of the Theme that Won the Top Award**

[Theme] The role of heparan sulfate at the dermal-epidermal junction in hyperpigmentation

[Award Recipient] Shunsuke Iriyama, Researcher (Cosmetics Basic Research Center), Shiseido Research Center

[Summary] Heparan sulfate at the dermal-epidermal junction, which is considered to control movements of growth factors between epidermis and dermis as well as maintain skin's homeostasis, decreased in the skin with senile pigmented patches (dark spots) which is one of the photo-aging signs, compared to adjacent normal skin (Figure 3). We discovered that darkening can be inhibited by inhibiting enzyme heparanase activity, which degrades heparan sulfate, with 3D cultured skin model containing pigment cells of dark spot skin model (Figure 4). Therefore, Shiseido developed "lilium candidum bulb extract" and "glucosamine" as ingredients to inhibit enzyme heparanase activity and enhance heparan sulfate production. This study result allowed us to establish a new idea of "response to dark spots/whitening by caring heparan sulfate at the dermal-epidermal junction".

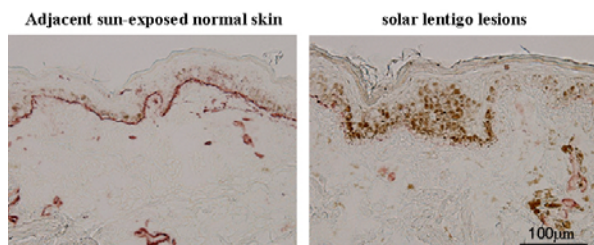


Figure 3 Degradation of heparan sulfate is promoted in solar lentigo lesions.

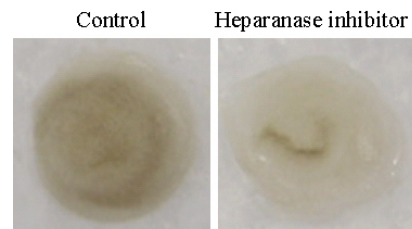


Figure 4 Heparanase inhibitor decreases the melanin content

IFSCC and Shiseido

IFSCC was founded for the aim of sharing information internationally for the development of cosmetics technologies by the chemists from eight countries in 1959, Recently, the organization has approximately 15,000 members in 47 countries. Since 2003, a top award has been presented to one most outstanding research at the IFSCC Conferences, which are held on odd-numbered

years to educate young researchers and enhance the awareness of developing country members. Furthermore, IFSCC Congresses are held once every two years on even-numbered years. With nearly 200 research presentations and more than 1,000 participants, the congress is truly recognized as the world's most authoritative event for innovative research regarding cosmetics and skin.

Shiseido is the recipient of 18 top IFSCC Congress and IFSCC Conference awards^{*6}, The number of awards is simply the best in cosmetic industry and contribute to sustain leadership in the cosmetic research. These awards certificate the technologies of Shiseido at high level, as the global cosmetics industry, and contributes to the creation of safe, reassuring, high quality products. Any other competitors cannot touch it.

^{*3} Top awards received by Shiseido are listed hereinafter.

1. List of Top Awards Received by Shiseido at IFSCC Congress

	Year	Congress	Location	Theme	Presentation Form
1	1976	9th Congress	Boston, USA	Research into, and application of, water-in-oil emulsions stabilized with amino acids or their salts	Oral Presentation
2	1986	14th Congress	Barcelona, Spain	Development of a new type of colored nacreous pigment	Oral Presentation
3	1988	15th Congress	London, UK	Elucidating body malodor to develop a novel body odor quencher	Oral Presentation
4	1990	16th Congress	New York, USA	Development of a new W/O-type nail enamel	Oral Presentation
5	1992	17th Congress	Yokohama, Japan	Measurement method of efficacy of anti-dandruff cosmetics and development of a new active commercial product	Oral Presentation
6	2000	21st Congress	Berlin, Germany	Research related to dermal-epidermal basement membrane care	Oral Presentation
7				Development of super-rapid drying "dip in water" nail enamel	Poster Presentation
8	2002	22nd Congress	Edinburgh, UK	Development of "Skincare Powder" as an ingredient inhibiting dry skin	Oral Presentation
9	2006	24th Congress	Osaka, Japan	How can we improve the appearance of conspicuous facial pores?	Poster Presentation
10	2008	25th Congress	Barcelona, Spain	Development of high water-resistant / detergent-washable powder coated with a pH-responsive polymer and its application to suncare products	Oral Presentation
11	2010	26th Congress	Buenos Aires, Argentina	Characterization and regulatory mechanism of bleomycin hydrolase as a natural moisturizing factor (NMF)-generating enzyme in human epidermis	Oral Presentation
12				Development of lipstick that barely leaves a color mark on cups using two-phase separation mechanism	Oral Presentation

13				A novel, self-assembled structure for transparent, reversibly deformable oil gels and its application to cosmetics	Oral Presentation
14	2012	27th Congress	Johannesburg	Non-invasive in situ assessment of structural alteration of human dermis caused by photoaging using a novel collagen-specific imaging technique	Oral Presentation

2. List of Top Awards Received by Shiseido at IFSCC Conference

	Year	Location	Theme	Presentation
1	2005	Florence, Italy	Optical Rejuvenating Makeup Using an Innovative Shape-Controlled Hybrid Powder	Oral Presentation
2	2011	Bangkok, Thailand	Development of self-dissolving microneedles consisting of hyaluronic acid as anti-wrinkle	Oral Presentation
3 (Currently awarded)	2013	Rio de Janeiro	Visualization of water distribution in facial skin using novel high-sensitivity water imaging systems and application to cosmetics evaluation	Oral Presentation
3 (Currently awarded)			The role of heparan sulfate at the dermal-epidermal junction in hyperpigmentation	Poster Presentation