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## CUSTOMER REFERENCE

Biotech and pharma industry, clinical research: drug discovery, biomarker, topical drug development

### Lipid analysis for topical dermal drug development for the treatment of ichthyosis associated with SLS



Aldeyra Therapeutics is a biotechnology company devoted to improving lives by inventing, developing, and commercializing next-generation medicines that treat immune-mediated and metabolic diseases. Aldeyra's lead product candidate, reproxalap (formerly called NS2), is a small molecule RASP (Reactive Aldehyde Species) inhibitor in Phase 3 clinical development for the treatment of dry eye disease, allergic conjunctivitis, noninfectious anterior uveitis, and Sjögren-Larsson syndrome. With its focus on a carefully selected range of diseases, Aldeyra Therapeutics is devoted to improving lives through outstanding innovation.

Sjögren-Larsson Syndrome (SLS) is a rare inborn error of aldehyde metabolism characterized by severe skin thickening (ichthyosis), retinal disease, and neurological dysfunction. As of today, no therapy that addresses SLS has been approved. Aldeyra Therapeutics has conducted a Phase 2 randomized, parallel-group, double-blind, vehicle-controlled, multi-center clinical trial of topical dermal reproxalap for the treatment of ichthyosis associated with SLS. The results of the trial demonstrated clinically meaningful and statistically significant improvements of SLS skin symptoms of patients after only eight weeks of treatment. A multi-center Phase 3 clinical trial is ongoing.

Lipotype Shotgun Skin Lipidomics provided Aldeyra Therapeutics with lipid analysis of skin samples for identification of relevant lipid biomarkers in the Phase 2 clinical trial. Results of the skin lipidomics analysis delivered evidence for a correlation between clinical effects and those skin lipid biomarkers. Consistent with the clinical activity of reproxalap, significant dermal biomarker changes were noted in reproxalap-treated patients but not vehicle-treated patients. Cholesterol, which is significantly elevated in the skin of SLS patients, was reduced in reproxalap-treated patients more than in vehicle-treated patients.

#### PUBLICATION:

**Aldeyra Therapeutics announces positive results from a randomized, double-blind, vehicle-controlled clinical trial of topical dermatologic NS2 in patients with Sjögren-Larsson syndrome – Aldeyra Therapeutics, 2016**

#### 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.

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**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*

