

LEA Jury announces the Winners of LEA 2019

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[LEA, the Lipidomics Excellence Award](#), was founded to strengthen life sciences through lipidomics. Over the course of April, the LEA jury deliberated on the submitted projects to announce the three LEA awardees.

LEA, promotes researchers who are eager to contribute to the progress of life sciences with generous research prizes. The winner of the first prize receives a trophy, 50,000 EUR worth of analysis services and a speaking slot to present their results at the EMBO workshop “Lipid function in health and disease” as well as coverage of the logistical costs to participate in the workshop. The second prize winner is awarded a lipidomics analysis worth 10,000 EUR; the third prize winner is acknowledged by a 1,500 EUR analysis package. (All lipidomics analysis packages are provided by Lipotype GmbH.)

The independent LEA jury composed of Britta Brügger, Pietro De Camilli, Ari Helenius and Kai Simons discussed vividly the LEA 2019 applications. After a month of deliberation, they decided on the following three scientists and their research projects.

1. Prize of LEA 2019 goes to...

Prof. Anne-Claude Gavin, Louis-Jeantet Professor at the University of Geneva, has been awarded with the 1. prize for her lipid-transfer research proposal. An emerging player in lipid metabolism and its associated disorders is a group of disease-linked proteins known as lipid-transfer proteins. At least 131 lipid-transfer proteins have been found in humans. Some of them orchestrate the transfer of lipids between membranes, thereby spatially organizing lipids and connecting lipid metabolic pathways. Prof. Anne-Claude Gavin will use her LEA research prize to develop the first molecular cartography of these lipid “highways”. The detailed insights into metabolic signalling and pathways as well as lipid-transfer protein mediated lipid movement, will be integrated into a molecular model to describe cell-specific cancer-associated alterations. This comprehensive model will address multiple fundamental and medically relevant questions.

2. Prize of LEA 2019 is awarded to...

Dr. Oliver Schmidt, Assistant Professor at the Biocenter of the Medical University of Innsbruck, won the 2. prize with his protein degradation research project. To adjust to the ever-changing environment, cells continuously synthesize and degrade proteins. Recently, Dr. Oliver Schmidt together with his colleagues identified a third and new membrane protein degradation pathway in cells, the EGAD pathway. Surprisingly, proteins which are degraded via the EGAD pathway are rich in proteins orchestrating the lipid metabolism. As such, the EGAD pathway is not only involved in protein homeostasis but lipid homeostasis too. Dr. Oliver Schmidt’s research will focus on further investigation and characterization of the influence of the EGAD pathway on lipid metabolism. The findings of this investigation may in future hold the potential to new therapeutic approaches in lipid metabolism associated diseases like diabetes or asthma and might eventually become textbook knowledge.

3. Prize of LEA was won by...

Prof. Sarah L. Keller, Professor of Chemistry at University of Washington - Seattle, has been awarded with the 3. prize for her proposed cell membrane research project in yeast, an important model organism. When yeast cells switch their stage of growth from proliferation to maintenance, large lipid domains appear in the membrane of their vacuoles, organelles inside the yeast. This change has been linked to the cellular TOR signalling pathway. This pathway is of high importance in humans. For example, the TOR signalling pathway is targeted by rapamycin, a remarkable drug that is applied to inhibit the proliferation of tumor cells and prevent organ rejection in kidney transplant patients. Prof. Sarah Keller will use her LEA research prize to answer questions about what molecular changes in vacuole membranes drive the formation of the lipid domains. Her results will facilitate our understanding of the cell membrane and will serve as a springboard for future investigations.

The three winners will now receive their research support of the R&D unit of Lipotype GmbH and prepare their samples to be analysed swiftly.

Media Contact:

Henri Deda

T: +49 (0) 351 79653-45

lea@lipotype.com

Lipotype GmbH

Tatzberg 47, 01307 Dresden

Germany

www.lipotype.com/LEA2019

About LEA

LEA, the Lipidomics Excellence Award, promotes researchers who are eager to contribute to the progress of life sciences with generous research prizes. Three individuals with ongoing research are awarded to support their projects. Applications are open to all researchers from academia and industry.

The winner of the first prize will receive 55,000 EUR worth of analysis services and present their research at the EMBO Workshop "Lipid function in health and disease" in late September 2019. A press conference will be held to present the project and formally handover the LEA 2019 trophy.

LEA is supported by LIPID MAPS, SwissLipids and Lipotype, and the media Journal of Lipid Research, LABO and transkript.

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