

# IIDS

IMMUNOLOGY OF DIABETES SOCIETY

## 10<sup>th</sup> International Congress of the Immunology of Diabetes Society

### Program & Abstracts

### Malmö

### May 17-20, 2009

### Sweden

[www.immunologyofdiabetessociety.com](http://www.immunologyofdiabetessociety.com)

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## WELCOME TO MALMÖ AND THE 10<sup>TH</sup> INTERNATIONAL CONGRESS OF THE IMMUNOLOGY OF DIABETES SOCIETY (IDS-10).

Dear participant,

It is a pleasure to welcome you to IDS-10 in Malmö. The IDS has come a long way since its inception. The mission of IDS to promote and foster research in the immunology of diabetes has grown and we have witnessed tremendous progress in the understanding of type 1 diabetes. As the disease is close to the heart of immunology it is exciting to observe the way immunologists pay attention to improving the understanding of type 1 diabetes as the progress is made in to uncover the many secrets of our immune system. Most importantly, it is critical that IDS will dwell in the very forefront of immunology research and discovery to advance our ability to predict, prevent and cure type 1 diabetes. IDS-10 is no exception and we trust that you will enjoy the program, which shows great promise to a great extent due to your own abstract.

We're excited about the fact that more than 160 abstracts were submitted. As the abstracts are the backbone of the meeting we wanted to ensure that they all get proper attention whether they are presented in an oral presentation session or as a poster. In order to enhance the posters there will be poster viewing with wine and cheese and a guided poster walk at each of the poster sessions.

The IDS-10 Scientific Program Committee (Susanne Cardell, Maria Faresjö, Malin Flodström, Robert Harris, Dan Holmberg, Petter Höglund, Ingrid Kockum, Olle Korsgren, Olle Kämpe, Kristina Lejon, Johnny Ludvigsson, CB Sanjeevi) was instrumental in putting the program together including scoring all the abstracts. We also got valuable advice and input from the IDS Council.

Backbone activities to IDS, the Diabetes Autoantibody Standardization Program (DASP) and the T-Cell Workshop Committee figure prominently in IDS-10. You will also have the opportunity to enjoy several Hot topics, Symposia and Debates. Novel to IDS-10 is the *Industry presentations & Buffet* and the *T cell Karaoke* events on Tuesday night. We trust that you will find the program both interesting and rewarding.

Despite the worldwide economic downturn IDS has friends who are staying with us. We thank the Juvenile Diabetes Research Foundation, the Society of Experimental Diabetes Research, RSR Ltd, Diamyd Medical AB, Coulter Beckman, Electra-Box, LRI Instrument AB, and Becton Dickinson for their support and interest. Travel grants were supported by National Institutes of Health (NIDDK).

Finally, we also thank Malmö City for their support and for hosting the Welcome reception. Malmö is the most continental and international city in Sweden. There are more than 100 languages spoken by people living in Malmö. While the Turning Torso is the landmark, the bridge to Denmark is the gateway to Europe and the World.

We hope that you will enjoy your participation in IDS-10 and your visit to Malmö!

Åke Lernmark

Corrado Cilio





## Scientific Committee

**Co-Chair:** Prof. Åke Lernmark, Lund University

**Co-Chair:** Dr. Corrado M. Cilio, Lund University

### **Members:**

Dr. Susanne Cardell, Göteborg University

Dr. Maria Faresjö, Jönköping University

Dr. Malin Flodström, Karolinska Institutet, Stockholm

Dr. Robert Harris, Karolinska Institutet, Stockholm

Prof. Dan Holmberg, Umeå University

Dr. Petter Höglund, Karolinska Institutet, Stockholm

Dr. Ingrid Kockum, Karolinska Institutet, Stockholm

Prof. Olle Korsgren, Uppsala University

Dr. Olle Kämpe, Uppsala University

Dr. Kristina Lejon, Umeå University

Prof. Johnny Ludvigsson, Linköping University

Dr. CB Sanjeevi, Karolinska Institutet, Stockholm

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# IDS 10th Congress

## Scientific Program





## IDS-10 Scientific Program

**SUNDAY, MAY 17**

**08.30 -11.00 *Antibody workshop***

Clinical Research Center (CRC), University Hospital MAS, Malmö

**11.00** Light buffet

**11.30** Bus to conference venue

**12.15 *Welcoming Remarks***

Åke Lernmark and Corrado M. Cilio, IDS-10 Co-Chairs  
Terry Delovitch, IDS President

**12.30 *Keynote introductions***

Chairperson: Jerry Palmer, USA

Matthias von Herrath, USA

*Viral Infections and Immunotherapy or How to Best Cure 'Mouse' Diabetes*

Allison Green, UK

*TNF $\alpha$  and TGF $\beta$ ; a Clash of Titans in Type 1 Diabetes*

**13.30 *BREAK (Coffee, fruit and refreshments)***

**14.00 *Oral Presentations I***

Chairpersons: Dan Holmberg, SE and Elisabeth P. Blankenhorn, USA

N. Mpofu, et al. USA: *Beta Cell Specific Regulatory T Cells Create Long-Lasting Tissue Specific Tolerance in Type 1 Diabetes.* (Abstract No. 8)

S. Oak, et al. USA: *The Lack of GAD65 Autoantibody-Specific Anti-Idiotypic Antibodies Identifies Islet Autoimmunity in Type 2 Diabetes Patients.*(Abstract No. 115)

A. Tada, et al. JPN: *Fulminant Type 1 Diabetes Like Phenotype Can Be Induced in Animal Model with Autoimmune Background.* (Abstract No. 17)

B. vanZyl, et al. UK: *Maternal Microchimerism in T1D Pancreases.* (Abstract No. 95)

H. Brauner et al. SE: *Distinct Phenotype and Function of Natural Killer Cells in the Pancreas of Non Obese Diabetic Mice.* (Abstract No. 137)

C. Gysemans, et al. BE *Histone Deacetylase Inhibitors (HDI) Inhibit Type 1 Diabetes in the Non Obese Diabetic Mouse, in Part by Enhancing T Regulatory Cells.* (Abstract No. 56).



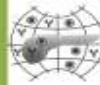


- 15.30**      **Hot topics – 1: Immunoregulation**  
 Moderator: Petter Höglund, SE
- Cristoph Benoist, USA  
*Immunoregulation in Autoimmune Diabetes*
- Christiane Hampe, USA  
*Anti-Idiotypic Antibodies as Regulatory Elements in Autoimmune Disease.*
- Cecile King, AUS  
*A loss of Parity Between the Linked Alleles, Interleukin-2 and Interleukin-21, in Autoimmune Diabetes*
- 17.00**      **Poster viewing and guided poster walk**
- 20.00**      **Get-together reception, Congress Venue**
- 22.00**      **Late bar with music and scientific topics**

**MONDAY, MAY 18**

- 08.30**      **Oral Presentations II**  
 Chairpersons: Susanna Cardell, SE and Henry Erlich, USA
- E. P. Blankenhorn, et al. USA: *Autoimmune Diabetes in the Lew.1wr1 Rat Requires Iddm14 and a New Genetic Locus Proximal to the Major Histocompatibility Complex.* (Abstract No. 106)
- F. Moore, et al. BE: *PTPN2, a Candidate Gene for Type 1 Diabetes, Modulates Interferon- $\gamma$ -Induced Pancreatic Beta Cell Apoptosis.* (Abstract No. 57)
- D. Zipris, et al. USA: *Altered Toll-Like Receptor Signaling in Human Type 1 Diabetes.* (Abstract No. 100)
- H. Beyan, et al. UK: *Monocyte Gene-Expression Profiles in Type 1 Diabetes; a Study of Identical Twins.* (Abstract No. 34)
- 09.30**      **Hot topics – 2: T1D genes: humans– mice –rats**  
 Moderator: George Eisenbarth, USA
- Jayne Danska, CA  
*Immunogenetic Analysis of T1D: Analysis of Candidate Genes and Gene-Environment Interactions*
- Flemming Pociot, DK  
*T1DGC Report*
- 10.30**      **BREAK (Coffee, fruit and refreshments)**
- 11.00**      **Debate 1: Type 1 Diabetes Genes – Needed or Not?**  
 Moderator: Edwin Gale, UK  
 Gerald T. Nepom, USA vs Stephen Rich, USA





**12.00 LUNCH**

**13.00 *Diamyd Medical hot topics-3: Combination therapy***

Moderator: Jeffrey Krisher USA

Carla Greenbaum, USA

*Combination Therapy Requiring Interaction: IL2 + Rapamycin*

David Harland, USA

*NIDDK Efforts to Preserve or Promote Pancreatic  $\beta$ -cell Function in T1D- the Next Step*

**14.00 *Oral Presentations III***

Chairpersons: Bart Roep NL and Johnny Ludvigsson, SE,

R. Casas et al. SE: *Specific Immunomodulatory Effect of GAD65 in Type 1 Diabetics*  
(Abstract No. 92)

R. Planas, et al. ES: *Gene Expression Profiles of Purified Human Islets and Pancreases in Type 1 Diabetes: New Findings at Clinical Onset and Longstanding Diabetes.*  
(Abstract No. 26)

B. Brooks-Worrell, et al. USA: *Rosiglitazone Suppresses T Cell Autoimmunity and Slows the Decline in  $\beta$  Cell Function in Phenotypic Type 2 Diabetes Patients.* (Abstract No.128)

S.A. Brod, et al. USA: *Effect of Ingested Interferon Alpha on Beta Cell Function in Children With New Onset Type 1 Diabetes Mellitus in a Phase II Randomized Clinical Trial (RCT).* (Abstract No. 15)

**15.00 *Antibody workshop (DASP) Report***

**15.30 BREAK** (Coffee, fruits and refreshments)

**16.00 *JDRF Symposium: Antigen-specific therapies***

Moderator: Richard Insel, USA

Stephen D. Miller, USA

*An Antigen-Specific Tolerance Approach to the Therapy of T1D and Islet Transplantation*

Mark Peakman, UK

*Using Natural Beta Cell Epitopes for Peptide Immunotherapy*

Pere Santamaria, CA

*Reversal of Autoimmune Diabetes by Boosting Autoregulatory T Cell Memory*

Michael P. Czech, USA

*RNAi-Based Therapeutic Strategies for Type 1 Diabetes*

**18.00 *Poster viewing and guided poster walk***

**20.00 IDS gala dinner, Congress venue**





**TUESDAY, MAY 19**

**08.30 T Cell Workshop (TCW)**

Corrado M. Cilio, SE  
*Presentation of the TCW Working Group*

Tim Tree, UK  
*PBMC freezing study*

Alessandro Sette, USA  
*Epitope database in infectious diseases*

Ivana Durinovic-Belló, USA and Roberto Mallone, FR  
*Tetramer Directed Epitope Validation Initiative (TDEVI)*

TCW selected abstracts  
Chairpersons: Nanette Schloot, DE and Susan Wong UK

B.O. Roep et al. NL: *Detection of Islet-Specific Autoreactive T-Cells by a Novel Robust and High Through-Put Screening Strategy in Stored Blood Samples of Type 1 Diabetic Patients* (Abstract No. 65)

S.I. Mannering, et al. AU: *The  $\alpha$ -Chain of Insulin is a Hot-Spot for CD4+ T-Cell Epitopes in Human Type 1 Diabetes.* (Abstract No. 39)

H.W. Davidson, et al. USA: *CD4 T Cell Autoreactivity to the Major Diabetes Autoantigen Znt8.* (Abstract No. 164).

**10.30 BREAK (Coffee, fruit and refreshments)**

**11.00 Oral Presentations IV**

Chairpersons: Bob Harris, SE and Roberto Mallone FR

I. Durinovic-Belló, et al. USA: *Combined Effect of HLA, Ins-VNTR and PTPN22 Genotypes on Function and Phenotype of Autoantigen Specific T Cell Responses.*(Abstract No. 140)

S.C. Kent, et al. USA: *Autoreactive B Cells in Pancreatic Draining Lymph Node from Type 1 Diabetes Subjects.* (Abstract No. 126)

M. Falcone, et al. IT: *Defective Gut Immune Regulation in Type 1 Diabetic Patients.* (Abstract No. 159)

S. Mayans, et al. SE: *3D Imaging and Quantification of  $\beta$ -Cell Mass and Lymphocyte Infiltration In Murine Type 1 Diabetes.* (Abstract No. 30)

**12.00 LUNCH**





- 13.00**     **Hot topics – 5: Beta cell regeneration and stem cells**  
 Moderator: Henrik Semb SE
- Harry Heimberg, BE  
*Elusive Beta Cell Progenitors in the Adult Pancreas*
- Ole Madsen, DK  
*Stem Cells in Future Diabetes Therapy*
- 14.00**     **Symposium 2: Innate and adaptive immunity**  
 Moderator: Mark Aktinson, USA
- Terry Delovitch, CA  
*Development of Glycolipid Antigen Agonists for iNKT Cell-Mediated Protection from Type 1 Diabetes*
- Giovanni de Libero, CH  
*Lipid molecules stimulating human CD1-restricted T cells: New Players*
- B. Pulendran, USA  
*Modulating Adaptive Immune Responses with Innate Immunity*
- 15.30**     **BREAK (Coffee, fruit and refreshments)**
- 16.00**     **Debate 2: How Much Type 1 is Type 2 Diabetes?**  
 Moderator: Åke Lernmark, SE
- Leif Groop SE vs Jerry Palmer, USA
- 17.00**     **IDS Business Meeting**
- Poster viewing and guided poster walk*
- Industry presentations & buffet*
- 18.30**     Elisabeth Lindner, Diamyd Medical  
**19.00**     Mike Powell, RSR Ltd
- 21.00**     **IDS-10 Awards Reception (sponsored by the Society of Experimental Diabetes Research)**
- 21.45**     **Late bar with T Cell Karaoke**

**WEDNESDAY, MAY 20**

- 08.30**     **Symposium 3: New biomarkers in Type 1 Diabetes**  
 Moderator: Terry Delovitch, CA
- Martin J. Hessner, USA  
*Transcriptional Signatures in Type 1 Diabetes*





Matej Oresic, FI  
*Metabolome en Route to Type 1 Diabetes*

Decio Eizirik, BE  
*Use of a Genomics-Based Approach to Identify Novel Beta-Cell Biomarkers*

**10.00 BREAK (Coffee, fruit and refreshments)**

**10.30 Oral presentation Late Breaking News**

Chairpersons: Abner Notkins, USA and Carani Sanjeevi, SE

T. DeLong, et al. USA: *A New Antigen for Autoreactive T Cells in Type 1 Diabetes.*  
(Abstract No. 153)

A. Criscimanna, et al. IT: *Limbal Stem Cells as a Potential Source of Pancreatic Beta Cells.* (Abstract No. 158)

M. Kalis, et al. SE, *Beta Cell Specific Disruption of Dicer-1 Leads to Defective Insulin Secretion and Diabetes Mellitus.* (Abstract No. 143)

Y. Zhao, et al. USA: *Human Cord Blood Stem Cell-Modulated Regulatory T Lymphocytes Reverse the Autoimmune-Caused Type 1 Diabetes in Non Obese Diabetic (NOD) Mice.* (Abstract No. 3)

H. Hyöty et al. FI: *Co-Occurrence of Allergic Sensitization and Type 1 Diabetes.*  
(Abstract No. 139)

JP. Mordes et al. USA: *Infection with Viruses from Three Families Triggers Autoimmune Diabetes in LEW.1WR1 Rats: Prevention of Diabetes by Maternal Immunization.*  
(Abstract No. 78)

**12.30 LUNCH**

**13.20 Symposium 4: Allergy & Autoimmunity**

Moderator: Corrado M. Cilio SE

Mark S. Anderson, USA  
*Using Extrathymic Aire-Expressing Cells to Control Diabetes*

Cezmi A.Akdis, CH  
*Mechanisms of Allergic Inflammation*

**14.00 Concluding Remarks**

Olle Kämpe, SE

**14.30 IDS-11 invitation**

**15.00 End of meeting**

**Farewell refreshments**

