

Suntory Global Innovation Center Enhances Blue Coloration in Roses Through Copigmentation

**— Research findings presented
at the 32nd International Horticultural Congress —**

Tokyo, JAPAN (August 31, 2026) – Suntory Global Innovation Center (SIC), the research and development arm of Suntory Group, has succeeded in enhancing blue coloration in roses through copigmentation^{*1} by molecular breeding^{*2}. The findings were presented at the 32nd International Horticultural Congress (IHC2026), one of the world's leading conferences on horticultural science, held in Kyoto, Japan, from August 23 to 28, 2026.

Suntory Group has pursued the challenge of creating a blue rose since 1990. After 14 years of research, the Group announced the successful development of the world's first blue rose in 2004^{*3}. Following its commercial launch in Japan in 2009 and subsequent introduction to North America, this achievement marked a major milestone in flower innovation. Driven by the desire to achieve an even bluer rose, SIC continued its research efforts, leading to the study reported here.

Under the theme “Modification of Rose Flower Color towards Blue by Copigmentation” this research was conducted by Seitaro Ito, Yukihiisa Katsumoto, Naoko Okitsu, Yoshikazu Tanaka, and Noriko Nakamura of SIC; Kohtaro Sugahara of Suntory Foundation for Life Science; Liana Cecilia Tovar Duarte and Carlos Eduardo Romeo Vásquez of Flores Luna Nueva S.A.S.

▼Research Method

To enhance blue coloration through copigmentation, the researchers combined delphinidin-based anthocyanins (Del-An) with flavone C-glycosides (FCGs) and identified effective combinations through in vitro copigmentation assays. SIC then introduced four biosynthetic genes required for the production of these compounds into roses and evaluated pigment accumulation, color change, and color stability under natural growing conditions.

▼Research Findings

The in vitro copigmentation assay demonstrated a strong copigmentation when malvidin, a delphinidin-derived pigment, was combined with FCGs such as isovitexin and isoorientin. To enable the production of these compounds in rose petals, four biosynthetic genes were introduced into roses. As a result, malvidin and isoorientin accumulated in the petals, producing a violet-blue flower color. The blue coloration became more pronounced as FCG levels increased. Three years of field trials in Colombia, a major rose-producing country, further confirmed that the blue coloration remained stable under natural growing conditions.

▼Future Outlook

This achievement represents another step forward in SIC's long-standing pursuit of even bluer roses. As blue roses do not occur naturally, creating one remains a longstanding challenge in plant science. By further advancing this research, SIC expects to achieve even bluer and more stable flower colors. The knowledge gained through this research is expected to have applications beyond roses to other plants, contributing to further advances in plant science.

As an organization responsible for research and technology development aimed at enhancing the value of Suntory Group and driving business growth, SIC will continue to pursue cutting-edge technologies and advance the natural sciences in its ongoing quest to create new value for customers.

Find more about Suntory Global Innovation Center [here](#), and about the blue rose [here](#). Follow the latest updates on [LinkedIn](#).

*1 A phenomenon in which anthocyanin pigments interact with other compounds, increasing color intensity and shifting the hue toward blue.

*2 A breeding approach that uses molecular biology techniques and genetic information, including genetic modification, to develop plants with desired traits.

*3 Sold as SUNTORY blue rose APPLAUSE by Suntory Flowers since 2009.

About Suntory Group

As a global leader in the beverage industry, Suntory Group aims to inspire the brilliance of life, by creating rich experiences for people, in harmony with nature. Sustained by the gifts of nature and water, the Group offers a uniquely diverse portfolio of products across more than 80 countries, from award-winning Japanese whiskies Yamazaki and Hibiki, iconic American whiskies Jim Beam and Maker's Mark, canned ready-to-drink -196 (minus one-nine-six), The Premium Malt's beer, Japanese wine Tomi, and the world-famous Château Lagrange. Its brand collection also includes non-alcoholic favorites Orangina, Lucozade, Oasis, BOSS coffee, Suntory Tennensui water, TEA+ Oolong Tea, and V energy drink, as well as popular health and wellness product Sesamin EX.

Founded as a family-owned business in 1899 in Osaka, Japan, Suntory Group has grown into a global company operating throughout the Americas, Europe, Africa, Asia and Oceania, with approximately 40,000 employees worldwide drawn upon the unique blend of Japanese artisanship and global tastes to explore new product categories and markets.

For more information, visit www.suntory.com and [Drink Smart](#).

