

Clariant launches Prenylium™ - a sustainably-sourced root-powered active ingredient for premium well-aging skincare

- **Unique white mulberry tree root extract helps to protect the skin matrisome in order to maintain its youth**
- **+2000% prenylated flavonoids with the Plant Milking Technology leads to stronger efficacy compared to traditional white mulberry roots**
- **Visible reduction in the appearance of wrinkles and increased skin smoothness**
- **More sustainable and protective cultivation, eco-friendly process & 100% traceability from seed to active**

– Clariant Active Ingredients launches Prenylium - the first product unveiled thanks to its new partnership with French biotechnology company, Plant Advanced Technologies (PAT). Rich in rare prenylated flavonoids content, Prenylium is a unique *Morus alba* tree root extract, highly efficient at protecting the skin matrisome from degradation that occurs with time and UV exposure. It also helps prevent signs of aging by visibly reducing the appearance of existing wrinkles and smoothing skin.

Prenylium is produced by PAT's patented Plant Milking Technology¹, which explores generally inaccessible plant parts - the roots - without killing the tree and allows for the production of rare compounds at an industrial scale. The highly sustainable, 100% traceable and eco-friendly process focuses on an innovative aeroponic, soilless system that stimulates roots to produce targeted molecules in higher quantities than those found in their natural environment. Roots are cut and collected several times a year from the same plant to harvest the molecules without destroying the plant culture; the roots can regrow multiple times.

Prenylium's exceptional concentration of prenylated flavonoids - more than 2,000% higher than the content found in traditional *Morus alba*, white mulberry, root extracts – gives stronger power and performance.

¹ PAT's **Plant Milking Technology** offers premium root power from sustainable production. Few plant resources are needed to create the active ingredient, active compounds are stimulated to get enhanced phytochemical profile, and roots regrow after harvesting. Other benefits include recycling of water used for root growth, discovery & optimization of plant capacities, and full traceability from seed to active ingredient as cultivation and production occur at one location. PAT's solution avoids competition with agricultural lands which ensures efficient use of planet resources and peace of mind for compliance with the Nagoya Protocol and ABS regulations.

This class of bioactive compounds has a higher affinity with cellular membranes and better interaction with biological targets of interest when compared to the non-prenylated flavonoids more commonly present at a high level in nature. As a result, biological efficacy is higher.

The skin matrisome is the set of all genes coding for elements contributing to matrix integrity and skin physiology. Prenylium is proven in vitro to modulate expression of CCN1, a protein that increases with age, thereby helping to safeguard matrisome integrity. As a consequence and thanks to the active's unique composition, it rebalances the equilibrium between collagen synthesis and degradation.

PAT's proprietary Target Binding Technology² makes it possible to assess the interaction of prenylated flavonoids with collagenase, the enzyme inducing collagen damage. All the active compounds of Prenylium were shown to inhibit the collagenase enzyme activity. Concentrating these specific polyphenols when compared to traditional mulberry root extracts is therefore interesting and essential to have a better efficacy.

Strong results were seen at the clinical level. Quick and noticeable results were recorded in terms of reduction in the appearance of wrinkles, improvement in skin smoothness and plumping effect. A group of 22 females with wrinkles, aged from 45 to 70 years old, applied a product twice a day containing 1% of Prenylium versus a placebo in a double-blind randomized study. Results were analysed after four and eight weeks of application.

Data demonstrated time-dependent wrinkle reduction, deepest wrinkles were reduced by -12.7% after 4 weeks and by -16.6% after 8 weeks. Data also revealed good improvements in smoothness, supporting skin youthfulness. Skin plumping improved by 13.4% after 8 weeks.

Prenylium's variety of benefits make it suitable for a wide range of applications, including anti-aging creams, plumping serums, dermal matrix prevention care, rejuvenation night creams, and smoothing products.

Alexandre Lapeyre, Head of Marketing, Clariant Active Ingredients, comments: "Prenylium's role in maintaining key skin matrisome components, and protecting them from alteration that would normally result over time and through UV exposure, makes it a particularly market-relevant active for skin care formulators keen to develop effective skincare solutions for the growing "well-aging" generation. The assurance of a traceable and responsible ingredient, achieved through a controlled culture environment and sustainable access to tree roots, is also fundamental to ensuring the beauty industry's sustainable future. We are excited to kick-start our partnership with PAT with an active ingredient infused by roots' uniqueness so that the tree growth cycle is protected, which really shows our commitment to Powered by Nature, Advanced with Science."

Prenylium (<http://www.clariant.com/premiumrootpower>) made its full market debut at Cosmetagora 2020 in Paris, and will be showcased at in-cosmetics Global 2020 in Barcelona. Editors can enjoy an exclusive preview on the eve of the show at Clariant's media event on March 30. Contact stefanie.nehlsen@clariant.com to register.

² Target Binding Technology ensures an efficient and unrivaled way of identifying the compounds in complex mixtures which support the activities of key-relevance for innovative cosmetic claims.



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(Photo: PAT)