

## Shiseido Wins First Prize for Digital Poster Presentation at the Asian Societies of Cosmetic Scientists Conference 2024 in Goa

At the Asian Societies of Cosmetic Scientists (ASCS)\*<sup>1</sup> Conference 2024 held in Goa, India, in March 2024, Shiro Mukae, Ph.D., Researcher at Shiseido MIRAI Technology Institute, gave a presentation titled "Non-invasive evaluation of the network of dermal collagen using high-frequency ultrasound microscopy" and received "First Prize" for Digital Poster Presentation.

This award, which is given to the most outstanding digital poster presentation during the conference, aims to further promote the development and revitalization of research in cosmetics-related fields.

\*1. The ASCS was established for the improvement of cosmetic technologies and further development of the cosmetic industry in the Asian region with the aim of deepening mutual collaboration through active technological and cultural exchanges. The international academic conference held biennially has been a place where a multitude of latest research achievements from various Asian countries are presented, with participants engaging in lively discussions.

### Outline of award-winning presentation

Collagen is considered to have a significant impact on the firmness and wrinkles of the skin. Therefore, clarifying the structure of the collagen network is important for understanding the formation of healthy and beautiful skin. However, while previous studies have been successful in capturing the properties of collagen micro-fibers, few have described the method to visualize and evaluate the macroscopic collagen network. Against this backdrop, the present study was conducted to develop a new technique for analyzing the collagen network using a high-frequency ultrasound microscope. This technique allows for the three-dimensional visualization of the elastic components of the dermis layer over a wide area, which until now could only be captured locally, mainly in two dimensions. Using this technique, Shiseido succeeded in quantitatively evaluating collagen network in terms of density and thickness (Figure 1). The results demonstrated how the density of the collagen network in the cheeks decreases with age, along with a decrease in the thickness of the network. This new analytical technique will be used to elucidate new mechanisms underlying wrinkle formation and loss of skin firmness, and to develop innovative solutions for aging care approaches in the future.

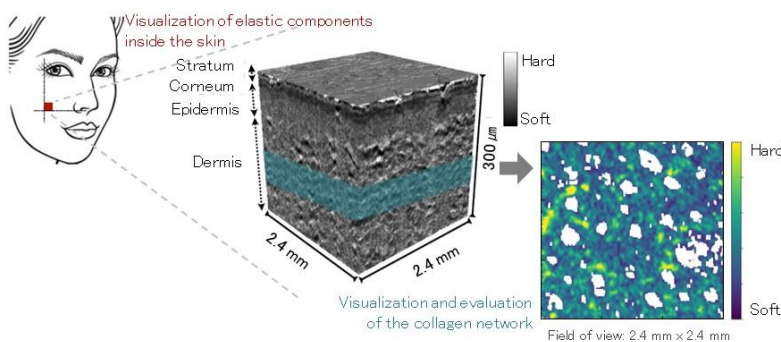


Figure 1. Visualization of collagen from elastic components inside the skin



Shiro Mukae, Ph.D., Researcher  
at Shiseido MIRAI Technology Institute