

## Press Release

Ruzicka Prize 2015

# A virtuoso in the field of synthesis

Zurich, 23 November 2015

The Ruzicka Prize 2015 has been awarded to Henning Jessen, Professor of Bioorganic Chemistry at the University of Freiburg in Breisgau. The 36-year-old German scientist has been highly successful in researching how secondary messengers can be chemically modified or even artificially produced in the laboratory.

Messengers are molecules that allow cells in organisms to communicate with one another so that they can interact correctly. Henning Jessen, Professor of Bioorganic Chemistry at the University of Freiburg in Breisgau, studies the chemical biology of secondary messengers, which are messengers that operate within the cell, relaying and processing signals from outside the cell that cannot pass through the membrane. Although investigations into the chemical biology of these secondary messengers are still in their infancy, scientists hope that this field of research will provide answers to fundamental questions.

### **An intelligent combination**

Henning Jessen has achieved ground-breaking results with his research on inositol pyrophosphates, molecules which play a crucial role in the development of lipid metabolism disorders, severe obesity and type 2 diabetes. Various studies suggest that one key function of inositol pyrophosphates is to regulate the uptake of glucose from the blood. Mice lacking the enzyme that produces inositol pyrophosphates are highly sensitive to insulin, so they gain little weight and do not develop diabetes. Jessen and his team combine approaches from the fields of chemical synthesis and biology in order to clarify the molecular origins of these mechanisms.

Recognising his pioneering results, ETH Zurich is awarding Henning Jessen the Ruzicka Prize, which carries prize money of 10,000 Swiss francs. "This is our way of honouring a young scientist working in a young research area in chemical biology, who has achieved outstanding results thanks to a creative approach combining chemical synthesis and biological applications," explains Professor Donald Hilvert, Head of the Department of Chemistry and Applied Biosciences.

### A worthwhile investment

For Jessen – who previously conducted research at EPF Lausanne, the University of Basel and, most recently, the University of Zurich before being appointed to the University of Freiburg – the Ruzicka Prize is a wonderful recognition of his work in Switzerland. “I am really delighted that the people who believed in and supported us can now see that investments in high-risk research are worthwhile,” he stresses, adding: “By ‘us’ I mean specifically my research group, my doctoral students and master’s students, who have played a significant part in this success.”

The Ruzicka Prize will also spur Jessen on in his future projects. He is currently building up his research group in Freiburg; the foundations for the research stem from his time in Zurich. “We are now able to prepare efficiently all of the molecules we are interested in, transport them into cells, release them, and determine their effects,” says Jessen. “So you could say that we are reaping the benefits of our earlier work.”

[www.bit.ly/ruzickapreis2015](http://www.bit.ly/ruzickapreis2015) →

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## Ruzicka Prize

The Ruzicka Prize, named after the Nobel Prize winner Leopold Ruzicka, has been awarded annually to young researchers who publish outstanding work in the field of chemistry, since 1957. The award is funded by the Swiss chemical industry, and along with the Werner Prize, it is Switzerland’s most important award for the promotion of young talent in the field of chemistry. The boards of trustees have discovered a wealth of talent since the prize was first awarded: the list of winners includes names such as Richard Ernst (magnetic resonance, Nobel Prize 1991) and Charles Weissmann (prion research, Robert Koch Medal 1995).