DIAMICOM Network
Spring School 2014

GRK 1874
Diabetic Microvascular Complications: DIAMICOM
Mannheim – Groningen
(Hans-Peter Hammes, Han Moshage)

GRK 1566
Protecting the Heart from Ischemia: PROMISE
Giessen - Barcelona (Klaus T. Preissner)

GRK 1508
Arterial Remodeling: EuCAR
Aachen - Maastricht (Jürgen Bernhagen)
Organizing committee

Prof. Dr. H.-P. Hammes  
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Director of Graduate School GUIDE, Medical Dept., UMCG

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Dekanat, Medizinische Fakultät Mannheim

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www.iwh.uni-hd.de/md/iwh/angebot/iwh_karte-hell.gif
PROGRAMME

Sunday, March 30, 2014

17.00 – 17.15  Welcome & Introduction
DIAMICOM: Hans-Peter Hammes
PROMISE: Klaus T. Preissner
EuCAR: Jürgen Bernhagen

Moderation:  Robin Jonas & Vincenzo Terlizzi

Hot Topic I
17.15 –17.40  Glyoxalase-1 and microvascular complications in diabetes
Caspar Schalkwijk (EuCAR)

Session 1  Kidney - Sweet dreams for kidneys, a nightmare for renal cells

17.40 – 17.55  The function of the Rac1 regulator ELMO1 in the vasculature and in renal development under high glucose in zebrafish and in human diabetic nephropathy
Krishna R. Sharma (DIAMICOM)

17.55 – 18.10  Oxidative protein modification in diabetic nephropathy – friend or foe?
Tanja Wiedenmann (DIAMICOM)

18.10 – 18.25  Carnosinase in hyperglycemia: Influence on CN-1 secretion and relevance for damage to glomerular endothelial cells
Shiqi Zhang (DIAMICOM)

18.25 – 18.40  Diabetic nephropathy in the BTBR Ob/Ob mouse as a pre-clinical model for therapeutic interventions
Thomas Albrecht (DIAMICOM)

18.40 – 19.30  Dinner

Moderation: Klaus Preissner

19.30 – 20.30  Keynote lecture
Novel potential mediators and biomarkers in diabetic nephropathy
Gabriella Gruden
Monday, March 31, 2014

Session 2  More than meets the Eye
Moderation: Thomas Albrecht & Bettina Müller

8.30 – 9.30  Keynote lecture
How do policy-makers decide which treatments for diabetic retinopathy to fund? Issues and experience from NICE
Amanda Adler

9.30 – 9.45  Hyperglycemic memory
– mechanisms relevant to the diabetic retina
Patrick Friedrichs (DIAMICOM)

9.45 – 10.00  ADSC: up a Notch to support retinal capillaries
Vincenzo Terlizzi (DIAMICOM / Groningen)

10.00 – 10.15  MicroRNA-induced microangiopathy in diabetes
Julian Friedrich (DIAMICOM)

10.15 – 10.30  Glucose-induced mitochondrial dysfunction in ADSC
– implications for pericyte function
Ghazaleh Hajmousa (DIAMICOM / Groningen)

10.30 – 11.00  Coffee break

Session 3  Vascular I - The bigger not the better
Moderation: Siqi Zhang & Bastian Schlickenrieder

11.00 – 11.25  Long-term inhibition of AP-1 by JDP2 overexpression prevents cardiac hypertrophy after unilateral kidney stenosis but provokes cardiac dysfunction
Gerhild Euler (PROMISE)

11.25 – 11.50  A background Ca2+ entry pathway mediated by TRPC1/TRPC4 is critical for development of cardiac hypertrophy
Marc Freichel (SFB 1118)

11.50 – 12.05  The calcium-sensing receptor in experimental models of pressure-induced cardiac hypertrophy
Elena Dyukova (PROMISE)

12.05 – 12.20  Role of endothelial junctional adhesion molecule-a (JAM-A) in inflammatory cell recruitment in atherosclerosis
Martin Schmitt (EuCAR)

12.20 – 12.45  A glimpse on IMI SUMMIT
– Work package 4 activities at Sanofi
Thomas Hübschle (Sanofi)

12.50 – 14.00  Lunch
Session 4  Neuropathy - To feel or not to feel
Moderation: Krishna R. Sharma & Julian Friedrich

14.00 – 15.00  **Keynote lecture**
Diagnosing and managing diabetic neuropathy: Can we do better?
*Rayaz Malik*

15.00 – 15.15  Altered cell-cell interaction in experimental diabetic neuropathy – contributing to pain?
*Divija Deshpande (DIAMICOM)*

15.15 – 15.30  Diabetic thin fiber neuropathy - objective assessment and mechanism
*Robin Jonas (DIAMICOM)*

15.30 – 15.45  Identification of tissue specific changes within the nociceptive system in diabetic peripheral neuropathy – contribution of TRP channels
*Bastian Schlickenrieder (DIAMICOM)*

15.45 – 16.15  ▪ Coffee break ▪

Session 5  Vascular II - Lost in translation
Moderation: Jaspal Garg & Nadine Volk

16.15 – 16.40  Protective versus exacerbating roles of MIF in cardiovascular and metabolic disease
*Jürgen Bernhagen (EuCAR)*

16.40 – 16.55  The damaging nature of extracellular RNA in atherosclerosis and cardiovascular disease
*Hector A. Cabrera-Fuentes (PROMISE)*

16.55 – 17.20  Cytoprotective actions of the anti-diabetic drug metformin
*Han Moshage (DIAMICOM / Groningen)*

17.20 – 17.45  Inflammatory activities of extracellular RNA in the vasculature
*Silvia Fischer (PROMISE)*

17.45 – 18.10  Predictive value of vascular function for individual susceptibility to end-organ damage: does it also hold in diabetes?
*Hendrik Buikema (DIAMICOM / Groningen)*

18.15 – 19.30  ▪ Dinner ▪

Moderation: Hans-Peter Hammes

19.30 – 20.30  **Candlelight lecture**
Of mice and men: what did we not (yet) learn about diabetes
*Hans-Georg Joost*
Tuesday, April 1, 2014

Session 6 Mechanisms - Highway to hell
Moderation: Tanja Wiedenmann & Divija Deshpande

9.00 – 10.00  Keynote lecture
Climate change at sites of diabetic complications:
Just looking for alternative fuel sources?,
Josephine Forbes

10.00 – 10.15  Detoxifying enzymes in diabetic target tissues
– mitochondrial dependent and independent
effects of methylglyoxal,
Nadine Volk (DIAMICOM)

10.15 – 10.30  Dysfunction of compartmentalized cyclic AMP
signaling in the diabetic vasculature,
Jaspal Garg (DIAMICOM)

10.30 – 10.45  • Coffee break •

10.45 – 11.00  Hyperglycemia-induced monocyte-macrophage differentiation,
Kondaiah Moganti (DIAMICOM)

11.00 – 11.15  Kv channels in myogenic and perivascular fat-dependent
autoregulation and small artery diabetic dysfunction,
Bettina Müller (DIAMICOM)

11.15 – 11.30  Monocyte differentiation and macrophage plasticity in
diabetic conditions,
Sarah Riemann (DIAMICOM)

Hot Topic II
Moderation: Jürgen Bernhagen

11.30 – 11.55  Development of an accelerated and reliable model of
diabetic nephropathy in mice,
Tammo Ostendorf (EUCAR)

11.55 – 12.15  Concluding remarks

12.15 – 14.00  Lunch & Farewell

14.00  End of Meeting & Departure
PARTICIPANTS

Chairmen

Prof. Dr. H.-P. Hammes  
V. Med. Klinik, Universitätsmedizin Mannheim

Prof. Dr. H. Moshage  
Graduate School GUIDE, Medical Dept., University Medical Center Groningen (UMCG)

Speakers

Dr. A. Adler  
Addenbrooke’s Hospital, University of Cambridge

Prof. Dr. J. Bernhagen  
Institute of Biochemistry and Molecular Cell Biology RWTH Aachen University

Prof. Dr. H. Buikema  
Department of Clinical Pharmacology, UMCG

Prof. Dr. G. Euler  
Department of Physiology, Justus-Liebig-University Gießen

Dr. S. Fischer  
Institute for Biochemistry, Justus-Liebig-University Gießen

Prof. Dr. M. Freichel  
Institute of Pharmacology, Heidelberg University

Prof. Dr. J. Forbes  
Department of Medicine, University of Melbourne

Prof. Dr. G. Gruden  
Department of Internal Medicine, University of Turin

Dr. T. Hübschle  
Diabetes Division, Sanofi-Aventis Deutschland GmbH, Frankfurt a.M.

Prof. Dr. H.-G. Joost  
German Institute of Human Nutrition, Potsdam-Rehbrücke, Nuthetal

Prof. Dr. R. Malik  
School of Clinical & Laboratory Sciences, University of Manchester

Prof. Dr. H. Moshage  
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