Leopoldina
Nationale Akademie
der Wissenschaften

Curriculum Vitae Professor Dr Maike Sander

Image: Max Delbrück Center for Molecular Medicine

Name: **Maike Sander**
Date of birth: **16 August 1967**

Research priorities: novel therapeutic approaches for diabetes, pancreatic cell differentiation, stem cells, genetics, bioinformatics

Maike Sander is a German physician-scientist. She investigates novel therapies for diabetes, a common global metabolic disease. Her research into underlying molecular mechanisms and the strategy for replacing insulin-producing cells with embryonic stem cells aims to pave the way for novel methods to treat diabetes.

Academic and Professional Career

since 2022	Scientific Director and Chair of the Board, Max Delbrück Center for Molecular Medicine (MDC), Berlin, Germany
since 2022	Adjunct Professor, Departments of Pediatrics, University of California, San Diego, USA
2019 - 2022	Einstein Visiting Fellow, Berlin Institute of Health (BIH), Berlin, Germany
2012 - 2022	Director, Pediatric Diabetes Research Center, San Diego, USA
2014 - 2022	Co-Director, Center on Diabetes, Institute of Engineering in Medicine, University of California, San Diego, USA
2008 - 2022	Professor, Departments of Pediatrics and Cellular and Molecular Medicine, University of California, San Diego, USA
2003 - 2008	Assistant Professor and Professor, University of California, Irvine, USA
1999 - 2003	Assistant Professor, Center for Molecular Neurobiology, Universität Hamburg, Hamburg, Germany
1994 - 1999	Research Associate, University of California, San Francisco, USA
1987 - 1994	Degree in Medicine, Heidelberg, Germany

Functions in Scientific Societies and Committees

since 2003 Expert, National Institutes of Health (NIH), USA

since 2004 Expert, Juvenile Diabetes Research Foundation (JDRF), New York City, USA

Project Coordination, Membership in Collaborative Research Projects

since 2021 Member, Research Consortium “Impact of Genomic Variation on Function”, National Human Genome Research Institute, Bethesda, USA

since 2015 Member, Research Consortium “Human Islet Research Network”, National Institute of Diabetes and Digestive and Kidney Diseases, Bethesda, USA

2015 - 2020 Member, T2D-GENES Consortium, National Institute of Diabetes and Digestive and Kidney Diseases, Bethesda, USA

2005 - 2015 Member, Research Consortium “Beta Cell Biology Consortium”, National Institute of Diabetes and Digestive and Kidney Diseases, Bethesda, USA

Honours and Awarded Memberships

2022 Albert Renold Prize, European Association for the Study of Diabetes

since 2020 Member, Association of American Physicians, USA

since 2017 Member, German National Academy of Sciences Leopoldina, Germany

2017 Humboldt Research Award, Alexander von Humboldt Foundation, Bonn, Germany

since 2011 Member, American Society of Clinical Investigation, USA

2008 Grodsky Award, Juvenile Diabetes Research Foundation (JDRF), New York City, USA

Research priorities

Maike Sander is a German physician-scientist. She investigates novel therapies for diabetes, a common global metabolic disease. Her research into underlying molecular mechanisms and the strategy for replacing insulin-producing cells with embryonic stem cells aims to pave the way for novel methods to treat diabetes.

Diabetes is caused by the destruction and loss of function of special cells in the pancreas, known as beta cells. These cells provide healthy bodies with insulin, a hormone that reduces blood sugar levels and is vital to health. Diabetes patients, on the other hand, need insulin to be administered to them for the duration of their lives. Maike Sander and her team investigate the genetic factors that lead to the loss of beta cells. By discovering the molecular mechanisms that underlie the

formation and function of pancreatic cell types, above all the insulin-producing beta cells, the team aims to pave the way for novel therapeutic possibilities.

One focus of Maike Sanders' work is using embryonic stem cells to treat diabetes. This involves devising procedures to enable embryonic stem cells to develop into pancreas cells, which then replace the afflicted beta cells of patients. To achieve this it is important to identify gene-regulating programmes which allow stem cells to mature into beta cells. The end goal of this approach is to create therapies for diabetes which would fundamentally improve patients' quality of life.