

Annual Dutch Diabetes Research Meeting 2013

Nederlandse Vereniging voor Diabetes Onderzoek (NVDO)
Nederlandse Associatie voor de Studie van Obesitas (NASO)
Netherlands Diabetes Epidemiology Study Group (NDESG)
Psychosocial Aspects of Diabetes (PSAD) Study Group
Nederlandse Vereniging voor Neurovasculaire Complicaties
van Diabetes (NVCD)

28 & 29 November 2013
Hotel de Bilderberg, Oosterbeek

Thursday 28 November 09.30-10.45 Parallel Sessions

08.00-13.15 Registration

<u>Hevea</u>	<u>Renkum</u>	<u>Oosterbeek</u>	<u>Hertog</u>	<u>Bilderberg I & II</u>
<p>09.30-10.45 NVDO/NASO</p> <p>PS1: Adipose Tissue Biology I</p> <p>Chair: Vanessa van Harmelen</p> <p>9.30-9.45: D. Ballak (Nijmegen) 1. TLR-3 is highly expressed in human adipocytes, but deficiency of TLR3 does not protect against obesity-induced inflammation and insulin resistance in mice</p> <p>9.45-10.00: K. Wouters (Maastricht) 2. Role of the tumour suppressor CDKN2A/p16INK4a in the development of perivascular adipose tissue</p> <p>10.00-10.15: E. Parlevliet (Leiden) 3. Central GLP-1 receptor activation increases triglyceride and glucose clearance by brown adipose tissue</p> <p>10.15-10.30: R. Vink (Maastricht) 4. Adipose tissue blood flow (ATBF) changes in overweight and obese subjects following rapid and slow weight loss</p> <p>10.30-10.45: S. Kooijman (Leiden) 5. Photoperiodic (dys)regulation of brown adipose tissue activity</p> <p>TO BE CONT'D</p>	<p>09.30-10.45 NVDO/NASO</p> <p>PS2: Beta Cell function I</p> <p>Chair: Françoise Carlotti</p> <p>9.30-9.45: M. Roefs (Leiden) 1. Expansion of human insulin-producing β-cells through epithelial-to-mesenchymal transition</p> <p>9.45-10.00: P. van Poppel (Nijmegen) 2. The interleukin-1 receptor antagonist anakinra improves β-cell function in subjects with impaired glucose tolerance</p> <p>10.00-10.15: J. Balak (Leiden) 3. The effect of INGAP, FGF7 and a GLP-1R agonist on the differentiation of primary human duct cells towards beta cells</p> <p>10.15-10.30: M. Mast (Amsterdam) 4. What is the delay in time to insulin therapy initiation in patients with type 2 diabetes not responding to oral glucose lowering agents?</p> <p>10.30-10.45: H. Hoelen (Utrecht) 5. Insulin degradation via the ERAD pathway; the production of auto-antigens in type 1 diabetes</p> <p>TO BE CONT'D</p>	<p>09.30-10.45 NSDEG</p> <p>PS3: Diabetes mellitus and cardiovascular risk</p> <p>Chair: Sabita Soedamah-Mutu</p> <p>9.30-9.45: S. van Dieren (Utrecht) 1. Validation of Cardiovascular Risk Scores Among Patients with Type 2 Diabetes Mellitus</p> <p>9.45-10.00: M. Kasteleyn (Utrecht) 2. Clinical characteristics of patients with and without type 2 diabetes and an acute myocardial infarction</p> <p>10.00-10.15: Y. Krul Poel (Alkmaar) 3. Vitamin D status is related to advanced glycation end products (AGEs) in patients with type 2 diabetes mellitus: a cross-sectional study</p> <p>10.15-10.30: M. van Eupen (Maastricht) 4. Advanced glycation endproducts are associated with higher ambulatory 24-hour pulse pressure: preliminary results from the Maastricht Study</p> <p>10.30-10.45: G. Sidorenkov (Groningen) 5. Do treatment quality indicators predict cardiovascular outcomes in patients with diabetes?</p>	<p>09.30-10.45 NVDO/NASO</p> <p>PS4: Liver Biology I</p> <p>Chair: Maarten Soeters</p> <p>9.30-9.45: F. Mathijssen (Wageningen) 1. Hlpda is a novel PPAR target involved in hepatic lipid metabolism</p> <p>9.45-10.00: N. Gruben (Groningen) 2. Hepatic expression of constitutively active IKKβ in mice induces low-grade inflammation, but does not cause insulin resistance: a protective role for A20?</p> <p>10.00-10.15: K. Berk (Rotterdam) 3. Weight reduction decreases soluble LR11 in patients with type 2 diabetes</p> <p>10.15-10.30: E. Toonen (Nijmegen) 4. Proteinase 3: a new link between inflammation, obesity and type 2 diabetes</p> <p>10.30-10.45: S. Udayappan (Amsterdam) 5. Administration of Eubacterium hallii improves insulin sensitivity and degree of liversteatosis in male db/db mice</p> <p>TO BE CONT'D</p>	<p>9.30-10.45 NVDO</p> <p>PS5: Klinische diabetologie</p> <p>Chair: Frits Holleman</p> <p>9.30-10.00: E. Donga (Tilburg) Slapenderwijs gezond blijven; de relatie tussen slaapdeprivatie & diabetes</p> <p>10.00-10.30: G-J. Biessels (Utrecht) Cognitie en diabetes</p> <p>10.30-11.00 S. Houweling (Utrecht) Mythisch, magisch, malafide: alternatieve behandelingen van diabetes</p>

10.45-11.30 Coffee break

Thursday 28 November 10.30-12.45 Parallel Sessions

Hevea

11.30-12.45 NVDO/NASO

PS1: Adipose Tissue Biology II (Cont'd)

Chair: Gijs Goossens

11.30-11.45: K. Gaens (Maastricht)

6. Pyridoxamine improves adiposity and insulin resistance in high-fed diet induced obese mice

11.45-12.00: W. Dijk (Wageningen)

7. Long-term cold exposure down-regulates Angptl4 expression in brown adipocytes

12.00-12.15: M. Boon (Leiden)

8. Brown adipose tissue volume is markedly lower in healthy lean adolescents from South Asian compared to white Caucasian origin

12.15-12.30: M. Kilicarslan (Amsterdam)

9. Adipose ChREBP-beta expression correlates with endogenous glucose production in lean men

12.30-12.45: K. Wouters (Maastricht)

10. Obesity induces CD11c⁺ macrophages in murine adipose tissue which are distinctive from, but resemble, dendritic cells

Renkum

11.30-12.45 NVDO/NASO

PS6: Substrate metabolism

Chair: Johan Jocken

11.30-11.45: M. Schooneman (Amsterdam)

1. γ -Butyrobetaine impairs glucose tolerance in mice on a high carbohydrate diet

11.45-12.00: Y. Oligschläger (Maastricht)

2. "Tour d'AMPK": Myocellular cycling of the energy sensor AMPK between free and glycogen-bound states

12.00-12.15: M. Soeters (Amsterdam)

3. Plasma acylcarnitine levels have limited predictive value for metabolic characteristics as insulin sensitivity and energy expenditure

12.15-12.30: M. Miglianico (Maastricht)

4. Toward selective targeting of muscular AMPK: in search of a small molecule to change AMPK cellular localization

12.30-12.45: T. Rigter (Amsterdam)

5. Towards best practice guidelines for genetic testing for Maturity-Onset Diabetes of the Young

Oosterbeek

11.30-12.45 NSDEG

PS7: Burden of diabetes in The Netherlands, glycemic control and complement activation

Chair: Jolien Beulens

11.30-11.45: A. Spijkerman (Bilthoven)

1. The prevalence and incidence of diabetes in The Netherlands in 2011: estimates based on GP-registries and a national health examination survey

11.45-12.00: S. Soedamah-muthu (Wageningen)

2. Glycemic control and all-cause mortality risk in type 1 diabetes patients: the EURODIAB Prospective Complications Study

12.00-12.15: S. Rauh (Amsterdam)

3. Predicting Glycated Haemoglobin in the Non-Diabetic General Population: a DIRECT Study

12.15-12.30: E. Hertle (Maastricht)

4. Complement activation products C5a and sC5b-9 are in a cross-sectional study associated with low-grade inflammation, but not with atherosclerosis: The CODAM study

12.30-12.45: N. Wlazlo (Eindhoven)

5. Complement factor 3 is longitudinally associated with insulin resistance, glucose tolerance, and incident type 2 diabetes mellitus over a 7-year follow-up period: the CODAM study

Bilderberg I & II

11.30-12.45 NVDO

PS5: Klinische diabetologie

Chair: Bastiaan de Galan

11.30-12.00: J. Jukema (Leiden)

Cardiale revascularisatie bij patiënten met diabetes; dotteren of opereren?

12.00-13.00: DEBAT

J. de Vries (Amsterdam)
E. Bazelmans (Nijmegen)

Vergoeding in de diabeteszorg: Meer glucosesensoren of meer psychologen?

Thursday 28 November 14.00-15.00 Parallel Sessions

12.45-14.00 Lunch break

<u>Bilderberg I & II</u>	<u>Renkum</u>	<u>Oosterbeek</u>	<u>Hertog</u>	<u>Hevea</u>
14.00-15.00 NVDO/NASO	14.00-15.00 NVDO/NASO	14.00-15.00 NSDEG	14.00-15.00 NVCD	14.00-15.00 PSAD
PS9: Cardiovascular Health I	PS10: Exercise	PS11: Diabetes, micro vascular complications and cancer	PS8: NVCD (program tbd)	PS12: PSAD (program tbd)
Chair: Erik Serne	Chair: Matthijs Hesselink	Chair: Annemieke Spijkerman	Chair: Sicco Bus	Chair: Maartje de Wit
14.00-14.15: M. Smits (Amsterdam) 1. Postprandial Haemodynamic Responses Are Altered in Uncomplicated Type 2 Diabetes	14.00-14.15: M. Catoire (Wageningen) 1. Fatty acid inducible myokine ANGPTL4 governs the lipid metabolic response to acute exercise	14.00-14.15: M. Weldegiorgis (Groningen) 1. Longitudinal eGFR trajectories in patients with type 2 diabetes	14.00-14.15: N. Schaper (Maastricht) 1. Charcot neuro-osteo-arthropathie: wat je niet kent, herken je niet	14.00-14.15: K. Tovote (Groningen) 1. Mindfulness-Based Cognitive Therapy (MBCT) and Cognitive Behavior Therapy (CBT) for treating depression in patients with diabetes: A randomized controlled trial
14.15-14.30: R. Kootte (Amsterdam) 2. Plasma trimethylamine N-oxide (TMAO) levels are associated with 18FDG-PET/CT determined vascular inflammation	14.15-14.30: S. Janssens (Eindhoven) 2. Exercise does not modulate postprandial lipid uptake in liver and skeletal muscle of healthy and diabetic rats	14.15-14.30: L. Engelen (Maastricht) 2. Higher urinary sodium excretion is weakly associated with albuminuria, but not with retinopathy in type 1 diabetes: the EURODIAB Study	14.30-14.45: J. Otte (Enschede) 2. Stage 4 and 5 chronic kidney disease in diabetes as an independent risk factor for foot ulceration and amputation	14.15-14.30: I. Hommel (Nijmegen) 2. Patients are insufficiently involved in perioperative diabetes care
14.30-14.45: W. Chen (Amsterdam) 3. The effect of exenatide compared to insulin glargine on exercise-related hemodynamics and metabolism in patients with type 2 diabetes and left ventricular systolic dysfunction	14.30-14.45: J. Luiken (Maastricht) 3. Contraction-induced glucose uptake requires dual signaling input: Consequence for muscular glucose utilization in diabetes	14.30-14.45: D. Muris (Maastricht) 3. Age, waist circumference and blood pressure are associated with skin microvascular flow motion in a healthy population: the Maastricht Study	14.45-15.00: C. Liu (Enschede) 3. Infrared dermal thermography for automatic detection of diabetic foot complications	14.30-14.45: M. van Vugt (Amsterdam) 3. Use of behavioral change techniques in web-based self-management programs for type 2 diabetes patients: a systematic review
14.45-15.00: M. Muskiet (Amsterdam) 4. Changes in Circadian Haemodynamics and Autonomic Nervous System Balance in Non-Hypertensive Uncomplicated Type 2 Diabetes	14.45-15.00: S. Alex (Wageningen) 4. Exercise training lowered hepatic fat in a steatotic mice model	14.45-15.00: A. Simon (Amsterdam) 4. Use of Glucose Lowering Drugs and the Risk of Adenocarcinoma Among Patients With Type 2 Diabetes: A Case-Control Study in The Netherlands		14.45-15.00: C. Stoop (Tilburg) 4. Screening for symptoms of depression and anxiety in people with type 2 diabetes treated in primary care – Who do we reach?
TO BE CONT'D				TO BE CONT'D

15.00-15.30 Coffee break

Thursday 28 November 15.30-17.00 Parallel Sessions

<u>Bilderberg I & II</u>	<u>Renkum</u>	<u>Oosterbeek</u>	<u>Hertog</u>	<u>Hevea</u>
<p>15.30-16.30 NVDO/NASO</p> <p>PS9: Cardiovascular Health II (Cont'd)</p> <p>Chair: Kristiaan Wouters</p> <p>15.30-15.45: J. Woerdeman (Amsterdam) 5. Proliferative retinopathy in type 1 diabetes is associated with cerebral microbleeds and decreased skin capillary density</p> <p>15.45-16.00: C. Boly (Amsterdam) 6. Cardiac microvascular perfusion defects precede insulin resistance in mildly obese mice</p> <p>16.00-16.15: M. Roerink (Nijmegen) 7. Cardiovascular risk factor management in patients with HIV and diabetes</p> <p>16.15-16.30: C. van Eupen (Maastricht) 8. Skin autofluorescence and plasma pentosidine are associated with higher pulse wave velocity in individuals with different glucose metabolism status: preliminary results from the Maastricht Study</p> <p>TO BE CONT'D</p>	<p>15.30-16.30 NVDO/NASO</p> <p>PS13: Imflammation I</p> <p>Chair: Sander Kersten</p> <p>15.30-15.45: M. Heemskerk (Leiden) 1. APOA5 plays a role in high-fat diet induced inflammation</p> <p>15.45-16.00: T. Gabriel (Amsterdam) 2. Glycoprotein Nonmetastatic Melanoma protein B (GPNMB) is induced in obese macrophages as a result of lysosomal stress</p> <p>16.00-16.15: L. van Beek (Leiden) 3. Fcγ- and ϵ-receptors do not play a role in the initial development of insulin resistance</p> <p>16.15-16.30: M. de Vries (Rotterdam) 4. Gender differences in glucose-dependent leukocyte activation in patients with type 2 diabetes mellitus, familial combined hyperlipidemia and healthy controls</p> <p>TO BE CONT'D</p>	<p>15.30-16.30 NSDEG</p> <p>PS14: Diabetes in clinical practice, socio-economic status and psychosocial stress</p> <p>Chair: Sabita Soedamah-Mutu</p> <p>15.30-15.45: A. Koopman (Amsterdam) 1. Socio-economic status – combination of occupation, education and income level – and diabetes risk; the Hoorn study</p> <p>15.45-16.00: S. de Vries (Groningen) 2. Potential overtreatment and undertreatment of diabetes in primary care after the introduction of performance measures</p> <p>16.00-16.15: F. Rutters (Amsterdam) 3. The association between psychosocial stress and mortality is mediated by life style and chronic diseases: the Hoorn Study</p> <p>16.15-16.30: I. van der Heide (Bilthoven) 4. Associations between health literacy, diabetes knowledge, self-management and health among adults with type 2 diabetes in The Netherlands</p>	<p>15.30-16.30 NVCD</p> <p>PS8: NVCD (Cont'd)</p> <p>Chair: Edgar Peters</p> <p>15.30-15.45: S. Bus (Amsterdam) 3. The efficacy of removable offloading devices to heal plantar foot ulcers in diabetic patients</p> <p>15.45-16.00: J. van Netten (Almelo) 4. The relation between peak pressure parameters in removable offloading devices and healing of neuropathic diabetic foot ulcers</p> <p>16.00-16.15: M. Schouten (Utrecht) 5. Ultrasound findings after surgical decompression of the tarsal tunnel in patients with painful diabetic polyneuropathy. A prospective, randomized, study</p> <p>16.15-16.30: Ledenvergadering</p>	<p>15.30-16.30 PSAD</p> <p>PS12: PSAD (Cont'd)</p> <p>Chair: Eelco van Duinkerken</p> <p>15.30-15.45: S. Rondags (Amsterdam) 5. Development and evaluation of a light psycho-educational group intervention with internet for insulin-dependent diabetes patients and problematic hypoglycaemia</p> <p>15.45-16.00: E. van Duinkerken (Amsterdam) 6. Selective cognitive decline is related to focal brain volume loss in type 1 diabetes patients with microangiopathy: a 4 year follow-up</p> <p>16.00-16.15: A. Nieuwesteeg (Tilburg) 7. The quality of parent-child interaction and disease-related parenting stress is associated with HbA1c and quality of life in young children with type 1 diabetes</p> <p>16.15-16.30: J. Menting (Nijmegen) 8. Chronic fatigue is highly prevalent in type 1 diabetes, but not related to glucose variability or hyperglycemia</p>

16.30-17.00 Coffee break

Thursday 28 November 17.00-20.00 Plenary Session

Bilderberg I & II

17.00-17.50 Gerritzen Award Ceremony for best thesis on diabetes research

Chair: Cees Tack

17.00-17.05 Introduction by the chairman

17.05-17.20 **Anne Vrieze (Amsterdam)**
The role of gut microbiota in human metabolism

17.20-17.35 **Hans van Hateren (Groningen)**
Diabetes care in old age

17.35-17.50 **Giesje Nefs (Tilburg)**
Diabetes and emotional distress: the need for a personalized approach

18.00-19.00 State-of-the-Art lecture

Prof. Chantal Mathieu

Strategies to prevent type 1 diabetes

19.00-20.00 Dr. F. Gerritzen Award Ceremony (cont'd)

19.00-19.05 Short address by sponsor

19.05-19.10 Announcement of the winner of the 28th Dr. F. Gerritzen Award

19.10-20.00 Dr. F. Gerritzen party, Rozenhage zaal

20.00-01.00 Dinner, drinks and music

Friday 29 November 09.30-11.00 Parallel / Plenary Sessions

08.30-09.15 Ledenvergadering NVDO

Bilderberg I & II

09.30-10.15 NVDO/NASO

PS9: Cardiovascular Health III (Cont'd)

Chair: Suat Simsek

9.30-9.45: E. Eringa (Amsterdam)

9. Human coronary artery disease is characterized by defects in coronary insulin signaling

9.45-10.00: E. van Poelgeest (Amsterdam)

10. AMPK α 2 regulates insulin-induced capillary recruitment through control over endothelial NO and endothelin-1 secretion

10.00-10.15: H. de Valk (Utrecht)

11. The importance of cardiovascular management in patients with cystic fibrosis after lung transplantation

TO BE CONT'D

Renkum

09.30-10.15 NVDO/NASO

PS2: Beta Cell Function II (Cont'd)

Chair: Mireille Serlie

9.30-9.45: S. Willekens (Nijmegen)

6. Proof of Principle Study: IBZM based imaging of transplanted islets of Langerhans

9.45-10.00: J. Kruit (Groningen)

7. MicroRNA-132 improves beta-cell function in high-fat diet fed mice

10.00-10.15: I. van der Kroon (Nijmegen)

8. Correlation of beta cell volume and SPECT signal in transplanted islets, using In-111 labeled exendin-3

Oosterbeek

09.30-10.15 NVDO/NASO

PS15: Nutrition

Chair: tbd

9.30-9.45: A. Maas (Eindhoven)

1. Incorporating different food products and composite meals in the Eindhoven Diabetes Education Simulator

9.45-10.00: K. Bouter (Den Bosch)

2. Stability and long storage life of a small dose of metformin in yoghurt

10.00-10.15: J. Ellenbroek (Leiden)

3. Long-term ketogenic diet leads to weight gain, glucose intolerance and reduced beta-cell mass in mice

Hevea

9.30-10.15 NVDO/NASO

PS16: Food Intake & Obesity

Chair: Esther Phielix

9.30-9.45: N. Radhakishun (Amsterdam)

1. The impact of Ramadan fast on BMI and cardiometabolic factors in ethnic obese adolescents

9.45-10.00: S. Doornweerd (Amsterdam)

2. Low birth weight is associated with alterations in dietary intake in later life independent of genetic factors

10.00-10.15: M. Rijnsburger (Amsterdam)

3. Concomitant Intracarotid Infusion of Intralipid and Glucose Towards the Brain Alters Glucose Metabolism not Accompanied by Changes in Neuropeptide Y Expression

10.15-10.30 Coffee break

Bilderberg I & II

10.30-11.00 NVDO- Prof.dr. J. Terpstra Award Ceremony

Chairs: Prof.dr C.D.A. Stehouwer and Dr. I.M. Jazet

10.30-10.40: Charlotte Geelen (winner award 2012)

10.40-10.50: Announcement of the 2013 winner

Friday 29 November 11.30-13.30 Parallel / Plenary Sessions

11.00-11.30 Coffee break

Bilderberg I & II

11.30-12.15 NVDO/NASO

PS9: Cardiovascular Health IV (Cont'd)

Chair: tbd

11.30-11.45: Y. Angin (Maastricht)
12. Involvement of zinc in the fatty acid transport function of CD36: a novel link to type 2 diabetes

11.45-12.00: M. Stolze (Utrecht)
13. Real-time continuous glucose monitoring during pregnancy on glycaemic control and maternal and fetal outcomes

12.00-12.15: R. Meijer (Amsterdam)
14. Perivascular adipose tissue characteristics are related with in vivo microvascular and metabolic insulin sensitivity

Renkum

11.30-12.15 NVDO/NASO

PS13: Inflammation II (Cont'd)

Chair: Rinke Stienstra

11.30-11.45: B. Guigas (Leiden)
5. Protective effect of chronic helminth infection against diet-induced obesity

11.45-12.00: R. van Genugten (Amsterdam)
6. DPP-4 inhibition as preventive strategy for the diabetogenic effects of glucocorticoids in men with the metabolic syndrome - a randomised controlled trial

12.00-12.15: S. van der Tuin (Leiden)
3. Plasma cholesterol ester transfer protein: a biomarker for hepatic macrophages

Oosterbeek

11.30-12.15 NVDO/NASO

PS17: Glucose homeostasis & the GI tract

Chair: Patrick Schrauwen

11.30-11.45: S. van Nierop (Amsterdam)
1. Postprandial plasma glycine-conjugated deoxycholic acid levels correspond with plasma insulin levels in healthy subjects

11.45-12.00: L. 't Hart (Leiden)
2. The CTRB1/2 locus encoding chymotrypsin is associated with diabetes risk and DPP-4 inhibitor treatment response via the incretin pathway

12.00-12.15: D. Stenvers (Amsterdam)
3. The daily rhythm of glucose tolerance is inverted in type 2 diabetes

Hevea

11.30-12.15 NVDO/NASO

PS4: Liver Biology II (Cont'd)

Chair: Patrick Rensen

11.30-11.45: J. van Diepen (Nijmegen)
6. Hepatic vanin-1 is highly induced by PPAR-alpha and a key mediator of hepatic lipid metabolism in the fasted state

11.45-12.00: M. van Albada (Groningen)
7. Genetic defects in hepatocyte nuclear factor-1 β : patient presentation and phenotype

12.00-12.15: E. Koopman (Amsterdam)
8. Effects of a hypercaloric snacking diet on liver fat and insulin sensitivity in lean men

12.15-12.45 Coffee break

Bilderberg I & II

12.45-13.30 NVDO/NASO

PS18: BEST MEETING ABSTRACTS

Chair: Matthijs Hesselink

12.45-13.00 L. van Bloemendaal (Amsterdam)
1. Exenatide blunts hyperactivation in CNS reward and satiety circuits elicited by viewing food cues in obese individuals

13.00-13.15 W. Woliner-van der Weg (Nijmegen)
2. Quantification of the beta cell mass based on ¹¹¹In-Exendin imaging in patients with type 1 diabetes and healthy controls

13.15-13.30 H. Spijker (Leiden)
3. Loss of beta-cell identity occurs in type 2 diabetes and is associated with islet amyloid depositions

13.30-14.00 Farewell lunch