

University of Groningen

Imaging of insulinitis and beta cell mass in type 1 diabetes mellitus

Di Gialleonardo, Valentina

IMPORTANT NOTE: You are advised to consult the publisher's version (publisher's PDF) if you wish to cite from it. Please check the document version below.

Document Version

Publisher's PDF, also known as Version of record

Publication date:

2012

[Link to publication in University of Groningen/UMCG research database](#)

Citation for published version (APA):

Di Gialleonardo, V. (2012). *Imaging of insulinitis and beta cell mass in type 1 diabetes mellitus*. s.n.

Copyright

Other than for strictly personal use, it is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), unless the work is under an open content license (like Creative Commons).

The publication may also be distributed here under the terms of Article 25fa of the Dutch Copyright Act, indicated by the "Taverne" license. More information can be found on the University of Groningen website: <https://www.rug.nl/library/open-access/self-archiving-pure/taverne-amendment>.

Take-down policy

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

Downloaded from the University of Groningen/UMCG research database (Pure): <http://www.rug.nl/research/portal>. For technical reasons the number of authors shown on this cover page is limited to 10 maximum.

Stellingen behorende bij het proefschrift

'Imaging of insulinitis and beta cell mass in type 1 diabetes mellitus'

van Valentina Di Galleonardo

1. Approximately 2000 years after the first description of diabetes, adequate treatment of type 1 diabetes is still illusive.
2. The possibility to non-invasively quantify beta-cell mass and the extent and severity of pancreatic insulinitis could facilitate early diagnosis and possibly prevention of human type 1 diabetes. (*this thesis, chapter 2*)
3. [¹⁸F]FB-IL2 binding to its receptor expressed on human activated T-lymphocytes can be quantified in vivo by compartmental analysis measuring the binding potential of [¹⁸F]FB-IL2 to IL2 receptor. This may have important implications for imaging activated T-cells in autoimmune diseases. (*this thesis, chapters 4-5*)
4. [¹⁸F]FB-IL2 PET provides a non invasive and quantitative method to measure the extent of T-lymphocyte infiltration in the pancreas of pre-diabetic animals (insulinitis) and this could help for early diagnosis of type 1 diabetes. (*this thesis, chapter 6*)
5. Uptake and metabolism of [¹¹C]HTP is different in endocrine and exocrine pancreatic cells. Only in beta cells, [¹¹C]HTP trapping is strongly dependent on the serotonin pathway and this can be used as an imaging strategy to in vivo detect beta-cell mass. (*this thesis, chapter 7*)
6. The important thing in science is not so much to obtain new facts as to discover new ways of thinking about them. (*Sir William Bragg*)
7. The statement "[...]Intuition and concepts constitute the elements of all our knowledge, so that neither concepts without an intuition in some way corresponding to them, nor intuition without concepts, can yield knowledge[...]" (*Immanuel Kant*) provides a satisfactory description of a good scientist.
8. The big challenge of nuclear imaging of beta cell mass is looking for a tiny "radioactive" needle in the enormous "pancreatic" haystack, but this difficulty is also a big challenge.
9. Diabetic research needs multidisciplinary teams able to bring together different expertise for the advancement of scientific discovery as well as for the translation of those into useful clinical practice.
10. There is no growth without addressing obstacles. Is only by sacrifice, commitment and passion that you can achieve your goals.