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## CUSTOMER REFERENCE

**Cosmetics and Dermatology:** claim support, drug development and validation, personalized cosmetics

### Lipid analysis for investigation of photodamaged dry facial skin from different ethnic groups



Royal DSM is a purpose-led global science-based company in Nutrition, Health and Sustainable Living. With its innovative business solutions for human nutrition, animal nutrition, personal care and aroma, medical devices, green products and applications, DSM is driving economic prosperity, environmental progress and social advances to create sustainable value. DSM's purpose is to create brighter lives for people today and generations to come.

Even though decades of moisturizer development have passed, dry facial skin remains a major concern for consumers. Thus, DSM's aim was to understand more precisely the underlying biochemistry, particularly of the maturation of the stratum corneum and its relation to facial photodamage, skin pigmentation and ethnicity. In contrast to traditional research of skin analyte composition, a more revolutionary 'omic' approach was applied.

With its mass spectrometry-based Shotgun Skin Lipidomics technology Lipotype delivered lipid analysis of the ceramide, the entirety of ceramides. The results precisely highlight changes in ceramide composition and distribution which help to explain the differences in facial skin barrier function, hydration and stratum corneum maturation, but also the skin care need of the differently pigmented skin types.

#### **PUBLICATION:**

**Phenotypic changes in the corneome and ceramidome of photodamaged dry facial stratum corneum from different ethnic groups – *International Federation of Societies of Cosmetic Chemists, 2018***

R Voegeli, J M Monneuse, C Klose, R Schoop, B Summers, T Rudolph, A V Rawlings

#### **About Lipotype**

LIPOTYPE is a spin-off company from the Kai Simons and Andrej Shevchenko labs of the world-renowned Max-Planck-Institute of Molecular Cell Biology and Genetics in Dresden, Germany. Drawing on many years of cutting edge research experience, Lipotype delivers comprehensive, absolutely quantitative lipid analysis services for clinical and biological samples on a high-throughput scale. Lipotype offers high quality lipid analysis services for a wide range of customers and applications including biomarker identification for clinical researchers, pharma and biotech companies, functional food development for the food industry, claim support for the cosmetics industry, as well as for the small-scale profiling needs of academic researchers.

#### **For enquiries, please contact:**

Lipotype GmbH

Dr. Oliver Uecke, Business Development | Tatzberg 47 | 01307 Dresden | Germany

T: +49 (0) 351 79653-45 | [sales@lipotype.com](mailto:sales@lipotype.com)



[www.lipotype.com](http://www.lipotype.com)

**We offer high quality lipid analysis services for a wide range of customers and applications:**



**Biotech and pharma industry, clinical research**

*Drug discovery (mode-of-action, target validation, effect on lipid metabolism), biomarker identification (pharmacodynamic, pharmacokinetic, CDx), clinical screening, diagnostics*



**Food industry**

*Development of functional food/nutraceuticals, intervention studies, lipid composition of food products*



**Cosmetics and Dermatology**

*Claim support, drug development and validation, personalized cosmetics*



**Academic research**

*Lipid analysis of cells, tissues and body fluids from various model organisms in a plethora of experimental setups*

