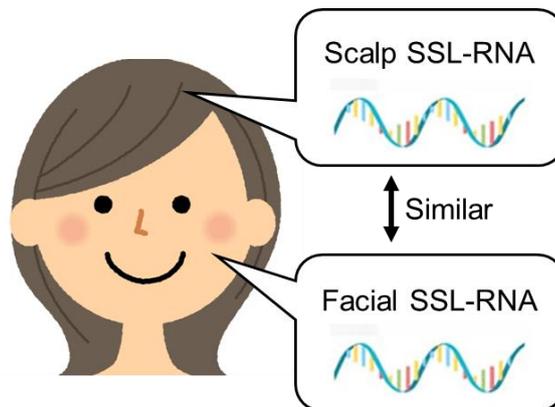


FOR IMMEDIATE RELEASE

January 28, 2026

Similarity of Expression Patterns Between Facial and Scalp Skin Surface Lipids RNA Is Confirmed

Kao Corporation's Skin Beauty 1 Products Research has analyzed the RNA contained in skin surface lipids (SSL-RNA)*¹ and found that the expression patterns of facial and scalp SSL-RNA are similar.



Some of the results of this research were presented at the 48th Annual Meeting of the Molecular Biology Society of Japan (December 3–5, 2025, Kanagawa).

*This news release is a translation of a Japanese-language news release dated January 8, 2026.

*1 Kao News Release dated June 10, 2019:

[Kao's original non-invasive analytical method for monitoring RNA—Discovery of the presence of human RNA in sebum](#)

Background

Kao discovered the presence of human RNA in sebum in 2019, and developed SSL-RNA monitoring technology, a non-invasive method for comprehensive analysis of RNA extracted from facial sebum collected using an oil blotting film. Furthermore, the SSL-RNA expression profiles revealed that the facial skin can be classified into at least two skin types*², one type characterized by high expression of genes involved in skin barrier functions such as “keratinization”, and the other type characterized by high expression of genes involved in skin immune functions such as “immune response”.

Until now, Kao has primarily accumulated knowledge based on facial SSL-RNA; however, SSL-RNA can also be obtained from the scalp. In terms of basic structure and function, the scalp has much in common with the face, but no detailed analysis has yet been undertaken.

Kao has now utilized this technology to analyze SSL-RNA expression profiles from the face and scalp of the same individuals.

*2 Kao News Release dated March 6, 2024:

[Skin Type Classification Using Sebum RNA Developed—Two Skin Types with Different Gene Expression \(RNA\) Characteristics Discovered](#)

Similarity between the expression patterns of facial and scalp SSL-RNA

SSL-RNA was sampled simultaneously from the face and scalp of 33 Japanese women*³, and the average expression levels of each of the approximately 20,000 RNA species obtained were calculated for each site. The similarity between the RNA expression profiles of the two sites was evaluated using Spearman's rank correlation, and the results showed a very strong correlation (Figure 1). This result indicates that the expression patterns—which RNA have relatively high (or low) expression—of the face and scalp are similar.

*³ Conducted in subjects aged 20–49 from January to February 2023.

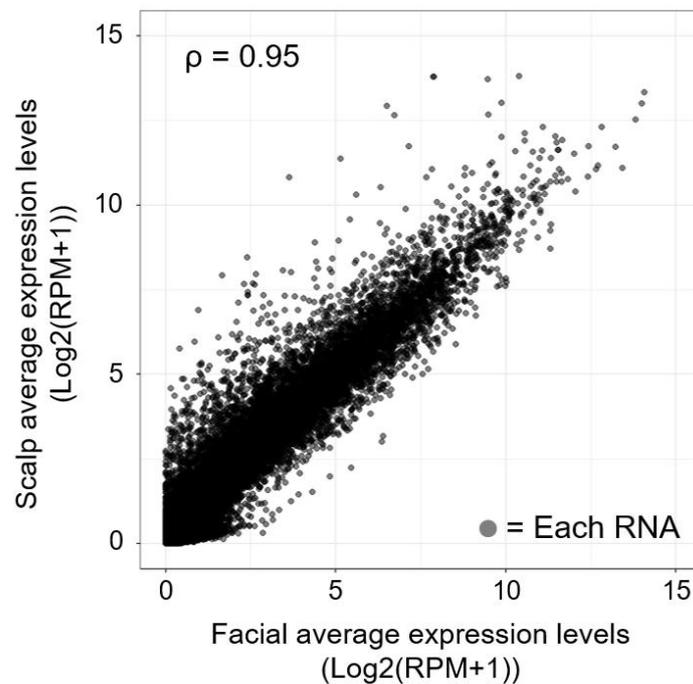


Figure 1. Similarity between the expression patterns of facial and scalp SSL-RNA

Summary

Kao has discovered that the expression patterns of facial and scalp SSL-RNA are similar. Kao has already developed “skin gene mode determination” technology that uses SSL-RNA expression information to estimate skin type from facial images*⁴. Kao will further explore the application of the skin gene mode to the scalp.

*⁴ Kao News Releases (in Japanese) dated May 21, 2025:

[Establishment of a Model to Estimate Skin Type from Facial Images Based on Sebum RNA Expression Information—Enabling Anyone to Easily](#)

[Utilize Objective Skin Metrics](#)

[Skin Gene Mode: Estimating Skin Type from Facial Images Based on Sebum RNA Expression Information—Debuting in istyle's @cosme App](#)

About Kao

Kao, a Japan-based manufacturer of personal care and household products, cosmetics, and specialty chemicals creates high-value-added products and services that provide care and enrichment for the life of all people and the planet. Through its brands such as *Attack* laundry detergent, *Bioré* and *Jergens* skin care products, *Laurier* sanitary products, *Curél*, *SENSAI*, and *MOLTON BROWN* cosmetics, and *Oribe* hair care products, Kao is part of the everyday lives of people across Asia, the Americas, Europe, the Middle East, and Africa. Combined with its chemical business, which contributes to a wide range of industries, Kao generates about 1,630 billion yen in annual sales. Kao employs about 32,600 people worldwide and has more than 130 years of history in innovation. As an enterprise that provides products people use on a daily basis, the Kao Group takes responsibility to actively reduce the environmental footprint of its products throughout the product lifecycle. This is laid out in Kao's ESG strategy, the Kirei Lifestyle Plan, which launched in 2019.

Please visit [the Kao Group website](#) for additional information.

Media inquiries should be directed to:

Public Relations

Kao Corporation

corporate_pr@kao.com