

## Scientist refines all-natural ingredients to preserve cosmetics

November 20 2015, by Steve Martin

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German Schäfer, a visiting scientist in Purdue University's Department of Agricultural and Biological Engineering, examines all-natural extracts that could preserve personal-care products manufactured by the cosmetics industry. Schäfer is commercializing the ingredients through BioProcol, a Medellin, Colombia-based company he founded. Credit: Purdue Research Foundation photo

All-natural ingredients refined by a visiting scientist in Purdue University's Department of Agricultural and Biological Engineering and Laboratory of Renewable Resources Engineering (LORRE) show promise for next-generation products manufactured by the cosmetics industry.

German Schäfer said a current trend in the cosmetics and personal care industry is the use of all-natural [ingredients](#) instead of synthesized materials like parabens, which are commonly used preservatives. He is developing ingredients called Solanum Complex and Sopex that could replace synthetic antioxidants and parabens.

"These ingredients are derived from the extracts of superfruits of the Solanum plant species, which grow in particular ecosystems in the foothills of the Colombian Andes," he said. "Solanum Complex is a natural antioxidant that stimulates internal revitalization and regeneration of the skin. Sopex protects and stabilizes cosmetic and dermatologic formulations. Because of the high purity and bioactivity of these ingredients, only very low concentrations are needed to achieve their multifunctional benefits in cosmetics."

Solanum Complex and Sopex are being commercialized by BioProcol, based in Medellin, Colombia. Schäfer founded the company.

"BioProcol has developed a vertical-integrated operations system based on good agricultural practices, sustainability, social responsibility and benefits-sharing principles to propagate and harvest the raw materials," he said. "The bio-prospection, the organic horticulture and bio-processes are carried on under a multi-year contract with the Colombian government to research the Andean region's biodiversity and its genetic resources for its commercialization."

Michael Ladisch, director of LORRE, has worked with Schäfer to refine

the ingredients.

"This is another example of how a renewable resource can fill a very special need and provide a value-added product that is difficult to obtain by other means," Ladisch said.

Schäfer is working with business experts at Purdue Foundry to evaluate the best path to introduce, transfer, distribute and commercialize BioProcol's products and technologies. Purdue Foundry is an entrepreneurship and commercialization hub in Discovery Park's Burton D. Morgan Center for Entrepreneurship on the Purdue campus.

"These ingredients are used in all beauty products of BioProcol's IDONA, an All-Natural Skin Care Luxury Brand," he said. "BioProcol's Industrial and Manufacturing business unit, which produces the special compounds, will sell them to other cosmetics manufacturers in the United States and Europe. We also may pursue other health and well-being applications as resources permit and after the growth of IDONA and this cosmetic natural ingredients business."

Provided by Purdue University

Citation: Scientist refines all-natural ingredients to preserve cosmetics (2015, November 20) retrieved 18 April 2024 from <https://phys.org/news/2015-11-scientist-refines-all-natural-ingredients-cosmetics.html>

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