Press Information, September 26, 2024

Data-based Health Care: The Gateway to Personalized Preventive Care

Carolin Schneider receives the Friedmund Neumann Prize 2024

The Schering Stiftung awards the Friedmund Neumann Prize 2024 to Prof. Dr. Carolin Schneider for her outstanding contributions to the prevention and therapy of gastrointestinal and metabolic diseases. Special mention was made of her innovative use of big data and artificial intelligence to develop personalized prevention strategies for metabolic diseases. The research prize comes with a monetary award of 10,000 euros.

Metabolic diseases, which until now have been mainly treated symptomatically, present a growing challenge. Prof. Dr. Carolin Schneider, head of the research group for the prevention and genetics of metabolic liver diseases at RWTH Aachen, uses advanced data science methods to develop more effective treatment strategies. Her research centers on providing personalized solutions through the analysis of large amounts of data.

“Professor Schneider’s pathbreaking research has offered new ways not only to treat metabolic diseases but to tackle them preemptively. Her use of big data and AI sets new standards in medical research and helps improve the quality of life for many patients,” explained Prof. Dr. Max Löhning, chairman of the Foundation Council.

Besides her scientific activities, Prof. Schneider advocates for gender equity in medicine and actively supports the next generation of female scientists, paving the way for future female researchers.

Since 2011, the Schering Stiftung has awarded the 10,000-euro prize to young scientists for outstanding basic research in human biology, organic chemistry or human medicine. The award aims to make visible excellent scientific achievement, honor young scientists for having developed a distinctive scientific profile early in their career and help the prize winners establish themselves in their field of research.

Prof. Dr. Carolin Schneider was nominated for the Friedmund Neumann Prize 2024 by Prof. Dr. Pavel Strnad from Uniklinik RWTH Aachen. Prof. Strnad, who will also give the presentation speech, emphasized her many and varied qualities both as a scientist and a leader. “Carolin is a rare mix of flavors needed to be a great scientist and a great leader,” he explained. “As a scientist, she is hard-working, determined, always ready for the next challenge. As a colleague, she is kind, approachable, and always willing to help. As a leader, she is passionately looking for everybody’s strengths to make sure that her ensemble puts together a great symphony.”

Background Information

Dr. Carolin Schneider, Junior Professor for the Prevention and Genetics of Metabolic Liver Diseases, drives innovative research based on the premise that early prevention can prevent metabolic diseases. Integrating disciplines such as computer science, bioinformatics, software engineering, and clinical medicine, her approach develops robust methods to analyze large clinical multi-omics datasets with the aid of modern biostatistics and artificial intelligence. Her aim is to develop personalized prevention measures based on genetic markers, environmental influences, and lifestyle factors.

A central aspect of her work is the creation of customized nutritional and exercise recommendations aligned with her patients’ individual genetic profile and lifestyle habits. These personalized treatment plans are based on comprehensive data analyses that deliver action-oriented insights such as specific dietary or exercise recommendations to effectively reduce the risk of metabolic diseases.

Her research not only supports the development of digital prevention strategies that take into account individual risk factors; it also improves clinical results and reduces the prevalence of disease. Future projects include the growth of her interdisciplinary research group and the conduct of large-scale studies aimed at making personalized prevention approaches part of medical protocol. Her vision is to bring about a revolution in medical practice through the use of big data and artificial intelligence and prevent the spread of metabolic diseases.

Carolin Schneider completed her medical studies at RWTH Aachen with support from the German Academic Scholarship Foundation. Her many honors and awards for her outstanding achievements include the Springorum Commemorative Coin. She completed her doctoral degree in the genetics of liver diseases at the Medical Clinic III of RWTH Aachen under the supervision of Prof. Dr. Pavel Strnad. During her postdoc at the University of Pennsylvania, she deepened her research on the genetics and prevention of metabolic diseases with funding from a Walter Benjamin Fellowship from the German Research Foundation (DFG). Since 2023, she has been Junior Professor for the Prevention and Genetics of Metabolic Liver Diseases at RWTH Aachen; she also holds an adjunct assistant professorship at the Perelman School of Medicine at the University of Pennsylvania. In addition, Schneider is active in international consortia, including working groups concentrating on metabolic disease research.

Program of the Ernst Schering Prize and Friedmund Neumann Prize Award Ceremony

Tuesday, November 12, 2024

5:00 p.m.: Ernst Schering Prize Lecture, Prof. Dr. Maiken Nedergaard
The Glymphatic System

6:00 p.m.: Award Ceremony
Lecture by Prof. Dr. Carolin Schneider: Using digital innovation to prevent metabolic diseases

Where:
Berlin-Brandenburg Academy of Sciences and Humanities
Leibniz Hall
Markgrafenstr. 38, 10117 Berlin

Registration required. Please register by November 3, 2024 at www.scheringstiftung.de/Preisverleihung2024

Additional lectures by Carolin Schneider on Wednesday, November 13, 2024:

10:00 a.m.: High-school lecture, Oberstufenzentrum Lise Meitner – School of Science (not open to the public):
How digital technologies and artificial intelligence can help to prevent diseases

4:00 p.m.: Public scientific lecture: *Using big data and artificial intelligence for the prevention of metabolic liver disease*

Where:
Charité Campus Virchow-Klinikum (CVK)
Forum 4, Seminar 4
Augustenburger Platz
13353 Berlin

In English.

More Information

Press information and images can be found at https://scheringstiftung.de/presse/.

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