

## **Prof. Henrik Semb**

Henrik Semb is Professor of Stem Cell and Developmental Biology at the Faculty of Health and Medical Sciences and Executive Director of the Novo Nordisk Foundation Center for Stem Cell Biology, University of Copenhagen. His research focuses on elucidating basic mechanism in morphogenesis and cell differentiation during organogenesis.

In parallel, Professor Semb is heading a translational research program with particular interest in making human pluripotent stem cells usable as a source for mature insulin-producing beta cells for cell therapy in diabetes. In that area, he entered into a strategic partnership and became Director for Translational Stem Cell Research at the Helmholtz Diabetes Center, Helmholtz Zentrum München. Professor Semb holds several patents and has previously acted as a co-founder of different start-up companies.

## **PERSONAL INFORMATION**

Semb, Henrik,

Novo Nordisk Foundation Center for Stem Cell Biology, DanStem

Faculty of Health and Medical Sciences, University of Copenhagen, Denmark

Nationality: Swedish

Website: [http://danstem.ku.dk/research1/semb\\_laboratory](http://danstem.ku.dk/research1/semb_laboratory)

## **EDUCATION**

1988	PhD in Medical Chemistry	Umeå University, Umeå, Sweden
1982	BSc in Medicine (preclinical)	Umeå University, Umeå, Sweden

## **CURRENT POSITIONS**

2018-	Director, Institute for Translational Stem Cell Research, Helmholtz Zentrum München, Munich, Germany (part-time affiliation)
2011-	Group Leader and Executive Director, Novo Nordisk Foundation Center For Stem Cell Biology (DanStem), University of Copenhagen, Denmark
2011-	Professor in Human Stem Cell Biology, University of Copenhagen, Denmark

## **PROFESSIONAL EXPERIENCE**

2009-10	Coordinator of StemTherapy (Strategic funding by Swedish Government), Lund University
2008-10	Managing Director of the Stem Cell Center, Lund University, Sweden
2006-08	Deputy Director of the Stem Cell Center, Lund University, Sweden
2004-	Professor in Functional Genetics, Stem Cell Center, Lund University, Sweden
2003-04	Professor in Developmental Biology, Gothenburg University, Sweden
98-2003	Associate Professor in Developmental Biology, Dept. Med. Biochem, Gothenburg University
1997-98	Associate Professor, Department of Microbiology, University of Umeå, Sweden
1997	“Docent” in Medical Molecular Biology at University of Umeå, Sweden
1991-97	Assistant Professor, Department of Microbiology, University of Umeå, Sweden
1989-90	Postdoc, University of California, San Francisco, USA

## **FELLOWSHIPS, HONORS AND AWARDS**

2020-25	Awarded a 5-year grant in EU Collaborative grant, H2020, ISLET. <i>Project coordinator/ Head of project.</i>
2014-17	Awarded a 3-year EU Collaborative Grant, FP7, HumEn. <i>Project Coordinator/ Head of</i>

*project.*

- 2010-21 “Novo Nordisk Foundation Center for Stem Cell Biology” from the Novo Nordisk Foundation (Executive Director), Copenhagen, Denmark (
- 2009-18 Awarded a 10-year Strategic Research Grant in Stem Cells and Regenerative Medicine (StemTherapy) from Swedish Government (PI) (34M Euro). Stepped down from leadership to move to Denmark in late 2010.
- 1989 EMBO long-term fellowship

### **ENTREPRENEURIAL ACTIVITIES**

- 2017 Co-founder of Pancryos a start-up company Pancryos is developing a next generation stem-cell derived allogeneic cell therapy for type 1 diabetes.
- 2001 Co-founder of Cellartis AB, scientific advisor and board member. Cellartis is a Gothenburg-based SME with 62 employees and an annual revenue of 6 mio € that commercializes human embryonic stem cell applications. Cellartis was purchased by Cellectis in 2011 and then sold to Takara Bio Inc. in 2014.

### **COMMISSIONS OF TRUST**

Member of the Editorial Board of Stem Cells (2008-present)

Medical Advisory Committee of the Juvenile Diabetes Research Foundation (2003-2008)

Board member of the International Stem Cell Forum (ISCI) (2004-2010).

“Ad hoc” reviewer: Nature, Science, Cell Stem Cells, Developmental Cell, Journal of Cell Biology, Development, Journal of Cell Science, Mechanism of Development, Developmental Dynamics, Diabetes; “Ad hoc” reviewer: MRC (UK), and Inserm (France)

### **INVITED PRESENTATIONS**

Several times a year to present at major conferences and research institutes in the areas of stem cell and developmental biology and diabetes (e.g. ISSCR, Gordon Conferences, Keystone symposia).

### **SCIENTIFIC FOCUS AREAS**

Basic mechanism in morphogenesis and cell differentiation during organogenesis using a combination of in vivo and in vitro genetic and cell biological experimental tools. Human embryonic stem cells and pancreas developmental biology with the ultimate goal to use human embryonic stem cells as tools to study human pancreatic beta cell development and beta cell dysfunction as well as a source for transplantable beta cells in type 1 diabetes therapy.

### **SUPERVISION OF GRADUATE STUDENTS AND POSTDOCTORAL FELLOWS**

Throughout my career I have trained a total number of 27 Postdoctoral Fellows (8 present), and 19 PhD students (2 present), in addition to numerous bachelor and master students. Seven of my former trainees have moved on to lead their own academic research groups or become faculty members at international research institutions. Five trainees have become senior scientists/leaders with R&D positions in industry.