

Press Release

Shiseido Wins First Prize and Two Second Prizes for Excellent Research Papers at the 12th China Cosmetics Academic Research Conference

Shiseido Company, Limited (Shiseido) won three prizes at the 12th China Cosmetics Academic Research Conference hosted by China Association of Fragrance Flavour and Cosmetic Industries (CAFFCI), held on June 26-28, 2018 in Jiangmen, Guangdong, China. The first prize and two second prizes were given to three excellent research papers by Shiseido, selected from 84 entries this year. These prizes also recognize Shiseido's contribution to the technological progress in the Chinese cosmetics industry. Up to date, Shiseido has received a total of six first prizes at the conference, an award given to the most outstanding research. Shiseido will continue utilizing the outcomes of its cutting-edge researches and advanced technologies to develop the products of its China-exclusive brand AUPRES and its global brands such as Clé de Peau Beauté and SHISEIDO, going forward.

China Association of Fragrance Flavour and Cosmetic Industries (CAFFCI) is an NPO consisting of business entities, institutions and individuals specializing in essence/fragrance and cosmetics ingredients, as well as equipment/devices, packaging, related R&D activities, design, education, and other activities for cosmetic products. The China Cosmetics Academic Research Conference is held once every two years and is regarded as one of the largest conferences on cosmetics in terms of the number of research presentations and academic debates involved. The participants include many companies, universities, and research institutes in China and overseas, and the best research papers are selected based on outstanding results that will contribute to advancing the technologies in the Chinese cosmetics industry.

Yusuke Hara of Shiseido Research Center, who received the first prize at the award ceremony on June 27, made a presentation of his research titled "New insight into the development of anti-aging skincare cosmetics focusing on the primary causes of wrinkles". He commented:

"I am very honored to receive such a prestigious prize. There are still a lot of mechanisms and phenomena in our skin that have not yet been clarified. So I would like to pursue research that creates new value, helping consumers to become and stay more beautiful by clarifying those unknown facts."



Yusuke Hara of Shiseido Research Center
at the award ceremony

Two research papers that won the second prize are:

- Development of breakthrough anti-aging skin care – Discovery of a critical skin-aging mechanism caused by sweat gland shrinkage: dermal cavitation (Presenter: Tomonobu Ezure, Shiseido Research Center)
- A Novel Mechanism of Cutaneous Aging Mediated by the Impairment of Lymphatic Function and the Protective Role of a Lymphatic-promoting Compound (Presenter: Kentaro Kajiya, Shiseido Research Center)

Overview of prize-winning research papers

【First Prize】

Title	New insight into the development of anti-aging skincare cosmetics focusing on the primary causes of wrinkles
Presenter	Shiseido Research Center, Yusuke Hara
Overview	The sites that are prone to wrinkling undergo a high degree of motion during facial expressions; therefore, skin motion may be an essential factor in wrinkle formation. We confirmed an increase in wrinkle volume immediately after facial expressions. The resulting wrinkles were referred to as residual wrinkles, and the mechanically deteriorated stratum corneum (SC) was suggested to be primarily responsible for residual wrinkle formation. An efficient method for repairing deteriorated SC was demonstrated to be the SC hydration–dehydration process, which could be controlled by skincare product ingredients or formulations. In our previous studies, polyoxyethylene/polyoxypropylene dimethyl ether (EPDME) has been confirmed to enhance the SC hydration–dehydration process. EPDME suppressed the formation of residual wrinkles by keeping the moderate moisture in the stratum corneum, and repaired the formed residual wrinkles. The results offer new insights into the development of daily anti-aging skincare cosmetics.

【Second Prize】

Title	Development of breakthrough anti-aging skin care – Discovery of a critical skin-aging mechanism caused by sweat gland shrinkage: dermal cavitation
Presenter	Shiseido Research Center, Tomonobu Ezure
Overview	To determine the cause of age-related skin sagging, we developed a new micro-computed tomography method to visualize internal skin structures in three dimensions and identified for the first time that multiple defects are filled with adipose tissues (“dermal cavitation”) in the deep dermal layer of aged skin. This research revealed that the cavitation significantly decreases skin elasticity and promotes sagging, and that age-induced cavitation is closely connected with atrophic sweat glands, suggesting that sweat glands shrink upwards with aging and create cavities in the dermal layer, which results in skin sagging. As for the means to improve cavitation, we found out for the first time that rosemary extract attracts adipose tissue-derived stem cells (ADSCs) and activates dermal tissues, establishing a three-dimensional dermal structure.

【Second Prize】

Title	A Novel Mechanism of Cutaneous Aging Mediated by the Impairment of Lymphatic Function and the Protective Role of a Lymphatic-promoting Compound
Presenter	Shiseido Research Center, Kentaro Kajiya
Overview	Skin-aging is thought to be caused partly by the deterioration of the inner part of the body, in particular, the circulatory system, composed of blood and lymphatic vessels. However, very few studies have been conducted on the functions of lymphatic vessels in skin-aging. By visualizing the lymphatic vessels in the skin, we succeeded in revealing that 1) lymphatic vessels are functionally hyper-permeable in aged skin, deteriorating its function of collecting waste products and excess water, 2) sagging skin shows increased subcutaneous adipocyte accumulation and looser, hyper-permeable lymphatic vessel structure, and 3) fatty acids in the lymph promote hyper-permeability of lymphatic vessels, leading to the increase of adipocyte accumulation. Moreover, we found out for the first time age-dependent down-regulation of Tie2 activation that plays an important role in the stabilization of lymphatic vessels, and that cinnamon extract directly activates Tie2 receptor, promotes the stabilization of lymphatic vessels, and controls the accumulation of subcutaneous adipocyte.