GLP-1 and the neuroendocrine control of feeding in obesity and type 2 diabetes: food for thought

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LIST OF PUBLICATIONS

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L. van Bloemendaal & J.S. ten Kulve, S.E. la Fleur, R.G. IJzerman, M. Diamant. Effects of glucagon-like peptide 1 on appetite and body weight: focus on the CNS. *J. Endocrinol. 2014 Mar 7;221(1):T1-16*

L. van Bloemendaal & J.S. ten Kulve, R. Balesar, R.G. IJzerman, D.F. Swaab, M. Diamant, S.E. la Fleur, A. Alkemade. Decreased hypothalamic glucagon-like peptide-1 receptor expression in type 2 diabetes patients. *Submitted*

L. van Bloemendaal, R.G. IJzerman, J.S. ten Kulve, F. Barkhof, R.J. Konrad, M.L. Drent, D.J. Veltman, M. Diamant. GLP-1 receptor activation modulates appetite- and reward-related brain areas in humans. *Diabetes. 2014 Dec;63(12):4186-96*

L. van Bloemendaal, D.J. Veltman, P.F.C. Groot, R.G. Ruhe, F. Barkhof, J.H. Sloan, M. Diamant, R.G. IJzerman. Brain reward-system activation in response to anticipation and consumption of palatable food is altered by GLP-1 receptor activation in humans. *Diabetes, Obesity and Metabolism. 2015 Sep;17(9):878-86*

L. van Bloemendaal, D.J. Veltman, J.S. ten Kulve, M.L. Drent, F. Barkhof, M. Diamant, R.G. IJzerman. Emotional eating is associated with increased brain responses to food-cues and reduced sensitivity to GLP-1 receptor activation. *Obesity. 2015 Jun 5. Accepted for publication.*

L. van Bloemendaal, R.G. IJzerman, J.S. ten Kulve, F. Barkhof , M. Diamant, D.J. Veltman, E. van Duinkerken. Alterations in white matter volume and integrity in obesity and type 2 diabetes. *Submitted.*

J.S. ten Kulve, D.J. Veltman, **L. van Bloemendaal**, F. Barkhof, M.L. Drent, M. Diamant, R.G. IJzerman. Liraglutide reduces CNS activation in response to visual food cues only after short-term treatment in patients with type 2 diabetes. *Diabetes Care. 2015 Aug 17. Epub ahead of print*

J.S. ten Kulve, D.J. Veltman, **L. van Bloemendaal**, F. Barkhof, C.F. Deacon, J.J Holst, Robert J. Konrad, J.H. Sloan, M.L. Drent, M. Diamant, R.G. IJzerman. Endogenous GLP-1 mediates postprandial reductions in activation in central reward and satiety areas in patients with type 2 diabetes. *Diabetologia. 2015 Aug 20. Accepted for publication.*

J.S. ten Kulve, D.J. Veltman, **L. van Bloemendaal**, P.F.C. Groot, H.G. Ruhé, F. Barkhof, M.Diamant, R.G. IJzerman. Endogenous GLP-1 and treatment with liraglutide affect activation in reward and satiety related brain areas in response to palatable food. *Submitted.*

J.S. ten Kulve, D.J. Veltman, **L. van Bloemendaal**, F. Barkhof, C.F. Deacon, J.J. Holst, R.J. Konrad, J.H. Sloan, M.L. Drent, M. Diamant, R.G. IJzerman. Elevated postoperative endogenous GLP-1 levels mediate effects of Roux-en-Y gastric bypass on neural responsivity to food cues. *Submitted*.

T.C. van der Pouw Kraan, W.J. Chen, M.C. Bunck, D.H. van Raalte, N.J. van der Zijl, R.E. van Genugten, **L. van Bloemendaal**, J.M. Baggen, E.H. Serné, M. Diamant, A.J. Horrevoets. Metabolic changes in type 2 diabetes are reflected in peripheral blood cells, revealing aberrant cytotoxicity, a viral signature, and hypoxia inducible factor activity. *BMC Med Genomics.* 2015 May 9;8(1):20

ABSTRACTS & PRESENTATIONS

L. van Bloemendaal, D.J. Veltman, P.F.C. Groot, R.G. Ruhe, F. Barkhof, J.H. Sloan, M. Diamant, R.G. IJzerman. Brain reward-system activation in response to anticipation and consumption of palatable food is altered by GLP-1 receptor activation in humans. Oral presentation at the 75th Scientific Sessions of The American Diabetes Association, Boston, USA. *Diabetes* 2015; 64(S1):A99

L. van Bloemendaal, D.J. Veltman, P.F.C. Groot, R.G. Ruhe, F. Barkhof, J.H. Sloan, M. Diamant, R.G. IJzerman. GLP-1 receptor activation alters central reward responses to anticipation and consumption of palatable food in humans. Oral presentation at the Annual Dutch Diabetes Research Meeting, Oosterbeek. *Nederlands Tijdschrift voor Diabetologie* 2014;12(4):170

L. van Bloemendaal, R.G. IJzerman, J.S. ten Kulve, F. Barkhof, D.J. Veltman, M. Diamant. Exenatide blunts hyperactivation in CNS reward and satiety circuits elicited by viewing food cues in obese individuals. Oral presentation at the Annual Dutch Diabetes Research Meeting, Oosterbeek. *Nederlands Tijdschrift voor Diabetologie* 2013;11(4):200

L. van Bloemendaal, R.G. IJzerman, J.S. ten Kulve, F. Barkhof, D.J. Veltman, M. Diamant. Exenatide Blunts the Increases in CNS Reward and Satiety Activation by Visual Food-Related Stimuli in Obese Individuals. Poster presentation at the 73rd Scientific Sessions of The American Diabetes Association, Chicago, USA. *Diabetes* 2013; 62(S1):A542

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L. van Bloemendaal, R.G. IJzerman, J.S. ten Kulve, F. Barkhof, D.J. Veltman, M. Diamant. Exenatide Blunts the Increases in CNS Reward and Satiety Activation by Visual Food-Related Stimuli in Obese Individuals. Oral presentation at 11th Endo-Neuro-Psycho Meeting, 2013, Lunteren, The Netherlands

L. van Bloemendaal, R.G. IJzerman, J.S. ten Kulve, F. Barkhof, D.J. Veltman, M. Diamant. The GLP-1 receptor agonist exenatide blunts the increases in central reward and satiety activation by visual food-related stimuli in human obesity. Poster presentation at Keystone Symposium on "Neuronal control of appetite, metabolism and weight", 2013, Banff, Canada

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