Simon Amadeus Hinke, Ph.D.

Instructor, University of Washington School of Medicine

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Department of Pharmacology
University of Washington
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PERSONAL INFORMATION

Date of Birth: December 7th, 1974
Place of Birth: Delta, British Columbia
Nationality: USA/Canada (Dual)

EDUCATION

Ph.D. **University of British Columbia, Vancouver, BC Canada** 1997-2003
Faculty of Medicine, Department of Physiology
Advisor: Christopher McIntosh, Ph.D.
Committee: R.A. Pederson, E.D. Moore, R.T. MacGillivray
Thesis: Modulation of Insulinotropic Hormone Bioactivity with a Focus on Glucose-dependent Insulinotropic Polypeptide and Its Receptor

B.Sc. **University of British Columbia, Vancouver, BC Canada** 1993-1997
Faculty of Medicine, Department of Physiology, Honors

HONOURS & AWARDS

Keystone Symposia Scholarship, University of Washington 2010

Canadian Diabetes Association Postdoctoral Fellowship 2007-2009
Oregon Health and Science University / University of Washington

CIHR Postdoctoral Fellowship 2005-2007
Free University of Brussels / Oregon Health and Science University

Belgian National Science Foundation (FWO) Visiting Postdoctoral Fellowship 2003-2004
Free University of Brussels

MRC/CIHR Doctoral Research Fellowship, University of British Columbia 1999-2002

Izaak Walton Killam Predoctoral Fellowship, University of British Columbia 1999-2001

Canadian Physiological Society Travel Award, University of British Columbia 2000, 2002

DAAD Short Term Research Grant, Probiodrug AG, Halle, Germany 2000

UBC/Canadian Airlines Travel Award, University of British Columbia 2000

UBC Graduate Fellowship, University of British Columbia 1997-1999

UBC Science Scholar, University of British Columbia 1997

Physiology Prize, University of British Columbia 1997

Chan and Peggy Gunn Prize, University of British Columbia 1997

Dean's Honor List, University of British Columbia 1994-1997

UBC Faculty of Medicine Summer Student Research Award, University of British Columbia 1996

University of BC Scholarship, University of British Columbia 1995

J Fred Muir Memorial Scholarship in Science, University of British Columbia 1995

BC Provincial Scholarship, Victoria High School, Victoria, BC 1993

RESEARCH EXPERIENCE

Acting Instructor/Senior Research Fellow 2006-present

Howard Hughes Medical Institute, Department of Pharmacology, University of Washington, Seattle WA, and The Vollum Institute, Oregon Health and Science University, Portland OR (lab relocation, fall 2008)

Advisor: John D. Scott, Ph.D., F.R.S.

Topic: A-Kinase Anchoring Proteins (AKAPs) in Metabolic Function

Postdoctoral Fellow 2003-2006

Diabetes Research Center, Free University of Brussels (VUB), Brussels, Belgium

Advisors: Daniel Pipeleers, M.D., Ph.D., Frans Schuit, M.D., Ph.D.
Mark van de Casteele, Ph.D.

Topics: AMPK induced β-cell toxicity; Incretin signaling in knockout mice

Doctoral Candidate 1997-2003

Department of Physiology, University of British Columbia, Vancouver BC

Advisor: Christopher McIntosh, Ph.D.

Topics: Regulation of GIP receptor signaling;
Serum degradation of GIP, GLP-1 and glucagon

Deutscher Akademischer Austausch Dienst (DAAD) Fellow Fall 1999
Probiodrug AG, Halle/Saale, Germany
Advisor: Hans-Ulrich Demuth, Ph.D.
Topic: Inhibition of DPPIV by metformin

Undergraduate Researcher Summer 1996
Department of Physiology, University of British Columbia, Vancouver BC
Advisor: Christopher McIntosh, Ph.D.
Topic: Development of GIP antagonists

TEACHING EXPERIENCE

Adjunct Lecturer 2004
Masters Program in Medical and Pharmaceutical Research
Free University of Brussels (VUB), Brussels, Belgium
- developed and taught one lecture to graduate students on the cellular basis of current and future type 2 diabetic therapies acting as insulin releasers to approximately 30 students

Teaching Assistant 1997-2000
Advanced Physiology Laboratory (Phyl 430)
Department of Physiology, University of British Columbia
- helped supervise approximately 20 senior physiology students during a two semester, weekly 8-hr laboratory course
- developed laboratory exercises demonstrating use of in vitro tissue culture, and neuromuscular blockade in an intact frog nerve-muscle preparation
- gave introductory lectures, quizzes, and surgical demonstrations prior to the weekly experiment
- graded student's weekly lab reports
- was evaluated highly by students for stimulating independent thinking and individual attention

Teaching Assistant 1997-2002
Glucose Tolerance Laboratory
Department of Medicine, University of British Columbia
- helped supervise approximately 50 medical students in an annual lab

Teaching Assistant 1997-2002
Electrocardiogram Laboratory
Department of Medicine, University of British Columbia
- helped supervise approximately 50 medical students in an annual lab

MENTORING EXPERIENCE

Predoctoral Graduate Student 2013
University of Washington, Seattle, WA
- supervised experiments of Christina Jones for a rotation project in our lab for one quarter

Technician Training 1998-Present

Hyewon Kong (2011-Present), University of Washington
Allison Ulman (2008-2011), University of Washington
Catherine Dayger (2008), Oregon Health and Science University
Madeleine Speck (2001-2003), University of British Columbia
Cuilan Nian (1998-2003), University of British Columbia

- trained technicians in techniques to benefit the lab as a whole, or assist in technical aspects of my own research

Predoctoral Graduate Student 2003-2004

Free University of Brussels (VUB), Brussels, Belgium

- co-directed experiments of Dominique Delmeire over a one year period, leading to two peer reviewed scientific publications, and acted as official internal referee for her thesis

Department of Physiology 4th year Thesis Project 1999-2000

Department of Physiology, University of British Columbia

- co-supervisor of Paul Sanders, a fourth year physiology student. Mentored him over the course of 8 months with his thesis entitled "Regulation of GIP receptor signaling by phosphorylation of the 3rd intracellular loop"

Department of Physiology 4th year Thesis Project 1998-1999

Department of Physiology, University of British Columbia

- co-supervisor of Mary Grace Miraflor, a fourth year physiology student. Mentored her over the course of 8 months with her thesis entitled "Visualizing GIP receptor internalization using a GFP-receptor chimera"

PROFESSIONAL INVOLVEMENT

Thesis Examiner

Lei Jiang, Ph.D. thesis "Discovery of novel biomarkers for real-time detection of beta cell injury" Vrije Universiteit Brussel, Belgium, 2013.

Marcella Mori, Ph.D. thesis "Profiles of gene expression induced by ionizing radiation in different human cell types" Vrije Universiteit Brussel, Belgium, 2005.

Chen Yuhong, M.Sc. thesis "Effects of rapamycin on glycemic control in normal rats", Vrije Universiteit Brussel, Belgium, 2004.

Peer Review

Scientific Journals:

Endocrinology, 60 articles	2003-2013
Diabetes, 16 articles	2007-2012
Journal of Clinical Endocrinology & Metabolism, 2 articles	2010, 2012
Journal of Proteomics, 1 article	2012
Diabetes Care, 8 articles	2006-2011
Journal of Physiology (London), 6 articles	2005-2011

PLoS ONE, 1 article	2011
Chemistry & Biology, 1 article	2010
Cellular Signalling, 1 article	2008
Nature, 1 article	2007
Journal of Biological Chemistry, 10 articles	2004-2006
Expert Opinion in Emerging Drugs, 1 article	2006
Diabetologia, 1 article	2004
American Journal of Physiology, 1 article	2004
ChemBioChem, 1 article	2004

Funding Agencies:

Portuguese Foundation for Science and Technology (Portugal), 4 applications	2010, 2012
Free University of Brussels Research Fund (Belgium), 4 applications	2003-2011
Juvenile Diabetes Research Foundation (USA), 1 application	2003
National Science Foundation (USA), 1 application	2003

Consultation

Probiodrug AG, Halle/Saale, Germany	1999-2005

Membership in Professional Societies

Canadian Physiological Society	1997-Present
Canadian Federation of Biological Science	1997-2008
Endocrine Society	1999-Present
European Association for the Study of Diabetes	2002-Present
American Association for the Advancement of Science	2010-Present

PUBLICATIONS

Peer Reviewed Articles

- Nystoriak, MA, Nieves, M, **Hinke, SA**, Scott, JD, Santana, LF, and MF Navedo. AKAP150 is required for NFATc3-induced vascular BKCa channel suppression during diabetic hypertension. *Manuscript under review at PNAS. (4/30/13).*

- Nieves, M, Hirenallur-S, DK, **Hinke, SA**, Scott, JD, and LF Santana. AKAP150-dependent changes in Kv channel expression in ventricular myocytes following myocardial infarction. *Manuscript in preparation.*

24. **Hinke, SA**, Navedo, MF, Ulman, A, Tian, G, Langeberg, LK, Tengholm, A, Dell'Acqua, ML, Santana, LF, and JD Scott. Anchored phosphatases modulate glucose homeostasis. *EMBO J.* 31:3991-4004, 2012.

23. Goehring, AS, Pedroja, BS, **Hinke, SA**, Langeberg, LK, and JD Scott. MyRIP anchors protein kinase A to the exocyst complex. *J. Biol. Chem.* 282:4568-71, 2007.

22. **Hinke, SA**, Martens, GA, Cai, Y, Finsi, J, Heimberg, H, Pipeleers, D, and M Van de Casteele. Methylsuccinate antagonises biguanide-induced AMPK-activation and death of pancreatic β-cells through restoration of mitochondrial electron transfer. *Brit. J. Pharmacol.* 150:1031-43, 2007.

21. Cai, Y, Martens, G, **Hinke, S**, Heimberg, H, Pipeleers, D, and M Van de Casteele. Increased oxygen radical formation and mitochondrial dysfunction mediate beta cell apoptosis in conditions of AMPK-stimulation. *Free Radic. Biol. Med.* 42: 64-78, 2007.

20. Martens, G, Cai, Y, **Hinke, S**, Stangé, G, Van de Casteele, M and D Pipeleers. Glucose suppresses superoxide generation in metabolically responsive pancreatic beta cells. *J. Biol. Chem.* 280:20389-20396, 2005.

19. **Hinke, SA**, Manhart, S, Speck, M, Pederson, RA, Demuth, H-U, and CHS McIntosh. In depth analysis of the N-terminal bioactive domain of gastric inhibitory polypeptide. *Life Sci.* 75:1857-1870, 2004.

18. Delmeire, D, Flamez, D, Moens, K, **Hinke, SA**, Van Schravendijk, C, Pipeleers, D, and F Schuit. Prior *in vitro* exposure to GLP-1 with or without GIP can influence the subsequent beta cell responsiveness. *Biochem. Pharmacol.* 68:33-39, 2004.

17. Hansotia, T, Baggio, LL, Delmeire, D, **Hinke, SA**, Yamada, Y, Tsukiyama, K, Seino, Y, Holst, JJ, Schuit, F, and DJ Drucker. Double incretin receptor knockout (DIRKO) mice reveal an essential role for the enteroinsular axis in transducing the glucoregulatory actions of DPP-IV inhibitors. *Diabetes* 53:1326-1335, 2004.

16. **Hinke, SA**, Manhart, S, Kühn-Wache, K, Nian, C, Demuth, H-U, Pederson, RA, and CHS McIntosh. [Ser^2]- and [(P)Ser^2]-Incretin Analogs: Comparison of dipeptidyl peptidase IV resistance and biological activities *in vitro* and *in vivo*. *J. Biol. Chem.* 279: 3998-4006, 2004.

15. Delmeire, D, Flamez, D, **Hinke, SA**, Cali, JJ, Pipeleers, D, and F Schuit. Type VIII adenylyl cyclase in rat beta cells: coincidence signal detector/generator for glucose and GLP-1. *Diabetologia* 46:1383-1393, 2003.

14. **Hinke, SA**, Gelling, R, Manhart, S, Lynn, F, Pederson, RA, Kühn-Wache, K, Rosche, F, Demuth, H-U, and CHS McIntosh. Structure-activity relationships of glucose-dependent insulinotropic polypeptide (GIP). *Biol. Chem.* 384:403-407, 2003.

13. Pamir, N, Lynn, FC, Buchan, AMJ, Ehses, J, **Hinke, SA**, Pospisilik, JA, Miyawaki, K, Yamada, Y, Seino, Y, McIntosh, CHS, and RA Pederson. Glucose-dependent insulinotropic polypeptide receptor null mice (GIPR-/-) exhibit compensatory changes in the enteroinsular axis. *Am. J. Physiol. Endocrinol. Metab.* 284:E931-E939, 2003.

12. Manhart, S, **Hinke, SA**, McIntosh, CHS, Pederson, RA, and H-U Demuth. Structure-function analysis of a series of novel GIP-analogs containing different helical length linkers. *Biochemistry* 42:3081-3088, 2003.

11. Lynn, FC, Thomson, SA, Pospisilik, JA, Ehses, JA, **Hinke, SA**, Pamir, N, McIntosh, CHS, and RA Pederson. A novel pathway for regulation of glucose-dependent insulinotropic polypeptide (GIP) receptor expression in β-cells. *FASEB J.* 17:91-93, 2003.

10. **Hinke, SA**, McIntosh, CHS, Hoffmann, T, Kühn-Wache, K, Wagner, L, Bär, J, Manhart, S, Wermann, M, Pederson, RA, and Demuth, H-U. On combination therapy of diabetes with metformin and DP IV inhibitors [letter]. *Diabetes Care.* 25:1491-1492, 2002.

9. **Hinke, SA**, Kühn-Wache, K, Hoffmann, T, Pederson, RA, McIntosh, CHS, and Demuth, H-U. Metformin effects on dipeptidylpeptidase IV degradation of glucagon-like peptide-1. *Biochem. Biophys. Res. Commun.* 291:1302-1308, 2002.

8. **Hinke, SA**, Gelling, RW, Pederson, RA, Manhart, S, Nian, C, Demuth, H-U, and CHS McIntosh. Dipeptidyl peptidase IV-resistant [D-Ala^2]glucose-dependent insulinotropic polypeptide (GIP) improves glucose tolerance in normal and obese diabetic rats. *Diabetes* 51:652-661, 2002.

7. **Hinke, SA**, Manhart, S, Pamir, N, Demuth, H-U, Gelling, RW, Pederson, RA, and CHS McIntosh. Identification of a bioactive domain in the amino-terminus of glucose-dependent insulinotropic polypeptide (GIP). *Biochim. Biophys. Acta* 1547:143-155, 2001.

6. Pospisilik, JA*, **Hinke, SA***, Hoffmann, T, Rosche, F, Schlenzig, D, Heiser, U, Glund, K, McIntosh, CHS, Pederson, RA and H-U. Demuth. Metabolism of glucagon by dipeptidyl peptidase IV. *Regul. Pept.* 96:133-141, 2001.*Dual primary authorship.

5. **Hinke, SA**, Pauly, RP, Ehses, J, Kerridge, P, Demuth, H-U, McIntosh, CHS, and RA Pederson. Role of glucose in chronic desensitization of isolated rat islets and mouse insulinoma (βTC-3) cells to glucose-dependent insulinotropic polypeptide. *J. Endocrinol.* 165:281-291, 2000.

4. **Hinke, SA**, Pospisilik, JA, Demuth, H-U, Manhart, S, Kühn-Wache, K, Hoffmann, T, Nishimura, E, Pederson, RA and CHS McIntosh. Dipeptidyl peptidase IV degradation of glucagon: characterization of glucagon degradation products and DPIV resistant analogs. *J. Biol. Chem.* 275:3827-3834, 2000.

3. Wheeler, MB, Gelling, RW, **Hinke, SA**, Tu, B, Pederson, RA, Lynn, F, Ehses, J, and CHS McIntosh. Characterization of the carboxyl-terminal domain of the rat glucose-dependent insulinotropic polypeptide (GIP) receptor. A role for serines 426 and 427 in regulating the rate of internalization. *J. Biol. Chem.* 274:24593-24624, 1999.

2. McIntosh, CHS, Bremsak, I, Lynn, FC, Gill, R, **Hinke, SA**, Gelling, R, Nian, C, McKnight, G, Jaspers, S, and RA Pederson. Glucose-dependent insulinotropic polypeptide stimulation of adenylyl cyclase and lipolysis in differentiated 3T3-L1 cells: Wortmannin-sensitive inhibition of insulin. *Endocrinology.* 140:398-404, 1999.

1. Gelling, RW, Coy, DH, Pederson, RA, Wheeler, MB, **Hinke, S**, Kwan, T, and CHS McIntosh. $GIP_{6\text{-}30amide}$ contains the high affinity binding region of GIP and is a potent inhibitor of $GIP_{1\text{-}42}$ action in vitro. *Regul. Pept.* 69:151-154, 1997.

Chapters, reviews and symposia

12. **SA Hinke**. In vivo biomarkers for detection of beta cell death. *in* The Islets of Langerhans. M.S. Islam (ed). Springer, *In press* 2013.

11. **Hinke, SA**, Canton, DA and JD Scott. Control of insulin secretion by phosphorylation-dependent signalling networks. *in* Islet Transplantation: Biology, Immunology, and Clinical Applications. F. Kandeel (ed). Springer, *In press* 2013.

10. **SA Hinke**. Inverse vaccination with islet autoantigens to halt progression of autoimmune diabetes [Invited Review]. *Drug Dev. Res.* 72:788-804, 2011.

9. **SA Hinke**. Epac2: a molecular target for sulfonylurea-induced insulin release [Invited Perspective]. *Sci. Signal.* 2:pe54, 2009.

8. **SA Hinke**. Diamyd, an alum-formulated recombinant human GAD65 for the prevention of autoimmune diabetes [Invited Perspective]. *Curr. Opin. Mol. Ther.* 10:516-525, 2008.

7. **SA Hinke**. Finding GAD: Early detection of β-cell injury. [Invited News & Views] *Endocrinology* 148:4568-4571, 2007.

6. **Hinke, SA**, Pederson, RA and CHS McIntosh. Relative contribution of incretins to the glucose lowering effect of DP IV inhibitors in type 2 diabetes mellitus (T2DM). *in* Dipeptidyl Aminopeptidases: Basic Science and Clinical Applications. U. Lendeckel (ed). Kluwer Academic Publishers *Adv. Exp. Med. Biol.* 575:119-133, 2006.

5. Martens, G, Cai, Y, **Hinke, SA**, Stangé, G, Van de Casteele, M and D Pipeleers. Nutrient sensing in pancreatic beta cells suppresses mitochondrial superoxide generation and its contribution to apoptosis. *Biochem. Soc. Trans.* 33:300-301, 2005.

4. **Hinke, SA**, Hellemans, K, and FC Schuit. Plasticity of the beta cell insulin secretory competence: preparing the pancreatic beta cell for a next meal. *J. Physiol. (Lond.)* 558:369-380, 2004.

3. **Hinke, SA**, Lynn, F, Ehses, J, Pamir, N, Manhart, S, Kühn-Wache, K, Rosche, F, Demuth, H-U, RA Pederson and CHS McIntosh. Glucose-dependent insulinotropic polypeptide (GIP): development of DPIV-resistant analogues with therapeutic potential. *in* Dipeptidyl Aminopeptidases in Health and Disease. M. Hildebrandt, B. Klapp, T. Hoffmann, and H-U. Demuth (eds). Kluwer Academic Publishers *Adv. Exp. Med. Biol.* 524:293-301, 2003.

2. Demuth, H-U, **Hinke, SA**, Pederson, RA, and CHS McIntosh. Rebuttal to Deacon and Holst: "Metformin effects on dipeptidylpeptidase IV degradation of glucagon-like peptide-1" versus "Dipeptidyl peptidase inhibition as an approach to the treatment and prevention of type 2 diabetes: a historical perspective". *Biochem. Biophys. Res. Commun.* 296:229-232, 2002.

1. Kühn-Wache, K, Manhart, S, Hoffmann, T, **Hinke, SA**, Gelling, R, Pederson, RA, McIntosh, CHS and H-U Demuth. Analogs of glucose-dependent insulinotropic polypeptide (GIP) with increased dipeptidyl peptidase IV (DP IV) resistance. *in* Cellular Peptidases in Immune Functions and Diseases Vol.2. J Langner and S. Ansorge (eds). Kluwer Academic/Plenum Publishers *Adv. Exp. Med. Biol.* 477:187-195, 2000.

PATENTS

Hinke, SA, Ehses, JA, Pederson, RA, McIntosh, CHS, Manhart, S, Demuth, H-U. Novel analogues of glucose-dependent insulinotropic polypeptide. Patent WO03/082898 PCT/EP03/03307 (Application date: March 28th, 2003).

DOCTORAL DISSERTATION

Hinke, SA. Modulation of Insulinotropic Hormone Bioactivity with a Focus on Glucose-dependent Insulinotropic Polypeptide and Its Receptor. CHS McIntosh (supervisor), S Katz (chair), RA Pederson, YN Kwok, B Rodriguez, R Brownsey, PR Flatt (examiners). Department of Physiology, Faculty of Medicine, University of British Columbia, Vancouver, Canada. **pp.** 244, January 2003.

ORAL PRESENTATIONS & POSTERS

Hinke, SA, Navedo, MF, Santana, LF, Shuai, H, Tengholm, A, McKnight, GS, Dell'Acqua ML, and JD Scott. Islet function in AKAP150 knockin mice. 2nd Annual Alberta-BC Islet Workshop, Silverstar BC, 2013. *Oral Presentation.*

Nystoriak, MA, Nieves, M, **Hinke, SA**, Scott, JD, Santana, LF, and MF Navedo. AKAP150 is required for NFATc3-induced vascular BKCa channel suppression during diabetic hypertension. Experimental Biology 2012, San Diego CA. FASEB J 26: 872.26.

Nieves, M, Hirenallur-S, DK, **Hinke, SA**, Scott, JD, and LF Santana. AKAP150-dependent changes in Kv channel expression in ventricular myocytes following myocardial infarction. Experimental Biology 2012, San Diego CA. FASEB J 26: 1053.9.

Hinke, SA, Ulman, A, Dell'Acqua ML, and JD Scott. AKAP150 null mice display enhanced peripheral insulin sensitivity via a calcineurin-dependent mechanism. 13th Canadian Diabetes Association Annual Meeting & Professional Conference, Edmonton AB, 2010. *Oral Presentation.*

Hinke, S, Ulman, A, Dell'Acqua ML, and JD Scott. AKAP150Δ[P655-T661] knock-in mice lose AKAP150-Protein Phosphatase 2B anchoring and display a metabolic phenotype. 2010 Symposium on Molecular Pharmacology, Leavenworth WA, 2010. *Poster Presentation.*

Hinke, SA, Navedo, MF, Ulman, A, McKnight, GS, Dell'Acqua ML, Santana, LF, and JD Scott. Deletion of AKAP150 impairs insulin secretion but enhances insulin sensitivity: conditional null mice vs. domain deleted knock-in mice. Western Regional Islet Study Group Meeting, Pack Forest WA, 2010. *Oral Presentation.*

Hinke, SA, Navedo, MF, Ulman, A, Tunquist, B, Santana, LF, and JD Scott. Deletion of AKAP150 impairs insulin secretion but enhances insulin sensitivity: comparison of global and beta cell specific AKAP150 knockout mice. Keystone Islet Biology Symposium (Z5), Whistler BC, 2010. *Poster Presentation.*

Hinke, SA, Tunquist, B, and JD Scott. The metabolic phenotype of AKAP150 null mice. Western Regional Islet Study Group Meeting, Victoria BC, 2008. *Oral Presentation.*

Van de Casteele, M, Finsi, J, **Hinke, S**, Cai, Y, Kefas, BA, Martens, G, Ling, Z, and D Pipeleers. Sustained exposure to anti-diabetic drug metformin impairs beta cell function and survival through effects on AMP-activated protein kinase (AMPK) and NADH:CoQ1 oxidoreductase (complex I) activity. ECDO - 12th Euroconference on apoptosis, Chania, Crete, Greece, 2004.

Martens, G, Cai, Y, **Hinke, SA**, Stangé, G, Van de Casteele, M and D Pipeleers. Nutrient sensing in pancreatic beta cells suppresses mitochondrial superoxide generation and its contribution to apoptosis. Biochemical Society Focussed Meeting – Nutrient Sensing through the Plasma Membrane of Eukaryotic Cells, Cirencester, United Kingdom, 2004.

Martens, G, Cai, Y, **Hinke, SA**, Stangé, G, Van de Casteele, M and D Pipeleers. Mitochondrial superoxide generation contributes to apoptosis in low-glucose cultured insulin producing beta cells. 187th meeting of the Belgian Society of Biochemistry and Molecular Biology, Liège, Belgium, 2004.

Cai, Y, Martens, G, **Hinke, SA** and M Van de Casteele. Low glucose-induced apoptosis of insulin-producing MIN6 cells involves production of reactive oxygen species. 187th meeting of the Belgian Society of Biochemistry and Molecular Biology, Liège, Belgium, 2004.

Hinke, SA, Manhart, S, Kühn-Wache, K, Pederson, RA, Demuth, H-U and CHS McIntosh. Further development of antidiabetic enzyme resistant incretin analogues. European Association for the Study of Diabetes 38th Annual Meeting, Budapest, Hungary, 2002. *Poster Presentation.*

Hinke, SA, Manhart, S, Wheeler, M, Miraflor, MG, Demuth, H-U, Pederson, RA and CHS McIntosh. Measurement of GIP receptor internalization with fluorescein-labelled peptide and GFP-tagged receptor. American Diabetes Association 62nd Scientific Session, San Francisco, CA, 2002. *Poster Presentation.*

Hinke, SA, Pederson, RA, and CHS McIntosh. Dipeptidyl peptidase IV-resistant [D-Ala^2]glucose-dependent insulinotropic polypeptide (GIP) improves glucose tolerance in normal and obese diabetic rats. Joint Canadian/Scandanavian Physiological Societies Winter Meeting, Vernon, British Columbia, 2002. *Oral Presentation.*

Hinke, SA, Hoffmann, T, Kühn-Wache, K, Bär, J, Manhart, S, Wermann, M, Pederson, RA, McIntosh, CHS, and H-U Demuth. Investigation of metformin effects on DPIV-mediated GLP-1 degradation. American Diabetes Association 61st Scientific Session, Philadelphia, PA, 2001. *Poster Presentation.*

Hinke, SA, Manhart, S, Pamir, N, Demuth, H-U, Gelling, RW, Pederson, RA, and CHS McIntosh. Identification of a bioactive domain in the amino-terminus of glucose-dependent insulinotropic polypeptide (GIP). 82nd Annual Meeting of the Endocrine Society, Toronto, Ontario, 2000. *Poster Presentation.*

Hinke, SA, Pospisilik, JA, Demuth, H-U, Manhart, S, Kühn-Wache, K, Hoffmann, T, Pederson, RA and CHS McIntosh. Dipeptidyl Peptidase IV Degradation of Glucagon: Characterization of Glucagon Degradation Products and DPIV Resistant Analogs. American Diabetes Association 60th Scientific Session, San Antonio, TX, 2000. *Poster Presentation.*

Hinke, SA, Pederson, RA, Wheeler, MB and CHS McIntosh. Desensitization of βTC-3 cells to glucose-dependent insulinotropic polypeptide. Joint Canadian/Japanese Physiological Societies Winter Meeting, Lake Louise, Alberta, 2000. *Oral Presentation.*

Kühn-Wache, K, Manhart, S, **Hinke, S**, Gelling, R, Pederson, R, McIntosh, C and H.-U. Demuth. Analogs of glucose-dependent insulinotropic polypeptide (GIP) with increased dipeptidyl peptidase IV (DP IV) resistance. 2nd Symposium on Cellular Peptidases in Immune Functions and Disease, Magdeburg, Germany, 1999.

Demuth, H-U, Glund, K, Heiser, U, **Hinke, SA**, Hoffman, T, Pospisilik, JA, Rosche, F, Schlenzig, D, Wermann, M, McIntosh, CHS, and RA Pederson. Regulation of glucagon metabolism by dipeptidyl peptidase IV. 12th International Symposium on Regulatory Peptides, Mackinac Island, MI, 1998.

McIntosh, CHS, Gelling, RW, Tu, B, Pederson, RA, **Hinke, SA**, Gill, R, and MB Wheeler. Characterization of the carboxyl-terminal domain of the glucose-dependent insulinotropic polypeptide (GIP) receptor. 80th Annual Meeting of the Endocrine Society, New Orleans, Louisiana, 1998.

Tu, B, McIntosh, CHS, Gelling, RW, Pederson, RA, **Hinke, S**, Gill, R, and MB Wheeler. Characterization of the CT Domain of the GIP Receptor. Canadian Diabetes Association Meeting, Calgary, Alberta, 1998.

Hinke, SA. $GIP_{6\text{-}30amide}$ contains the high affinity binding region of GIP and is a potent inhibitor of $GIP_{1\text{-}42}$ action in vitro. Health Science Student Forum, University of British Columbia, Vancouver, British Columbia, 1996. *Poster Presentation.*

SEMINARS

Guest Speaker: "Insights on the role of AKAP150 in the beta cell from genetic models". Free University of Brussels, Belgium, 2013.

Guest Speaker: "**A**nother **K**nockout **A**nimal **P**henotype: insights to the role of AKAP150 in the beta cell". Child & Family Research Institute, Vancouver, Canada, 2012.

Vollum Institute Postdoc Seminar Series: "Another Knockout Animal Phenotype: Metabolism of AKAP150 Null Mice". Portland, USA, 2008.

Invited Speaker: 2nd International Conference on Dipeptidyl Amino Peptidases,: "Relative contribution of incretin hormones in the glucose lowering action of DP IV inhibitors in type 2 diabetes". Magdeburg, Germany, 2005.

Guest Speaker: "Structure-Activity Relationships of GIP Analogues". Probiodrug Annual Research Conference, Halle, Germany, 2003.

Guest Speaker: "Modulation of GIP Bioactivity". Diabetes Research Center, Brussels, Belgium, 2002.

Guest Speaker: "Modulation of GIP Bioactivity". Institute of Pharmacology and Toxicology, University of Lausanne, Switzerland, 2002.

REFERENCES AVAILABLE ON REQUEST