

New facts about SLC30A8 (ZnT-8) A new major humoral antigen in Type 1 Diabetes

PRESS RELEASE

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The **abstracts** that will be presented at the next **EASD** meeting, to be held in Amsterdam, (17-21 September 2007) have just been published on EASD's website. Some of them **reveal a new critical aspect of ZnT8 related to Type 1 Diabetes**.

Four abstracts, most of which, presented by **J.C. Hutton's group** from the Barbara Davis Center for Childhood Diabetes, University of Colorado Health Sciences Center, Aurora, United States, mention that researchers took advantage of a bioinformatic approach to **identify novel autoantigens in T1D**.

In these studies, ZnT8 was classified as a major humoral antigen in Type 1 Diabetes.

A dominant autoantibody epitope in Slc30A8 mapped to a conserved secondary structure in the COOH terminus of the protein

Therefore, Slc30A8 was considered by the authors as a major target of diabetic autoimmunity, whose measurement adds power to the risk prediction in pre-diabetes based on autoantibody number.

Moreover, circulating Slc30A8 autoantibodies showed a progressive decline in Slc30A8 levels that were highly correlated both to disease duration and to the level of C-peptide. Thus, measurements of **autoantibodies directed against Slc30A8, which has a high β -cell specificity unlike GAD and IA2, may be advantageous in monitoring recurrent autoimmunity and possibly β -cell mass in Type 1 diabetic subjects.**

These results strongly support the approach Mellitech intend to develop regarding in vivo imaging of the pancreas using anti-Znt8 antibodies and open new opportunities for developing novel and more efficient predictive tests for T1D compared to the existing ones (GAD and IA2).

SOURCE: 43rd Annual Meeting of the European Association for the Study of Diabetes.

<http://www.easd.org>

Session OP 24 - "Zinc transporter SLC30A8 - candidate genes for beta cell function"

0139 A bioinformatic approach to identification of novel type 1 diabetes autoantigens

<http://www.easd.org/customfiles/43rd/abstracts/documents/0139.doc>

J. C. Hutton, J. M. Wenzlau, K. Juhl, S. Sarkar, L. Yu, G. S. Eisenbarth, J. Jensen, H. W. Davidson; Barbara Davis Center for Childhood Diabetes, University of Colorado Health Sciences Center, Aurora, CO, United States.

0140 Identification of Slc30A8 as a major humoral autoantigen in type 1 diabetes and a predictive disease marker

<http://www.easd.org/customfiles/43rd/abstracts/documents/0140.doc>

J. M. Wenzlau, O. Moua, L. Yu, M. Rewers, G. S. Eisenbarth, J. C. Hutton, H. W. Davidson; Barbara Davis Center for Childhood Diabetes, University of Colorado Health Sciences Center, Aurora, CO, United States.

0141 The decline in circulating Slc30A8 autoantibodies track falling post-prandial C-peptide responses in the years following type 1 diabetes onset in human subjects

<http://www.easd.org/customfiles/43rd/abstracts/documents/0141.doc>

M. Walter¹, T. Kaupper¹, A. Ziegler¹, H. W. Davidson², J. M. Wenzlau², J. C. Hutton²; ¹IDRI, Diabetes Research Institute, Munich, Germany, ²Barbara Davis Center for Childhood Diabetes, University of Colorado Health Sciences Center, Aurora, CO, United S

0143 A dominant autoantibody epitope in Slc30A8 maps to a conserved secondary structure in the COOH terminus

<http://www.easd.org/customfiles/43rd/abstracts/documents/0143.doc>

H. W. Davidson, J. M. Wenzlau, O. Moua, G. S. Eisenbarth, J. Hutton; Barbara Davis Center for Childhood Diabetes, University of Colorado Health Sciences Center, Aurora, CO, United States.

ABOUT MELLITECH SAS

The emerging biopharmaceutical company, Mellitech SAS is a spin-off of CEA Grenoble and J. Fourier Grenoble University.

Mellitech focuses on the discovery and development of novel antidiabetics, diagnostic methods and a functional imaging technique of the pancreas, targeting primarily SLC30A8 / ZnT8 for which it holds an exclusive licence covering all potential applications.

Through 5 GWA studies published in Nature and Science (Feb and Apr 2007), it has been revealed and confirmed on more than 35.000 patients, a unique mutation on SLC30A8 which is found in over 25% of Type 2 Diabetes Patients. This opens ways for the first pharmaco-genomic approach for T2D. Founded in 2005 and managed by Dr Philippe BARTH, the company is headquartered in Grenoble. The company currently employs 6 people and is raising its first round of financing.

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