

Press release, September 17, 2020

## Protective hormones from the intestine HOW THE BLOOD SUGAR-REGULATING INCRETINS INTERACT WITH OUR IMMUNE SYSTEM

**The Schering Stiftung honors Florian Kahles with the Friedmund Neumann Prize 2020. The physician receives the prize for his contribution to research on incretin as protective hormones in cardiovascular diseases.**

Incretins are endogenous hormones that are involved in the regulation of blood glucose levels. Their production in the cells of the intestinal mucosa is stimulated by food intake. This mechanism is used clinically successfully in the form of incretin mimetics for the treatment of patients with diabetes mellitus type 2.

In his research, Dr. Florian Kahles has successfully expanded our understanding of the effect of the incretin hormones as the body's own protective hormones. He was, for example, able to show that the incretin hormones are upregulated in cardiovascular diseases, while at the same time having a protective effect, reducing inflammatory processes and improving heart function.

Florian Kahles would like to increase his understanding of the exact effects of the incretin hormones on the immune system in the future, thus taking the opportunity to do more research into the molecular mechanisms of the interaction between the secretion of incretin hormones and immune cells in the intestine.

"The work as a clinician and researcher at the same time is undoubtedly a great challenge and a tour de force, but it also arouses immense enthusiasm in me. It is fascinating to be able to directly and scientifically investigate relevant questions that arise in everyday clinical practice. It is a particularly great feeling when laboratory experiments deliver potentially clinically useful results," says Florian Kahles about his work.



Florian Kahles receives the **Friedmund Neumann Prize 2020** for his outstanding and groundbreaking research work. "With his research, Florian Kahles was able to demonstrate a hitherto unknown anti-inflammatory and vascular-protective effect of incretin. This breakthrough in basic research is an excellent basis for a career in translational research. I wish him all the best for his future work in this fruitful field combining his clinical and scientific talents," said Dr. Katja Naie, Executive Director of the Schering Stiftung.

The Schering Stiftung awards the 10,000-euro prize to young scientists that have done outstanding basic research in human biology, organic chemistry or human medicine and have already developed a distinctive scientific profile following their dissertation. The award aims to make visible excellent scientific achievement and thus help the prize winners establish themselves in their field of research.

Florian Kahles was nominated for the Friedmund Neumann Prize 2020 by the Director and Professor of the Medical Clinic I of the University Hospital Aachen, Dr. Nikolaus Marx: "Dr. Florian Kahles is a successful young scientist who is working on the basic scientific and clinical aspects of the pathophysiology of cardiovascular diseases. He combines all the qualities of a clinician scientist and I am delighted that his groundbreaking work will be honoured with the Ernst Schering Foundation's Friedmund Neumann Prize 2020". At the award ceremony, Marx will talk to Kahles about his work and discuss the specifics of his research.

### Presentation of the Friedmund Neumann Prize

September 30, 2020, 4:30 pm

[Livestream](#) from the Komische Oper Berlin, more info: [www.scheringstiftung.de/Preisverleihung2020](http://www.scheringstiftung.de/Preisverleihung2020)

### Schülervortrag von Florian Kahles

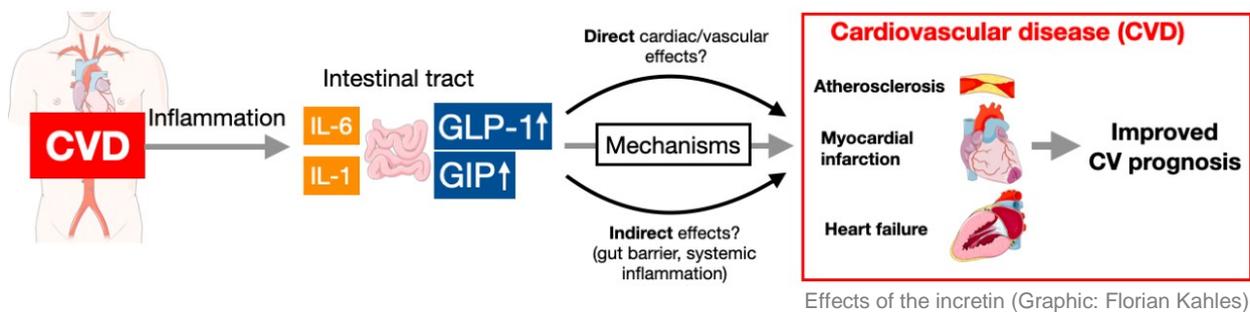
**1. Oktober 2020: Inkretine – körpereigene Schutzhormone aus dem Darm**

senior school center Lise-Meitner in Berlin-Neukölln (non-public)

## Background information

The incretin hormones GLP-1 (glucagon-like peptide-1) and GIP (gastric inhibitory polypeptides) are released from intestinal cells after food intake and are responsible for the regulation of the blood sugar level. Therefore, this mechanism is used clinically successfully in the form of incretin mimetics for the treatment of patients with diabetes mellitus type 2. Florian Kahles and his colleagues observed that GLP-1 and GIP can also be released in increased amounts in the context of blood poisoning and cardiovascular diseases such as atherosclerosis and heart attacks, regardless of food intake. Responsible for this is a regulatory network in which interleukins (IL-1 /IL-6), i.e. endogenous substances of the immune system, immune cells in the intestine as well as endocrine cells of the gut are involved. Florian Kahles' work shows the protective effect of increased secretion of incretin hormones in the context of cardiovascular diseases: in the process, heart function can be improved, inflammatory processes in various organ systems can be inhibited and the severity of atherosclerosis can be reduced. These results from his basic research are in line with the results of large clinical studies.

Thus, the work of Florian Kahles has broadened the understanding of the effect of incretins as endogenous anti-inflammatory protective hormones from the intestine and the results contribute to an improved understanding of the beneficial effects of GLP-1 receptor agonists on improving the prognosis of diabetes and cardiovascular disease.



Effects of the incretin (Graphic: Florian Kahles)

**Florian Kahles** started his medical studies in 2008 and after his first state examination in 2011 he started his scientific work as a PhD student in the group of Professor Michael Lehrke at the University Hospital Aachen. He interrupted his studies for 12 months of full-time laboratory work, finally receiving his PhD in 2015. Afterwards he began his clinical work in the cardiology department of the University Hospital and worked as a research assistant at Harvard University in Boston (USA) from 2017 to 2020. Since April 2020, he has headed his own research group, at the same time working in the Department of Cardiology at the University Hospital Aachen.

Florian Kahles has received several awards for his work, including the Young Investigator Award of the German Society for Internal Medicine, the Uta and Jürgen Breunig Research Prize of the Deutsche Herzstiftung and most recently the Büsing Diabetes Prize.

## Further information

You can find press information and pictures at <https://scheringstiftung.de/de/presse/>.

Jennifer Fielding | Press contact

Schering Stiftung | Unter den Linden 32-34 | 10117 Berlin | Tel. 030-20 62 29-60 | [fielding@scheringstiftung.de](mailto:fielding@scheringstiftung.de)