

Symposium

Developmental Programming of Metabolism: Recent Advances, Current Controversies, and Future Challenges

2nd Copenhagen Symposium on Fetal Programming

Date: 14 November 2014

Venue: Novo Nordisk Foundation, Auditorium, Tuborg Havnevej 19, Hellerup, Copenhagen.

A symposium jointly organized by The Danish Centre for Fetal Programming and The Danish Diabetes Academy.

Hales and Barker were the first to suggest, in the early 90ies, that the risk of developing type 2 diabetes may be influenced by factors working in the fetal period. Their 'thrifty phenotype hypothesis', cited more than 2000 times, has had a tremendous impact, and today substantial evidence from studies in animals and humans provide support for this notion. However, many questions are still left unanswered and the present symposium aims to give an update on some central issues in this fast growing research field.

The symposium is organized jointly by the Centre for Fetal Programming and the Danish Diabetes Academy. The Centre, established in 2010, is based on funding from the Danish Council for Strategic Research and managed from Statens Serum Institut; its main objective is to explore and examine the impact of environmental factors working during the fetal period. The Academy, established in 2012, is based on funding from the Novo Nordisk Foundation, The Juvenile Research Foundation and all universities in Denmark; its objectives include to enhance the quality of Danish diabetes research and to build up a platform of networking and knowledge sharing between national and international researchers within diabetology.

At the symposium, leading international experts will address a number of central issues in the field of fetal programming, including

- Causes and consequences of gestational diabetes
- Programming of the endocrine pancreas
- Programming of the immune system
- Lessons from famine incidences
- Epigenetics and maternal nutrition
- Role of environmental chemicals
- Role of microbiota

The speakers come from National Institutes of Health, Harvard School of Public Health, University of Pennsylvania, Philipps University at Marburg, State University of New York at Buffalo, Rutgers New Jersey Medical School, and University of Copenhagen.

Registration

Please register for seminar and dinner before 1 November at www.danishdiabetesacademy.dk

The symposium will have two poster sessions, and you are hereby invited to forward your abstract together with your registration or after registration, but before Monday, 27 October 2014 to info@danishdiabetesacademy.dk

The abstracts will be evaluated, and we will let you know if you will be invited to be part of the poster session.

Posters should be printed in the size 1m x 1,20m.

3 prizes for the best posters will be awarded at the symposium.

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Diabetes Academy, On

“Developmental Programming of Metabolism:
Recent Advances, Current Controversies,
and Future Challenges”

Programme

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| 8.00-8.45 | Registration and breakfast |
| 8.45-9.00 | Welcome
Sjurdur F Olsen, Symposium Chair & Leader of Danish Centre for Fetal Programming,
Statens Serum Inst, Copenhagen |
| 9.00-10.00 | Role of environmental factors
Chairpersons: Mette Olaf Nielsen, University of Copenhagen, and Thorhallur Ingi Halldorsson, University
of Iceland

“Developmental programming: lessons from famine incidences”
Professor Frank Hu, Harvard School of Public Health (Massachusetts)

“Role of environmental chemicals in fetal programming”
Dr Jerrold Heindel, National Institute of Environmental Health Sciences (North Carolina) |
| 10.00-11.00 | Poster session + Coffee and refreshments |
| 11.00-12.00 | Role of microbiota
Chairpersons: Lars Hellgren, Technical University of Denmark and Ekaterina Maslova, Statens Serum Inst.

“Programming of the immune system: role of microbiota”
Professor Harald Renz, Inst für Laboratoriumsmedizin und Pathobiochemie, Philipps University of
Marburg (Germany)

“Potential etiologic role of infections in early programming”
Professor Ib Bygbjerg, Copenhagen School of Global Health, University of Copenhagen (Denmark) |
| 12.00-13.00 | Lunch |

- 13.00-14.00** **Role of maternal over-nutrition**
Chairpersons: Sjurður F Olsen, Statens Serum Institut, and Allan Vaag, University of Copenhagen
- “Determinants and health consequences of gestational diabetes”
Dr Cuilin Zhang, Senior Investigator, National Institute of Child Health and Human Development (Maryland)
- Epigenetics and maternal nutrition**
Professor Rebecca Simmons, Perelman School of Medicine, University of Pennsylvania (Philadelphia)
- 14.00-15.00** **Impact on inter-organ communications**
Chairpersons: Jens Høiriis Nielsen, University of Copenhagen, and Kirsten Raun, Novo Nordic Ltd.
- “Fetal and neonatal programming of the endocrine pancreas”
Professor Mulchand Patel, Dept of Biochemistry, University of Buffalo, State University of New York
- “The role of the brain in metabolic programming”
Professor Barry Levin, Dept of Neurology and Neurosciences, Rutgers New Jersey Medical School
- 15.00-16.00** **Poster session + Coffee and refreshments**
- 16.00-16.45** **Plenary discussion:**
Future perspectives for developmental programming research
Chairperson: Bjørn Quistorff, University of Copenhagen
- 16.45** Poster Awards and closing remarks
- 17.30-** **Dinner at Restaurant Address:**
Tuborg Havnepark 15,
2900 Hellerup
(on the other side of Tuborg havn from the seminar venue, 10 minutes walk)

Speakers

Professor Frank Hu

Harvard School of Public Health, Boston, USA

Dr Jerrold Heindel

Health Scientist Administrator
National Institute of Environmental Health Sciences
North Carolina, USA

Dr Cuilin Zhang

Senior Investigator
National Institute of Child Health and
Human Development Bethesda, USA

Professor Rebecca Simmons

Perelman School of Medicine
University of Pennsylvania, USA

Professor Mulchand Patel

Department of Biochemistry
University of Buffalo,
State University of New York at Buffalo

Professor Barry Levin

Department of Neurology and Neurosciences
Rutgers New Jersey Medical School, USA

Professor Harald Renz

Institut für Laboratoriumsmedizin und pathobiochemie
Philipps University of Marburg, Germany

Professor Ib Bygbjerg

Copenhagen School of Public Health
University of Copenhagen, Denmark

Chairpersons

Adjunct Professor Sjurður F Olsen

Leader of the Danish Centre for Fetal Programming
Statens Serum Institut, Denmark
Harvard School of Public Health, Boston, USA

Professor MSO Mette Olaf Nielsen

Vice-leader of the Danish Centre for Fetal Programming
Department of Veterinary Clinical and Animal Sciences
University of Copenhagen, Denmark

Professor Thorhallur Ingi Halldorsson

Faculty of Food Science and Nutrition
University of Iceland

Professor Allan Vaag

Department of Endocrinology
Rigshospitalet, Denmark

Professor Jens Høiriis Nielsen

Department of Biomedical Sciences
University of Copenhagen, Denmark

Principal scientist Kirsten Raun

Department of Pharmacology Research
Novo Nordisk, Denmark

Ass Professor Lars Hellgren

Center for Biological Sequence Analysis
Department of Systems Biology
DTU- Technical University of Denmark

Professor Bjørn Quistorff

Cellular and Metabolic Research Section
University of Copenhagen, Denmark

Symposium

Symposium Executive Committee

Representing Centre for Fetal Programming:

Sjurður F Olsen, Centre Leader and Symposium Chair
Centre for Fetal Programming, Statens Serum Institut

Representing Danish Diabetes Academy:

Tore Sønne Christiansen, Managing Director
Danish Diabetes Academy

Representing both organizations:

Jens Høiriis Nielsen
University of Copenhagen

Symposium Secretariat

Inger Kristine Meder, MA

Project Coordinator of the Danish National Birth Cohort
Statens Serum Institut

Trine Helen Olesen, MSc Gastronomy & Health

Secretary Centre for Fetal Programming
Statens Serum Institut

Tina Hansen Barbisan, Communications Coordinator

Danish Diabetes Academy

Louise Hansen, Office Assistant

Danish Diabetes Academy



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www.danishdiabetesacademy.dk

Centre  for
Fetal Programming

www.cfp-research.com