



# Science Report 2013

Profil Germany

## Summary

<b>Scientific Publications</b>	<b>No.</b>	<b>ΣIF</b>	<b>No. (Neuss)</b>	<b>ΣIF Neuss</b>
Original Articles	25	70.939	21	68.676
Reviews	10	25.818	9	22.958
Short Reports	1	3.241	1	3.241
Letters / Comments	2	3.010	2	3.010
Book Chapters	1	0	1	0
<b>Sum</b>	<b>39</b>	<b>103.008</b>	<b>34</b>	<b>97.885</b>
<b>Scientific Congress Presentations</b>				
Oral Presentations			16	
Poster Presentations			34	
<b>Advanced Training Courses</b>				
Science Sessions			6	
Trainings with External Participants			7	
<b>Granted Research Projects</b>			6	
<b>Awards &amp; Appointments</b>			5	

## Details

	Profil author first or last position		Profil Neuss author first or last position		Profil author first or last position and study performed in Neuss	
	No.	ΣIF	No.	ΣIF	No.	ΣIF
<b>Scientific Publications</b>						
Original Articles	13	28.447	9	26.184	6	23.278
Reviews	7	15.883	6	13.023		
Short Reports	1	3.241	1	3.241		
Letters / Comments	2	3.010	2	3.010		
Book Chapters	1		1			
<b>Sum</b>	<b>23</b>	<b>50.581</b>	<b>18</b>	<b>45.458</b>	<b>6</b>	<b>23.278</b>

# Scientific Publications

## Original Articles

1. Buehlmeier J, Mulder E, Noppe A, Frings-Meuthen P, Angerer O, Rudwill F, Biolo G, Smith SM, Blanc S, Heer M  
A combination of whey protein and potassium bicarbonate supplements during head-down-tilt bed rest: presentation of a multidisciplinary randomized controlled trial (MEP study).  
**Acta Astronaut** 95: 82-91, <http://dx.doi.org/10.1016/j.actaastro.2013.11.001>, 2013 IF<sub>2012</sub>: 0.701
2. Flint A, Kapitza C, Zdravkovic M  
The once-daily human GLP-1 analogue liraglutide impacts appetite and energy intake in patients with type 2 diabetes after short-term treatment.  
**Diabetes Obes Metab** 15(10): 958-962, 2013 IF<sub>2012</sub>: 5.181
3. Frings-Meuthen P, Boehme G, Liphardt AM, Baecker N, Heer M, Rittweger J  
Sclerostin and DKK1 levels during 14 and 21 days of bed rest in healthy young men.  
**J Musculoskelet Neuronal Interact** 13(1): 45-52, 2013 IF<sub>2012</sub>: 2.453
4. Greiner H, Schaller-Ammann R, Huber A, O'Connell M, Krejci J, Porro G, Korsatko S, Gurban J, Deller S, Brunner M, Berghofer A, Priedl J, Zijlstra E, Heise T, Pieber TR, Schaupp L  
Continuous blood glucose monitoring (cgm) system based on intravenous microdialysis and glucose sensing.  
**Biomed Tech (Berl)**: pii: /j/bmte.2013.58.issue-s1-l/bmt-2013-4224/bmt-2013-4224.xml.  
doi: 10.1515/bmt-2013-4224, 2013 IF<sub>2012</sub>: 1.157
5. Heise T, Seman L, Macha S, Jones P, Marquart A, Pinnetti S, Woerle HJ, Dugi K  
Safety, tolerability, pharmacokinetics, and pharmacodynamics of multiple rising doses of empagliflozin in patients with type 2 diabetes mellitus.  
**Diabetes Ther** 4(2): 331-345, 2013 IF<sub>2012</sub>: -
6. Heise T, Seewaldt-Becker E, Macha S, Hantel S, Pinnetti S, Seman L, Woerle HJ  
Safety, tolerability, pharmacokinetics and pharmacodynamics following 4 weeks' treatment with empagliflozin once daily in patients with type 2 diabetes.  
**Diabetes Obes Metab** 15(7): 613-621, 2013 IF<sub>2012</sub>: 5.181

7. Hoffmann L, Brauers G, Gehrman T, Häussinger D, Mayatepek E, Schliess F, Schwahn BC  
Osmotic regulation of hepatic betaine metabolism.  
**Am J Physiol Gastrointest Liver Physiol** 304(9): G835-G846, 2013 IF<sub>2012</sub>: 3.649
  
8. Kapitza C, Forst T, Coester HV, Poitiers F, Ruus P, Hincelin-Mery A  
Pharmacodynamic characteristics of lixisenatide once daily vs liraglutide once daily in patients with type 2 diabetes insufficiently controlled on metformin.  
**Diabetes Obes Metab** 15(7): 642-649, 2013 IF<sub>2012</sub>: 5.181
  
9. Karababa A, Görg B, Schliess F, Häussinger D  
O-GlcNAcylation as a novel ammonia-induced posttranslational protein modification in cultured rat astrocytes.  
**Metab Brain Dis**: doi:10.1007/s11011-013-9454-7, 2013 IF<sub>2012</sub>: 2.333
  
10. Kolb H, Lückemeyer K, Heise T, Herder C, Schloot NC, Koenig W, Heinemann L, Martin S;  
on behalf of the DIATOR Study Group  
The systemic immune network in recent onset type 1 diabetes: central role of interleukin-1 receptor antagonist (DIATOR Trial).  
**PLOS ONE** 8(8): 1-7, e72440, 2013 IF<sub>2012</sub>: 3.730
  
11. Lane HW, Bourland C, Barrett A, Heer M, Smith SM  
The role of nutritional research in the success of human space flight.  
**Adv Nutr** 4(5): 521-523, 2013 IF<sub>2012</sub>: 3.245
  
12. Liebl A, Davidson J, Mersebach H, Dykiel P, Tack CJ, Heise T  
A novel insulin combination of insulin degludec and insulin aspart achieves a more stable overnight glucose profile than insulin glargine: results from continuous glucose monitoring in a proof-of-concept trial.  
**J Diabetes Sci Technol**: 7(5):1328-1336, 2013 IF<sub>2012</sub>: -
  
13. Luijf YM, Mader JK, Doll W, Pieber T, Farret A, Place J, Renard E, Bruttomesso D, Filippi A, Avogaro A, Arnolds S, Benesch C, Heinemann L Devries JH on behalf of the AP@home consortium  
Accuracy and reliability of continuous glucose monitoring systems: a head-to-head comparison.  
**Diabetes Technol Ther** 15(8): 721-726, 2013 IF<sub>2012</sub>: 2.205
  
14. Luijf YM, Arnolds S, Avogaro A, Benesch C, Bruttomesso D, Farret A, Heinemann L, Place J, Renard E, Scotton R, Devries JH on behalf of the AP@home consortium  
Patch pump versus conventional pump: postprandial glycemic excursions and the influence of wear time.  
**Diabetes Technol Ter** 15(7): 575-579, 2013 IF<sub>2012</sub>: 2.205

15. Luijf YM, DeVries JH, Zwinderman K, Leerathna L, Nodale M, Caldwell K, Kumareswaran K, Elleri D, Allen JM, Wilinska ME, Evans ML, Hovorka R, Doll W, Ellmerer M, Mader JK, Renard E, Place J, Farret A, Cobelli C, Del Favero S, Dalla Man C, Avogaro A, Bruttomesso D, Filippi A, Scotton R, Magni L, Lanzola G, Di Palma F, Toffanin C, Arnolds S, Benesch C, Heinemann L on behalf of the AP@home consortium  
Day and night closed-loop control in adults with type 1 diabetes mellitus: A comparison of two closed-loop algorithms driving continuous subcutaneous insulin infusion versus patient self-management.  
**Diabetes Care** 36(12): 3882-3887, 2013 IF<sub>2012</sub>: 7.735
  
16. Pfützner A, Hengesbach C, Demircik F, Schipper C, Forst T, Musholt PB  
Performance of blood glucose meters in compliance with current and future clinical ISO15197 accuracy criteria.  
**Curr Med Res Opin**: doi:10.1185/03007995.2013.858617, 2013 IF<sub>2012</sub>: 2.263
  
17. Pfützner A, Schipper C, Ramljak S, Flacke F, Sieber J, Forst T, Musholt PB  
Evaluation of the effects of insufficient blood volume samples on the performance of blood glucose self-test meters.  
**J Diabetes Sci Technol** 7(6):1522-1529, 2013 IF<sub>2012</sub>: -
  
18. Pfützner A, Musholt PB, Schipper C, Demircik F, Ramljak S, Hengesbach C, Flacke F, Sieber J, Forst T  
Blood glucose meters employing dynamic electrochemistry are stable against hematocrit interference in a laboratory setting.  
**J Diabetes Sci Technol** 7(6):1530-1537, 2013 IF<sub>2012</sub>: -
  
19. Polidori D, Sha S, Ghosh A, Plum-Mörschel L, Heise T, Rothenberg P  
Blood glucose meters employing dynamic electrochemistry are stable against hematocrit interference in a laboratory setting.  
**J Clin Endocrinol Metab** 98(5): E867-E871, 2013 IF<sub>2012</sub>: 6.430
  
20. Ramljak S, Musholt PB, Schipper C, Flacke F, Sieber J, Borchert M, Forst T, Pfützner A  
The Precision study: examining the inter- and intra-assay variability of replicate measurements of BGStar, iBGStar and 12 other blood glucose monitors.  
**Expert Opin Med Diagn** 7(6): 511-516, 2013 IF<sub>2012</sub>: -
  
21. Ren H, Plum-Mörschel L, Gutierrez-Juarez R, Lu TY, Kim-Muller JY, Heinrich G, Wardlaw SL, Silver R, Accili D  
Blunted refeeding response and increased locomotor activity in mice lacking FoxO1 in synapsin-cre-expressing neurons.  
**Diabetes** 62(10): 3373-3383, 2013 IF<sub>2012</sub>: 7.895

22. Rudwill F, Blanc S, Gauquelin-Koch G, Chouker A, Heer M, Simon C, Bergouignan A  
Effects of different levels of physical inactivity on plasma visfatin in healthy normal-weight men.  
**Appl Physiol Nutr Metab** 38(6): 689-693, 2013 IF<sub>2012</sub>: 2.009
  
23. Sinha VP, Howey DC, Choi SL, Mace KF, Heise T  
Steady-state pharmacokinetics and glucodynamics of the novel, long-acting basal insulin LY2605541 dosed once-daily in patients with type 2 diabetes mellitus.  
**Diabetes Obes Metab**: doi: 10.1111/dom.12222, 2013 IF<sub>2012</sub>: 5.181
  
24. Stirban A  
Noninvasive skin fluorescence spectroscopy for diabetes screening.  
**J Diabetes Sci Technol** 7(4): 1001-1004, 2013 IF<sub>2012</sub>: -
  
25. Stirban A, Pop A, Fischer A, Heckermann S, Tschoepe D  
Variability of skin autofluorescence measurement over 6 and 12 weeks and the influence of benfotiamine treatment.  
**Diabetes Technol Ther** 15(9): 733-737, 2013 IF<sub>2012</sub>: 2.205

## Reviews

1. Arnolds S, Heise T, Flacke F, Sieber J  
Common standards of basal insulin titration in type 2 diabetes.  
**J Diabetes Sci Technol** 7(3): 771-788, 2013 IF<sub>2012</sub>: -
2. Forst T, Pfützner A  
Pharmacological profile, efficacy and safety of lixisenatide in type 2 diabetes mellitus.  
**Expert Opin Pharmacother** 14(16): 2281-2296, 2013 IF<sub>2012</sub>: 2.860
3. Frier BM, Russell-Jones D, Heise T  
A comparison of insulin detemir and neutral protamine Hagedorn (isophane) insulin in the treatment of diabetes: a systematic review.  
**Diabetes Obes Metab** 15(11): 978-986, 2013 IF<sub>2012</sub>: 5.181
4. Görg B, Schliess E, Häussinger D  
Osmotic and oxidative/nitrosative stress in ammonia toxicity and hepatic encephalopathy.  
**Arch Biochem Biophys** 536(2): 158-163, 2013 IF<sub>2012</sub>: 3.370
5. Heise T, Meneghini LF  
Insulin stacking vs. therapeutic accumulation: understanding the differences.  
**Endocrine Pract** 6: 1-32, 2013 IF<sub>2011</sub>: 2.486
6. Lane HW, Bourland C, Barrett A, Heer M, Smith SM  
The role of nutritional research in the success of human space flight.  
**Adv Nutr** 4(5): 521-523, 2013 IF<sub>2012</sub>: 3.245
7. Stirban A, Heinemann L  
Messung der Autofluoreszenz der Haut.  
**Diabetes, Stoffwechsel und Herz** 22: 225-236, 2013 IF<sub>2012</sub>: 0.175
8. Stirban A, Gawlowski T, Roden M  
Vascular effects of advanced glycation endproducts: Clinical effects and molecular mechanisms.  
**Mol Metab**: dx.doi.org/10.1016/j.molmet.2013.11.006, 2013 IF<sub>2012</sub>: -
9. Varkonyi T, Putz, Keresztes K, Martos T, Lengyel C, Stirban A, Jermendy G, Kempler P  
Current options and perspectives in the treatment of diabetic neuropathy.  
**Curr Pharm Des** 19(27): 4981-5007, IF<sub>2012</sub>: 3.311



10. Vora J, Heise T  
Variability of glucose-lowering effect as a limiting factor in optimizing basal insulin therapy.  
**Diabetes Obes Metab** 15(8): 701-712, 2013 IF<sub>2012</sub>: 5.181

## Short Reports

1. Stirban A, Pop A, Tschoepe D  
A randomized, double-blind, cross-over, placebo-controlled trial to investigate the effects of a 6 weeks benfotiamine treatment on postprandial vascular function and variables of autonomic nerve function in type 2 diabetes mellitus.  
**Diabet Med** 30(10): 1204-1208, 2013 IF<sub>2012</sub>: 3.241

## Letters / Comments

1. Jax T  
It may be premature to conclude a class effect of DPP-4 inhibitors on attenuating endothelial function measured by flow-mediated vasodilatation.  
eLetter referring to *Dipeptidyl peptidase-4 inhibitors attenuate endothelial function as evaluated by flow-mediated vasodilatation in type 2 diabetic patients* by Ayaori et al.  
**JAHA** 2:e003277, doi: 10.1161/JAHA.112.003277, 2013 IF<sub>2012</sub>: -
2. Stirban A, Tschoepe D  
Comment on *Advanced glycation endproducts in food and their effects on health* by Poulsen et al. in *Food Chem Toxicol* 60: 10-37, 2013  
**Food Chem Toxicol**: S0278-6915(13)00815-6 [pii];10.1016/j.fct.2013.12.001 [doi], 2013  
IF<sub>2012</sub>: 3.010

## Book Chapters

1. Heise T  
Technische Aspekte der Blutzuckerselbstmessung.  
In: Meier JJ, Nauck MA, editors. Kursbuch Klinische Diabetologie. Mainz,  
Kirchheim-Verlag; 2013

# Scientific Congress Presentations

## Oral Presentations

### 6<sup>th</sup> International Conference on Advanced Technologies & Treatments for Diabetes, Paris, France, 27<sup>th</sup> February – 2<sup>nd</sup> March, 2013

1. Luijf YM, DeVries JH, Mader JK, Doll W, Place J, Renard E, Bruttomesso D, Avogaro A, Benesch C, Heinemann L on behalf of the AP@home Consortium  
Accuracy and reliability of current CGM systems; a direct comparison.  
**Diabetes Technol Ther** 15(S1): A-13, O-38, ATTD 2013 yearbook

### 4<sup>th</sup> FDA/JDRF/NIH Workshop on Innovation towards an Artificial Pancreas, Bethesda, MD, USA, 9<sup>th</sup> – 10<sup>th</sup> Apr, 2013

1. Heinemann L on behalf of the AP@home consortium  
Lessons learned from clinical studies on the way to daily life usage.  
4<sup>th</sup> FDA/JDRF/NIH Artificial Pancreas Meeting, 2013

### 48. Jahrestagung der Deutschen Diabetes-Gesellschaft, Leipzig, Germany, 8<sup>th</sup> – 11<sup>th</sup> May, 2013

1. Heinemann L  
Diabetes-Technologie: Eine Standortbestimmung. Kongressspezifisches Symposium: Neue Studien zur Blutzuckerbestimmung, Artificial Pancreas und Diabetes-Technologie.  
DDG Hauptprogramm (ePaper): 85, 2013
2. Heise T  
Pharmakokinetische Besonderheiten im Kindes- und Jugendalter. AG Pädiatrische Diabetologie der DDG.  
DDG Hauptprogramm (ePaper): 82, 2013
3. Kolb H, Lückemeyer K, Heise T, Herder C, Schloot NC, Koenig W, Heinemann L, Martin S  
Assoziation zwischen Immunmediatoren und metabolischen Parametern bei Typ 1 Diabetes: zentrale Rolle von Interleukin 1 Rezeptorantagonist.  
**Diabetologie & Stoffwechsel** 8(S01): FV73, 48. DDG, 2013

**American Diabetes Association´s 73<sup>th</sup> Scientific Sessions, Chicago, IL, USA, 21<sup>st</sup> – 25<sup>th</sup> June, 2013**

1. Dahmen R, Bergmann K, Lehmann A, Tillner J, Jax T, Heise T, Becker RHA  
New insulin glargine U300 formulation evens and prolongs steady state PK and PD profiles during euglycemic clamp in patients with type 1 diabetes (T1DM).  
**Diabetes** 62(S1): A29, 113-OR, 2013

**34<sup>th</sup> Annual International Gravitational Physiology Meeting, Toyohashi, Japan, 23<sup>rd</sup> – 28<sup>th</sup> June, 2013**

1. Heer M  
Space exploration: What are the nutritional requirements?  
34<sup>th</sup> ISGP Meeting, 2013
2. Baecker N, Buehlmeier J, Hand O, Frings-Meuthen P, Vassilieva G, Morukov B, Heer M  
Bone turnover in long-term space flight simulation (MARS500).  
34<sup>th</sup> ISGP Meeting, 2013

**19<sup>th</sup> IAA Humans in Space Symposium, Köln, Germany 7<sup>th</sup> – 12<sup>th</sup> July, 2013**

1. Heer M, Baecker N, Frings-Meuthen P  
High dietary NaCl- and protein intake: effects on bone turnover.  
HIS Symposium, 2013

**35<sup>th</sup> ESPEN Congress on Clinical Nutrition & Metabolism, Leipzig, Germany  
31<sup>st</sup> August - 3<sup>rd</sup> September, 2013**

1. Heer M, Buehlmeier J, Smith SM, Baecker N, Frings-Meuthen P  
Effects of potassiumbicarbonate on bone resorption during high protein in bed rest (MEP Study).  
**Clin Nutr** 32(S1): S9, OP022, 2013

**1<sup>st</sup> National Conference in Diabetic Neuropathy and Diabetic Foot with International Participation, Bucharest, Romania 17<sup>st</sup> – 20<sup>st</sup> October, 2013**

1. Stirban A  
From diabetic neuropathy to microvascular changes and back.  
1<sup>st</sup> Neurodiab Conference, 2013

**7. Herbsttagung der Deutschen Diabetes Gesellschaft, Berlin, Germany, 15<sup>th</sup> – 16<sup>th</sup> November, 2013**

1. Stirban A  
Sensomotorische Neuropathie.  
DDG Symposium: Diabetologie trifft Neurologie I  
7. DDG Herbsttagung, 2013
2. Stirban A  
Endotheliale Dysfunktion bei Diabetes mellitus.  
DDG Symposium: Diabetologie trifft Angiologie I  
7. DDG Herbsttagung, 2013

**66<sup>th</sup> Annual Scientific Meeting of the Gerontological Society of America, New Orleans, MD, USA, 20<sup>th</sup> – 24<sup>th</sup> November, 2013**

1. Heer M, Ferrucci L  
Physiological adaptation to bed rest and ability to recover: a model of resiliency in aging.  
GSA Annual Scientific Meeting, 2013
2. Heer M  
Is bone turnover in bed rest, and strategies used to mitigate it valid for aging processes?  
GSA Annual Scientific Meeting, 2013

**International Diabetes Federation, World Diabetes Congress 2013, Melbourne, Australia, 2<sup>nd</sup> - 6<sup>th</sup> December, 2013**

1. Bode B, Heise T, Pieber TR, Johansen T, Rasmussen S, Russel-Jones D  
Rates of confirmed hypoglycaemia in type 1 and type 2 diabetes are correlated with within-subject variability in fasting blood glucose.  
IDF 2013, OP-0068, 2013

## Poster Presentations

### 6<sup>th</sup> International Conference on Advanced Technologies & Treatments for Diabetes, Paris, France, 27<sup>th</sup> February – 2<sup>nd</sup> March, 2013

1. Keith S, McVey E, Sutter D, Kapitza C, Nosek L, Judge K, Pettis RJ  
Pharmacokinetics and feasibility of insulin lispro microneedle-based intradermal (ID) infusion.  
**Diabetes Technol Ther** 15(S1): A-85, P-164, ATTD 2013 yearbook
2. Schaller-Ammann R, Greiner H, Huber A, O'Connell M, Krejci J, Porro G, Korsatko S, Gurban J, Deller S, Brunner M, Berghofer A, Priedl J, Zijlstra E, Heise T, Pieber TR, Schaupp L  
Continuous blood glucose monitoring system using intravenous microdialysis and glucose sensing.  
**Diabetes Technol Ther** 15(S1): A-72, P-128, ATTD 2013 yearbook

### Diabetes UK Professional Conference 2013, Manchester, UK, 13<sup>th</sup> – 15<sup>th</sup> March, 2013

1. Heise T, Nosek L, Coester HV, Roepstorff C, Segal S, Lassota N  
Steady state is reached within two to three days of once-daily administration of ultra-long-acting insulin degludec.  
**Diabet Med** 30(S1): 73, P146, 2013

### 119<sup>th</sup> Kongress der Deutschen Gesellschaft für Innere Medizin e.V., Wiesbaden, Germany, 6<sup>th</sup> - 9<sup>th</sup> April, 2013

1. Abdollahnia M, Wilhelm B, Kurtzhals P, Steiner U, Heise T  
Multihexamerbildung: neuartiger Verzögerungsmechanismus als Grundlage für die lange blutzuckersenkende Wirkung von Insulin degludec.  
**Der Internist** 54(S1): 16, P-015, 2013
2. Jax T, Hövelmann U, Hermanski L, Nosek L, Kapitza C, Heise T, Heinemann L  
Systematic evaluation of the influence of hyperglycemia on diastolic myocardial function.  
**Der Internist** 54(S1): 82, P-168, 2013

### Experimental Biology, Boston, MA, USA, 20<sup>th</sup> – 24<sup>th</sup> April, 2013

1. Heer M, Buehlmeier J, Smith SM, Baecker N, Frings-Meuthen P  
KHCO<sub>3</sub> prevents increase in bone resorption with high protein in bed rest (MEP Study).  
**FASEB J** 27: 615.15, 2013



**American Association of Clinical Endocrinologists (AACE) 22<sup>nd</sup> Annual Scientific and Clinical Congress, Phoenix, AZ, USA, 1<sup>st</sup> – 5<sup>th</sup> May, 2013**

1. Bode BW, Heise T, Pieber T, Johansen T, Rasmussen S, Russell-Jones D  
Higher rates of confirmed hypoglycemia are associated with greater within-subject variation in fasting plasma glucose in patients with type 1 or type 2 diabetes: a meta-analysis.  
Abstract 1104, 22<sup>nd</sup> AACE 2013

**American Diabetes Association's 73<sup>rd</sup> Scientific Sessions, Chicago, IL, USA, 21<sup>st</sup> – 25<sup>th</sup> June, 2013**

1. Heise T, Nosek L, Hastrup H, Chenji S, Klein O, Haahr H  
IDegAsp shows distinct prandial and basal glucose-lowering effects at steady state in subjects with type 1 diabetes.  
**Diabetes** 62(S1): A235, 926–P, 2013
2. Heise T, Nosek L, Klein O, Coester HV, Roepstorff C, Svendsen AL, Haahr H  
IDegAsp produces dose-proportional glucose-lowering effect in subjects with type 1 diabetes.  
**Diabetes** 62(S1): A241, 947–P, 2013
3. Kazda CM, Garhyan P, Ding Y, Kelly RP, Hardy TA, Kapitza C  
A euglycemic clamp pilot study assessing the effects of the glucagon receptor antagonist LY2409021 on 24-hour insulin requirement in patients with T1DM.  
**Diabetes** 62(S1A): LB18, 64–LB, 2013
4. Morrow L, Heise T, Hompesch M, Pieber TR, Häring H-U, Kapitza C, Abt M, Ramsauer M, Fürst-Recktenwald S  
Metabolic effects and safety of two selective 11 $\beta$ -HSD1 inhibitors (RO5093151 (RO151) and RO5027838 (RO838) in metformin-treated patients with type 2 diabetes (T2DM).  
**Diabetes** 62(S1): A293, 1128–P, 2013
5. Patel S, Heise T, Larbig M, Weber-Born S, Seck T, Hehnke U, Woerle HJ, Dugi K  
The dipeptidyl peptidase (DPP)-4 inhibitor linagliptin improves  $\beta$ -cell function and postprandial glucose in type 2 diabetes (T2DM).  
**Diabetes** 62(S1): A296, 1138–P, 2013
6. Sha S, Polidori D, Heise T, Natarajan J, Artis E, Wang SS, Vaccaro N, Rothenberg P, Stirban A  
Effect of canagliflozin (CANA) 300 mg on C-peptide clearance (CLCpep).  
**Diabetes** 62(S1): A291, 1122–P, 2013

7. Tillner J, Bergmann K, Teichert L, Dahmen R, Heise T, Becker RHA  
Euglycemic clamp profile of new insulin glargine U300 formulation in patients with type 1 diabetes (T1DM) is different from glargine U100.  
**Diabetes** 62(S1): A234, 920–P, 2013
8. Topp BG, Geiser JS, Soon DKW, Heise T, Michael MD, Jacober SJ, Beals JM, Sinha VP  
Effects of a novel basal insulin, LY2605541, on hepatic glucose output and muscle glucose uptake: a physiology based simulation analysis.  
**Diabetes** 62(S1): A231, 913–P, 2013

#### **19<sup>th</sup> IAA Humans in Space Symposium, Köln, Germany 7<sup>th</sup> – 12<sup>th</sup> July, 2013**

1. Liphardt AM, Mündermann A, Koo S, Andriacchi TP, Achtzehn S, Heer M, Mester J  
Response of biomarkers of cartilage metabolism to immobilisation during 21-days of HDT-bed rest.  
HIS Symposium, 2013
2. Beck L, Mulder E, Gauger P, Titze J, Rauh M, Rakova N, Jüttner K, May F, Heer M, Baecker N, Chernogorov N, Vassilieva G, Morukov B, Rittweger J, Gerzer R  
MARS520: Ambulatory blood pressure monitoring during long-term confinement.  
HIS Symposium, 2013

#### **49<sup>th</sup> Annual Meeting of the European Association for the Study of Diabetes (EASD), Barcelona, Spain, 23<sup>rd</sup> – 27<sup>th</sup> September, 2013**

1. Bode BW, Heise T, Pieber TR, Johansen T, Rasmussen S, Russell-Jones DL  
Higher rates of confirmed hypoglycaemia are associated with greater within-subject variability in fasting blood glucose in type 1 and type 2 diabetes: a meta-analysis.  
**Diabetologia** 56(S1): S423, A1052, 2013
2. Ferrannini E, Muscelli E, Frascerra S, Baldi S, Mari A, Heise T, Broedl UC, Woerle HJ  
Metabolic response to sodium-glucose transporter 2 (SGLT2) inhibition with empagliflozin in patients with type 2 diabetes.  
**Diabetologia** 56(S1): S372, A932, 2013
3. Fürst-Recktenwald S, Heise T, Hompesch M, Pieber T, Haering H-U, Kapitza C, Abt M, Ramsauer M, Morrow L  
Metabolic effects and safety of two selective 11 $\beta$ -HSD1 inhibitors (RO5093151 (RO151) and RO5027838 (RO838)) in metformin-treated patients with type 2 diabetes.  
**Diabetologia** 56(S1): S407, A1015, 2013

4. Heise T, Nosek L, Hastrup H, Chenji S, Klein O, Haahr H  
IDegAsp shows distinct prandial and basal glucose-lowering effects at steady state in subjects with type 1 diabetes.  
**Diabetologia** 56(S1): S418, A1040, 2013
5. Jax T, Heise T, Dahmen R, Bergmann K, Lehmann A, Tillner J, Becker RHA  
New insulin glargine formulation has a flat and prolonged steady state profile in subjects with type 1 diabetes.  
**Diabetologia** 56(S1): S414, A1029, 2013
6. Kapitza C, Garhyan P, Ding Y, Kelly RP, Hardy TA, Kazda CM  
A euglycaemic clamp pilot study assessing the effects of the glucagon receptor antagonist LY2409021 on 24-hour insulin requirement in patients with type 1 diabetes mellitus.  
**Diabetologia** 56(S1): S235, A576, 2013
7. Nosek L, Heise T, Klein O, Coester HV, Roepstorff C, Svendsen A, Haahr H  
IdegAsp produces a dose-proportional glucose-lowering effect in subjects with type 1 diabetes.  
**Diabetologia** 56(S1): S418, A1041, 2013
8. Smulders RA, Leeflang S, Schliess F, Jax T, Kurosaki E, Kadokura T  
The effect of ipragliflozin on the total glucose turnover after OGTT in healthy subjects and patients with type 2 diabetes mellitus.  
**Diabetologia** 56(S1): S399, A997, 2013
9. Tillner J, Bergmann K, Teichert L, Dahmen R, Heise T, Becker RHA  
Euglycaemic single dose clamp profile of new insulin glargine formulation in subjects with type 1 diabetes is flat and prolonged.  
**Diabetologia** 56(S1): S415, A1033, 2013

**16<sup>th</sup> Annual CDA/CSEM Professional Conference and Annual Meeting, Montreal, QC, Canada  
17<sup>th</sup> – 20<sup>th</sup> October, 2013**

1. Bode BW, Heise T, Pieber T; Johansen T, Rasmussen S, Nazeri A, Russell-Jones DL  
Higher rates of confirmed hypoglycemia are associated with greater within-subject variation in fasting blood glucose in patients with type 1 and type 2 diabetes: a meta-analysis.  
**Can J Diabetes** 37(S4): S52-S53, 2013

**13<sup>th</sup> Diabetes Technology Meeting, San Francisco, CA, USA, 31<sup>st</sup> October – 2<sup>nd</sup> November, 2013**

1. Benesch C, Haensler J, Heise T  
ClampArt, a novel device for automated glucose clamps, shows high clamp quality and utility.  
**J Diabetes Sci Technol**: 8(in press) A7, 2014

2. Haensler J, Benesch C, Heise T  
Improving clamp quality with ClampArt, a novel device for automated glucose clamps: More reliable blood glucose measurements through a new sensor technology.  
**J Diabetes Sci Technol**: 8(in press) A40, 2014
  
3. Heise T, Nosek L, Dellweg S, Zijlstra E, Præstmark KA, Qvist M, Gorsøe Kjeldsen B, Kildegård J, Nielsen G, Sparre T  
Impact of injection speed and volume on perceived pain during subcutaneous injections into the abdomen and thigh.  
**J Diabetes Sci Technol**: 8(in press) A47, 2014

**International Diabetes Federation, World Diabetes Congress 2013, Melbourne, Australia, 2<sup>nd</sup> - 6<sup>th</sup> December, 2013**

1. Heise T, Nosek L, Klein O, Hastrup H, Chenji S, Haahr H  
Insulin degludec/insulin aspart has distinct prandial and basal glucose-lowering effects at steady state in subjects with type 1 diabetes.  
IDF 2013, PD-0745, 2013
  
2. Heise T, Zijlstra E, Nosek L, Bracken R, Haahr H, Roepstorff C, Rabøl C, Rowe E, Bain SC  
Similar risk of exercise-related hypoglycaemia for insulin degludec compared to insulin glargine in patients with type 1 diabetes.  
IDF 2013, PD-0791, 2013
  
3. Kapitza C, Coester HV, Berria R, Nikonova E, Hincelin-Mèry A, Forst T  
Pharmacodynamic profiles of lixisenatide vs. liraglutide in patients with type 2 diabetes mellitus on metformin.  
IDF 2013, P-1066, 2013
  
4. Heise T, Nosek L, Coester HV, Klein O, Roepstorff C, Svendsen AL, Haahr H  
Insulin degludec/insulin aspart produces a dose-proportional glucose-lowering effect in subjects with type 1 diabetes.  
IDF 2013, P-1400, 2013

# Advanced Training Courses

## Science Sessions

1. **Prof. Dr. med. Dan Ziegler**

20<sup>th</sup> March 2013

Diagnosis and treatment of diabetic neuropathy.

Deutsches Diabetes Zentrum, Institut für Klinische Diabetologie, Düsseldorf, Germany

2. **Professor Dr. med. Sven Francque**

17<sup>th</sup> April 2013

NASH: current insights in pathophysiology and clinical relevance.

Department of Gastroenterology and Hepatology, University Hospital Antwerp, Antwerp, Belgium

**Dr. med. Kris Verburgh**

17<sup>th</sup> April 2013

On type 2 diabetes, nutrition and aging.

Medical doctor, author and researcher, Antwerp, Belgium

3. **Dr. Roman Hovorka**

13<sup>th</sup> May 2013

The artificial pancreas – where we are and where we are going.

University of Cambridge, Metabolic Research Laboratories, Institute of Metabolic Science, Cambridge, UK

4. **Priv.-Doz. Dr. Leona Plum-Mörschel**

22<sup>nd</sup> May 2013

Bedeutung der Signaltransduktion über die Insulinrezeptor-Signalkaskade in hypothalamischen Neuronen für die Energiehomöostase.

Director Obesity & Prediabetes, Profil, Neuss, Germany

5. **Prof. Dr. Paul Enck**

12<sup>th</sup> June 2013

The placebo response to medicine: minimize, maximize or personalize?

Eberhard-Karls Universität Tübingen, Universitätsklinikum, Abteilung für psychosomatische Medizin und Psychotherapie

6. **Prof. Dr. Richard L. Hughson**

11<sup>th</sup> July 2013

Spaceflight causes aging-like changes in the cardiovascular system.

Chair in Vascular Aging and Brain Health, Schlegel-University of Waterloo, Research Institute for Aging, Faculty of Applied Health Sciences University of Waterloo, Waterloo, ON, Canada

## Trainings with External Participants

### 1. **Methoden in der experimentellen Ernährungsforschung**

2<sup>nd</sup> – 8<sup>th</sup> January 2013

Profil Institut für Stoffwechselforschung GmbH Neuss, Germany  
Masterstudiengang Humanernährung  
Rheinische Friedrich-Wilhelms-Universität Bonn, Germany

### 2. **Nutrition in Space**

5<sup>th</sup> March 2013

Masterstudiengang 'Space physiology and health'  
Kings College, London, UK  
Profil Institut für Stoffwechselforschung GmbH Neuss, Germany

### 3. **Profil – Glucose-Clamp-Technique Introduction Course**

17<sup>th</sup> April 2013

Thomas Andersen, Marius Gangal, Ditte Bretler, Marius Gangal, Rahul Kapur,  
Stanislava Macura, Marcus Niemeyer, Kristine Steensen Sølje  
Profil Institut für Stoffwechselforschung GmbH Neuss, Germany  
Novo Nordisk Bagsvaerd, Denmark

### 4. **Prime – Patients and Research interconnecting Medicine**

18<sup>th</sup> – 30<sup>th</sup> April 2013

Profil Institut für Stoffwechselforschung GmbH Neuss, Germany  
Society for Diabetic Neuropathy, Romania  
Wörwag Pharma GmbH&Co.KG, Romania

### 5. **Methoden in der experimentellen Ernährungsforschung**

13<sup>th</sup> – 19<sup>th</sup> June 2013

Profil Institut für Stoffwechselforschung GmbH Neuss, Germany  
Masterstudiengang Humanernährung  
Rheinische Friedrich-Wilhelms-Universität Bonn, Germany

### 6. **Profil – Glucose Clamp Training**

14<sup>th</sup> November 2013

Juliane Albert, Stephan Assmann, Robert Boesch, Karen Bruckmann, Fabienne Caillon,  
Jutta Degner, Madlen Exner, Lisa Naughton  
Profil Institut für Stoffwechselforschung GmbH Neuss, Germany  
Early Clinical Development, Covance, UK

**7. DuET 2013 Düsseldorf Education on Trials**

26<sup>th</sup> – 27<sup>th</sup> November 2013

Profil Institut für Stoffwechselforschung GmbH Neuss, Germany

Novo Nordisk, Region Europe A/S



## Granted Research Projects

### 1. **AP@Home – Bringing the Artificial Pancreas Home**

EU Project 7th Framework Programme, contract no. 247138  
European Project to Develop Artificial Pancreas for Diabetes Patients  
February 2010 – October 2014  
(further information: <http://www.apathome.eu/>)

### 2. **SPIDIMAN – Single-Port Insulin Infusion for Improved Diabetes Management**

EU Project 7th Framework Programme, contract no. 305343  
European Project to Combine Glucose Monitoring and Insulin Infusion in a Single Needle  
November 2012 – December 2016  
(further information: <http://www.spidiman.eu/>)

### 3. **MICROLOOP – Closed-loop glucose control in the hospital**

BMBF SME-innovation: Medical Technology Funding Programme, MED-327-060  
German Project to Develop a Medical Device for Glucose Control in the Hospital  
October 2012 – September 2015

### 4. **PCBIAB – Portable bihormonal artificial pancreas**

EU Project 7<sup>th</sup> Framework Programme, contract no. 305654  
European Project to bring a portable bihormonal artificial pancreas to the patients' home  
September 2012 – August 2015  
(further information: <http://PCBIAB.eu/project>)

### 5. **Untersuchung zum Knochenstoffwechsel**

anhand von ISS Experimenten, ESA Bed Rest Experimenten, und MARS500 Experimenten  
Rheinische Friedrich-Wilhelms-Universität Bonn  
BMW, Projektträger Raumfahrt  
October 2009 – June 2013

### 6. **Untersuchungen zur Auswirkung der Nährstoffzusammensetzung/-Supplementation auf den Knochen- und Kohlenhydratstoffwechsel**

anhand folgender Einzel-Projekte Toulouse-MTBR-Bettruhe-Experimente PROPEI und Bone Quality, Antarktisstation Concordia Projekt MONU, ISS-Experiment Pro K  
Rheinische Friedrich-Wilhelms-Universität Bonn,  
BMW, Projektträger Raumfahrt  
March 2012 – June 2015

## Awards & Appointments

1. **Sabine Arnolds**  
Member of the Editorial Board of Diabetes, Obesity and Metabolism
2. **Martina Heer**  
Appointed as President of the International Society for Gravitational Physiology
3. **Lutz Heinemann**  
Project Promotion Award of the German Diabetes Association for Gestational Diabetes (DDG)
4. **Thomas Jax**  
Finalist for the 'Best Poster award' at the 119<sup>th</sup> Kongress der Deutschen Gesellschaft für Innere Medizin e.V., Wiesbaden, Germany, 2013
5. **Leona Plum-Mörschel**  
Habilitation (venia legendi) for the subject Nutritional Sciences at Friedrich-Schiller-University Jena, Germany