

Press Information, 15. August 2023

A New Era in the Fight against Obesity and Diabetes Matthias Tschöp receives Ernst Schering Prize 2023

The Schering Stiftung awards the Ernst Schering Prize 2023 to Prof. Dr. Matthias Tschöp for his groundbreaking work in metabolic research. He is being honored for his discovery of the hunger hormone ghrelin, his dissection of the gut-brain signaling pathways, and his discovery of new classes of therapeutic agents that for the first time make it possible to normalize body weight and blood sugar levels in patients with obesity.

The physician-scientist Matthias Tschöp receives the Ernst Schering Prize 2023 for his pioneering discovery of highly effective anti-obesity drugs. For centuries, physicians have searched for drugs to regulate body weight in patients with excessive obesity. Besides his discovery in 2000 of the hunger hormone ghrelin, Tschöp and his long-term collaborator, biochemist Richard DiMarchi, combined several hormones into a single molecule, creating the therapeutic class of the so-called polyagonists. The first polyagonist has already been approved by the FDA and the European Commission, and more than ten additional polyagonists are currently in clinical trials, promising a new era in metabolic medicine. For the first time, widespread diseases such as obesity and diabetes can be effectively treated with these drugs, thereby significantly reducing the risk of developing diabetes – a scientific achievement that has long been thought impossible.

A seven-member jury consisting of international scientists selected Tschöp's research from a large number of outstanding nominations. The 50,000-euro Ernst Schering Prize is one of the most prestigious German science awards. It is given annually by the Schering Stiftung and honors scientists worldwide whose pioneering research has yielded new, inspiring models or led to fundamental shifts in biomedical knowledge. The chairman of the Foundation Council of the Schering Stiftung, Prof. Dr. Max Löhning, said: "Prof. Dr. Matthias Tschöp has contributed a number of highly significant basic and clinical findings that have helped transform metabolic research. Through his innovative research, he developed agents that ring in a new era in the fight against obesity and diabetes. He has become a defining, inspirational personality for new generations of physician-scientists, both in Germany and worldwide."

Prof. Dr. Günther Wess, former CEO Helmholtz Munich and a long-term colleague of Matthias Tschöp, said about the award: "Matthias Tschöp is passionate about searching for new principles and paradigm shifts. There is no room for mediocrity in his research. He knows how to get his collaborators excited about and engaged in his ambitious goals." As part of the award ceremony, Wess will talk with Matthias Tschöp about the laureate's research, as well as about innovation processes in Germany.

Background Information

Inspired by the discovery of the satiety hormone leptin, Tschöp devoted his career to finding a cure for obesity. In 2000, he identified ghrelin as the first and only circulating hunger hormone, and its obesity promoting actions in the brain. Based on studies of ghrelin, gut hormones and brain circuits, Tschöp and his long-term chemistry collaborator DiMarchi hypothesized that integrated action of specific hormones might provide safe and unprecedented weight lowering to reverse obesity. They pioneered a series of single molecule therapeutics, which simultaneously activate two or more hormone receptors to achieve unprecedented body weight, glucose and lipid lowering. This novel form of dual and triple hormone pharmacology includes agonists to GIP, GLP1, and Glucagon receptors. They do not include ghrelin blockers, since activating and blocking mechanisms can be combined in the same drug molecule only to a limited extent.

Although the uncovering of the metabolic benefits of GIP and glucagon went against the common dogma at the time, multiple representatives of the new drug class Tschöp and DiMarchi discovered are successfully advancing in clinical trials. The first FDA approved form is the dual GIP/GLP1-R co-agonist Tirzepatide (Mounjaro, Eli Lilly and Co.), followed by a first representative of the triple GIP/Glucagon/GLP1-R hormone drug class (Retatrutide, Eli Lilly and Co). Clinical data prove the ability of these multi receptor drugs to decrease body weight by 25% in human obesity and decrease HbA1C by 2.5% in diabetes. In summary, the unprecedented efficacy of these novel multi receptor drugs offers the potential to overcome human obesity and reverse the diabetes pandemic.

Matthias Tschöp, MD, trained at Ludwig Maximilian University of Munich (LMU), Germany. After a research fellowship at Eli Lilly (Indianapolis, USA, 1999–2002), he started his own lab at the German Institute of Human Nutrition (Potsdam, 2002–2003). At the University of Cincinnati (USA, 2003–2011) he advanced to Research Director and an Endowed Chair in Medicine. He was recruited back to Germany jointly by Helmholtz Munich and the Technical University of Munich (TUM) where he holds an Alexander von Humboldt Professorship. He is also CEO of Helmholtz Munich and Vice President of the Helmholtz Association of German Research Centers, and holds an adjunct professorship at Yale University.

Program

Tuesday, September 5, 2023

5:00 p.m.: Ernst Schering Prize Lecture, Prof. Dr. Matthias Tschöp
Highly effective drugs against obesity: from discovery to approval

6:00 p.m.: Award presentation
Conversation between the laureate and Prof. Dr. Günther Wess

Venue:
Berlin-Brandenburgische Akademie der Wissenschaften
Leibniz Saal
Markgrafenstr. 38, 10117 Berlin

Participation upon registration only. Please register by August 27, 2023, at www.scheringstiftung.de/Preisverleihung2023

Additional Lectures by Prof. Dr. Matthias Tschöp on Wednesday, September 6:

10:00 a.m. (not open to the public): Lecture to high-school students, Schulfarm Insel Scharfenberg
Obesity and diabetes: how to stay healthy?

2:30 p.m.: Public scientific lecture: *Overcoming obesity: the discovery of multi-receptor drugs*

Venue:
Charité – Universitätsmedizin Berlin
Charité Campus Mitte
Paul Ehrlich-Hörsaal
Virchowweg 4, 10117 Berlin

Hybrid lecture, online participation here: <https://bit.ly/449deOY>

In English. No registration required.

Further Information

This press information and images related to the prize recipient Matthias Tschöp are available at <https://scheringstiftung.de/de/presse/>.

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