



Behind the Science of Lipotec's FENSEBIOME™ peptide

We talk with Marie Ollagnier, Strategic Marketing Manager, Lubrizol Skin Essentials

EURO COSMETICS: *Microbiota plays a key role in skin health and it is currently a very popular trend in the beauty industry. Is Lubrizol also working on this topic?*

Marie Ollagnier: Yes, we are just presenting a new Lipotec active ingredient, FENSEBIOME™ peptide, aimed at reinforcing the skin's microbial and physical barrier functions as well as preventing dehydration. We have based our approach on the research showing that people living in close contact with nature, like our ancestors, present a healthier and more protected skin, having a high bacterial diversity and a high concentration of anti-inflammatory bacteria. Our new peptide assists in strengthening the vulnerable urban skin by promoting microbiota balance and diversity with an increase in beneficial bacteria, resembling the healthy skin of our ancestors.

EURO COSMETICS: *Can you tell us more about this research?*

Marie Ollagnier: In 2008, a small unknown village not registered on any map was spotted in the Amazon forest. A few months later, a scientific medical mission reached this area and discovered a group of Yanomami Indians, who had lived without any contact with the outside world. They continue to live by hunting and collecting fruits as their ancestors did generations before.

It represented a unique opportunity to study their bacterial universe and compare it with that of individuals living in modern urban environments to see if there was any link between the microbiota and the risk of current inflammatory diseases. The bacterial diversity of the Yanomami's skin resulted to be twice that of the people living in the Western world, leading to the conclusion that the more exposed one is to modern lifestyles, the higher the reduction in the microbiome's richness is, making the skin more prone to sensitivity and discomfort.



EURO COSMETICS: *What distinguishes this product from others already on the market to improve skin problems?*

Marie Ollagnier: The claim of FENSEBIOME™ peptide is that it helps the skin regain its original strength (similar to that of our ancestors) to face the current urban life. Unlike other companies, we have carried a very complete metagenomics study not only focusing on the microbiota as a skin barrier but also offering a double barrier function approach by improving the epidermal integrity.

EURO COSMETICS: *What tests were performed and how were the results?*

Marie Ollagnier: The ability of FENSEBIOME™ peptide to modulate the skin microbiome was assessed on volunteers by means of a metagenomics study. Female volunteers, who lived in urban environments, applied a cream containing 1 % peptide solution on the cubital fossa of the arm twice a day for 7 days. Samples of the skin microbiota were obtained before and after the treatment and changes in the microbiome were measured. An increase in the bacterial diversity as well as a better balance of the microbiota were observed on the treated skin, which are considered qualities of a healthier and protected skin.

The transepidermal water loss was also evaluated *in vivo* after surfactant-induced damage, showing a 27.8 % TEWL reduction that suggests a protective effect on the physical barrier to prevent dehydration.

The corneocytes cohesion was also assessed, in this case treating the shin, and a reduction in skin scaliness with 18.6 % less sloughed corneocytes was observed, suggesting the ability of the peptide to restore sensitive skin to its original condition.

In vitro, the peptide helped boost the skin's own defense system by favouring the presence of beneficial bacteria and by improving the skin immune response and the physical barrier integrity.

EURO COSMETICS: *In which formulations FENSEBIOME™ peptide can be incorporated?*

Marie Ollagnier: FENSEBIOME™ peptide can be incorporated into any formulation for skin exposed to urban conditions and sensitive skin types. It will deliver performance into products intended to strengthen the double barrier function of the skin and prevent dehydration. It can be also applied in prebiotic and probiotic-inspired skin care products that look for a balance in the skin microbiota or an enhancement in beneficial bacteria.

EURO COSMETICS: *Thank you for speaking with us.* ■