XI International Symposium on Insulin Receptor and Insulin Action
Naples, Italy - October 28 - 30, 2010

Scientific and Social Program

"Federico II" University of Naples
WEDNESDAY, OCT. 27

16:00 – 20:00 REGISTRATION AND HELP DESK OPENING

THURSDAY, OCT. 28

09:00 – 09:30 OPENING CEREMONY AND WELCOME ADDRESS
Chairs: Francesco Béguinot (Naples, IT) and Hans Ulrich Haering (Tübingen, DE)
Gabriele Riccardi (Naples, IT)
Welcome address of the President of the Italian Diabetes Society

09:30 – 10:30 MEETING INTRODUCTION
INSULIN ACTION IN 2010: PERSPECTIVES IN THE COMING DECADE
Chairs: Edwin Gale (Bristol, UK) and Jesse Roth (Whitestone, NY USA)

09:30 – 09:50 Jesse Roth (Whitestone, NY USA)
Introduction: Paired Revolutions in Intercellular Communication: The Tenth Day of Creation

09:50 – 10:10 Lecture 01 - C. Ronald Kahn (Boston, MA USA)
Continuing evolution in our concepts of insulin action and insulin resistance

10:10 – 10:30 Lecture 02 – Ulf Smith (Gothenburg, SE)
Understanding insulin signaling and action-also a future challenge

10:30 – 11:00 COFFEE BREAK

11:00 – 12:30 ORAL SESSION 01
NEW CONCEPTS IN INSULIN SIGNAL TRANSDUCTION
Chairs: Masato Kasuga (Tokyo, JP) and Emmanuel Van Obberghen (Nice, FR)

11:00 – 11:30 Lecture 03 - Domenico Accili (New York, NY USA)
Unusual sites of insulin resistance

11:30 – 12:00 Lecture 04 – Takashi Kadowaki (Tokyo, JP)
Adipocyte control of insulin action

12:00 – 12:15 Oral Presentation 1 (C1-1) - Qiong L. Zhou
A novel protein enhances insulin-stimulated akt phosphorylation and glut4 translocation in adipocytes

12:15 – 12:30 Oral Presentation 2 (C1-2) - Barbara Salani
IGF-IR internalizes with caveolin-1 and ptrf/cavin in hacat cells

12:30 – 14:30 POSTER SESSION 01 and BUFFET LUNCH
14:30 – 15:30 ORAL SESSION 02
THE ROLE OF ADIPOSE TISSUE IN INSULIN ACTION
Chairs: Eddy Karnieli (Haifa, IL) and Francesco Purrello (Catania, IT)

14:30 – 15:00 Lecture 05 – Francesco Giorgino (Bari, IT)
The biological specificity of visceral fat
*With the Unrestricted Educational Grant of Eli Lilly Italia*

15:00 – 15:15 Oral Presentation 3 (C2-3) – Karin Stenkula
Insulin regulates the spatial distribution of glucose transporter-4 on the cell surface

15:15 – 15:30 Oral Presentation 4 (C2-4) – Gregory Raciti
ANKRD26 gene ablation causes diabetes in mice

15:30 – 16:00 COFFEE BREAK

16:00 – 17:00 ORAL SESSION 03
INSULIN SIGNALLING IN PERIPHERAL TISSUES
Chairs: Amira Klip (Toronto, CA) and Robert J. Smith (Providence, RI USA)

16:00 – 16:30 Lecture 06 - Timothy E. McGraw (New York, NY USA)
AKT2 regulation of GLUT4 trafficking

16:30 – 16:45 Oral Presentation 5 (C3-5) – Isabelle Castan-Laurell
Chronic apelin treatment in HFD-fed mice improves b-oxidation and insulin resistance

16:45 - 17:00 Oral Presentation 6 (C3-6) – Kurt Højlund
Is defect insulin signaling to mitochondria linked to insulin resistance in human muscle?

17:00 – 17:45 ORAL SESSION 04
INSULIN ACTION IN OBESITY
*Roberto De Pirro Memorial Ceremony*
Chairs: Samuel Cushman (Bethesda, MD USA) and Ulf Smith (Gothenburg, SE)

17:00 – 17:30 Lecture 07 - Hadi Al-Hasani (Nuthetal, DE)
Roberto De Pirro Memorial Lecture - Obesity genes and their impact on insulin action: lesson from mouse genetics
*With the Unrestricted Educational Grant of Sanofi Aventis*

17:30 – 17:45 Oral Presentation 6bis (C4-6bis) – Paul Pilch
Title tbd
*Talk not included in the CME credit program*

19:30 -> DINNER
FRIDAY, OCT. 29

08:30 – 10:00

**ORAL SESSION 05**
**GENETIC AND EPIGENETIC CONTROL OF INSULIN ACTION**
Chairs: Henning Beck-Nielsen (Odense, DK) and Michael P. Czech (Worcester, MA USA)

08:30 – 09:00 Lecture 08 - Markku Laakso (Kuopio, FI)
Human gene variation affecting insulin action and secretion

09:00 – 09:30 Lecture 09 - I. Karen Temple (Southampton, UK)
Epigenetics and diabetes: lesson from neonatal diabetes and disorders of imprinting

09:30 – 09:45 Oral Presentation 7 (C4-7) - Raffaele Teperino
Environmental and epigenetic regulation of the diabetes-related PED/PEA-15 gene

09:45 – 10:00 Oral Presentation 8 (C4-8) - Stephan Scherneck
ZFP69 as a potential modulator of obesity-associated diabetes

10:00 – 10:30
**COFFEE BREAK**

10:30 – 12:00

**ORAL SESSION 06**
**ENVIRONMENTAL CONTROL OF INSULIN ACTION AND NUTRIENT METABOLISM**
Chairs: Angelika Bierhaus (Heidelberg, DE) and Philipp Gorden (Bethesda, MD USA)

10:30 – 11:00 Lecture 10 – Juleen Zierath (Stockholm, SE)
Metabolic regulation in diabetes through DNA methylation

11:00 – 11:30 Lecture 11 – Christopher B. Newgard (Durham, NC USA)
Metabolic drivers of insulin resistance and related disorders

11:30 – 11:45 Oral Presentation 9 (C5-9) – Katy Raddatz
Pkc epsilon regulates hepatic lipid metabolism during short term lipid oversupply

11:45 - 12:00 Oral Presentation 10 (C5-10) – Assaf Rudich
Activation of ASK1 in omental fat links adipocyte stress to whole-body insulin resistance

12:00 – 14:00
**POSTER SESSION 02 and BUFFET LUNCH**

14:00 – 15:30

**ORAL SESSION 07**
**β- AND α- CELLS IN INSULIN-RESISTANCE STATES**
Chairs: Jean-Louis Carpentier (Geneve, CH) and Piero Marchetti (Pisa, IT)

14:00 – 14:30 Lecture 12 - Bernard Thorens (Lausanne, CH)
IGF-2 and IGF-1 receptor in the control of beta-cell mass and function

14:30 – 15:00 Lecture 13 - Rohit N. Kulkarni (Boston, MA USA)
Intra-islet insulin signalling regulates alpha-cell function in vivo

15:00 – 15:15 Oral Presentation 11 (C6-11) - Eugenia Tiziana Maniscalchi
MAPK activation in alpha TC1 cells after chronic palmitate exposure

15:15 – 15:30 Oral Presentation 12 (C6-12) – Avital Beck
Sirna screening for genes involved in cytokine-induced pancreatic beta cell death
15:30 – 16:00  COFFEE BREAK

16:00 – 17:30  ORAL SESSION 08
INSULIN ACTION IN THE CNS
Chairs: Ira D. Goldfine (San Francisco, CA USA) and Giuseppe Paolisso (Naples, IT)

16:00 – 16:30  Lecture 14 – Jens C. Brüning (Köln, DE)
Central regulation of energy metabolism by insulin

16:30 – 17:00  Lecture 15 - Suzanne Craft (Seattle, WA US)
Insulin-resistance and neurodegeneration: novel mechanisms and therapeutic implications

17:00 – 17:15  Oral Presentation 13 (C7-13) – Toshiyasu Sasaoka
Impact of the elevation of lipid phosphatase ship2 on brain insulin action for the cognitive function in mice

17:15 – 17:30  Oral Presentation 14 (C7-14) – Tina Sartorius
Toll-like receptor2/4 deficiency protects from diet-induced brain insulin resistance

19:00 ->  MEETING POINT FOR GALA DINNER
SATURDAY, OCT 30

09:30 – 10:45  
**ORAL SESSION 09**  
**METABOLISM AND CANCER**  
Chairs: Pietro Formisano (Naples, IT) and Derek Le Roith (New York, NY USA)

09:30 – 10:00  
Lecture 16 – Reuben J. Shaw (La Jolla, CA USA)  
AMPK signaling in glucose metabolism and growth control

10:00 – 10:30  
Lecture 17 – Michael Pollak (Montreal, CA)  
Insulin signalling and metformin in relation to cancer: new developments.  
*With the Unrestricted Educational Grant of Sanofi Aventis*

10:30 – 10:45  
Oral Presentation 15 (C8-15) – Jutta Nagel  
Glargine and NPH insulin similarly increase colonic cell proliferation and ACF formation

10:45 – 11:15  
**COFFEE BREAK**

11:15 – 12:30  
**ORAL SESSION 10**  
**INSULIN-ACTION AND CANCER**  
*Session not included in the CME credit program*  
Chairs: Ira Pastan (Bethesda, MD USA) and Riccardo Vigneri (Catania, IT)

11:15 – 11:45  
Lecture 18 – Morris F. White (Boston, MA USA)  
The dark side of IRS-2: cancer and neuro-degeneration

11:45 – 12:15  
Lecture 19 – Norbert Tennesgels (Frankfurt am Main, DE)  
Metabolic and mitogenic signalling of exogenous insulin(s)

12:15 – 12:30  
Oral Presentation 16 (C9-16) – Michael Greene  
Breast cancer growth and activation of insulin/IGF-1 signaling by circadian disruption

12:30 – 14:30  
**POSTER SESSION 03 and BUFFET LUNCH**

14:30 – 16:30  
**ORAL SESSION 11**  
**FUTURE STRATEGIES FOR TREATING DIABETES**  
Chairs: Stefano Del Prato (Pisa, IT) and Giorgio Sesti (Catanzaro, IT)

14:30 – 15:00  
Lecture 20 – Fatima Bosch (Barcelona, ES)  
Gene therapy in diabetes

15:00 – 15:30  
Lecture 21 – Markus Stoffel (Zürich, CH)  
MicroRNAs: regulators of metabolism and therapeutic targets

15:30 – 15:45  
Oral Presentation 17 (C10-17) – Lucie Popineau  
GRB14 inhibition in mouse liver improves glucose tolerance and hepatic steatosis

15:45 – 16:00  
Oral Presentation 18 (C10-18) – Olivier Bezy  
PKCdelta is a regulator of hepatic insulin sensitivity and modifies hepatosteatosis risk

16:00 – 16:15  
Oral Presentation 19 (C10-19) – Shiri Karni Ahkenazi  
NFkB paradox: suppression of glut4 expression with concomitant tranlocation enhancement

16:15 – 16:30  
Oral Presentation 20 (C10-20) – Mashito Sakai  
Cited2 regulates hepatic gluconeogenesis by controlling PGC-1alpha activity
16:30 – 17:00  COFFEE BREAK

17:00 – 18:30  ORAL SESSION 12
DIABETES COMPLICATIONS
Chairs: Michele Muggeo (Verona, IT) and Yehiel Zick (Rehovot, IL)

17:00 – 17:15  Oral Presentation 21 (C11-21) – E. Dale Abel
Insulin signaling is a physiological regulator of myocardial autophagy in vivo

17:15 – 17:30  Oral Presentation 22 (C11-22) – Rossella Menghini
Increased expression of TIMP3 protects against diabetes and atherosclerosis

17:30 – 17:45  Oral Presentation 23 (C11-23) – Janice Zabolotny
Protein tyrosine phosphatase 1b (PTP1B) regulates wound healing

17:45 – 18:00  Oral Presentation 24 (C11-24) – Eugenia Carvalho
Immunosuppressive agents alter glucose metabolism, blood pressure and heart rate in rats

18:00 – 18:30  Lecture 22 – Hans Ulrich Haering (Tübingen, DE)
President lecture - Insulin action in human brain

18:30 – 19:00  CONCLUSION CEREMONY

18:30 – 18:45  Francesco Béguinot (Naples, IT)
Conclusion remarks

18:45 – 19:00  XII meeting announcement

19:00 ->  FAREWELL COCKTAIL
Abnormalities in insulin secretion and action determine the pathogenesis of all known forms of diabetes. Recent investigation in this area has considerably expanded our understanding of diabetes and related disorders. In addition, the more insulin action is investigated, the more it becomes apparent how diabetes contributes to the emerging burden of chronic disorders. Cancer, cardiac failure, Alzheimer disease, abnormalities in mood, memory and cognition, chronic liver diseases are just few between the several such conditions.

Through the last 30 years, the *International Symposium on Insulin Receptor and Insulin Action* has brought forward recent advances in this area. Importantly, the symposium has served as a catalyst to facilitate the translation of novel discoveries to the treatment of diabetes mellitus and its complications. It is our hope that the 11th edition of the Symposium will continue this tradition.

In 2007, global health expenditure to treat and prevent diabetes totalled at least 140 billion Euros. It is now evident that stopping diabetes requires an integrated approach to public health capable to guarantee every person’s access to an healthy life. It is also our hope that the XIth *International Symposium on Insulin Receptor and Insulin Action* will also serve as a forum fostering productive interactions between scientists and clinicians as well as policy makers.

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**International Scientific Committee**

Hans U. Häring, Germany (President, IR10); Domenico Accili, U.S.A.; Henning Beck-Nielsen, Denmark; Francesco Bèguinot, Italy (Chair, IR10); Jean-Louis Carpentier, Switzerland; Michael P. Czech, USA; Pierre De Meyts, Denmark; Suad Efendic, Sweden; Barbara B. Kahn, USA; C. Ronald Kahn, USA; Eddy Karnieli, Israel; Masato Kasuga, Japan; Yannick Le-Marchand-Brustel, France; Jesse Roth, USA; Alan R. Saltiel, USA; Emmanuel Van Obberghen, France; Yehiel Zick, Israel; Juleen Zierath, Sweden (Scientific Secretary)

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**Honorary Committee**

Renato Lauro (Honorary President)

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**Local Organizing Committee**

Francesco Beguinot (Chair), Pietro Formisano, Claudia Miele, Francesco Oriente, Luca Ulianich, Paola Ungaro, Rossella Valentino

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**Organizing Secretariat**

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Federica Schiassi