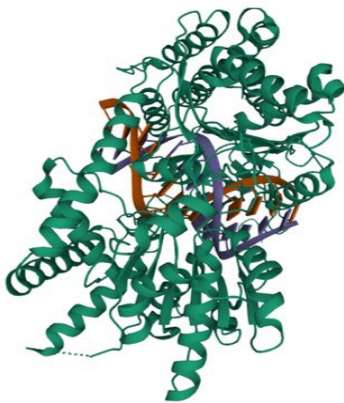


# THE INNODIA PATIENT GROUP EXTRA NEWS

PAC - Patient Advisory Committee - was created to put the patients and their family at the center of the project, giving them a voice in the decisions that affect how they receive care. 8 patients and 2 family members meet on a monthly base to discuss ideas and suggestions and to give their input in the progression of the study.

## MDA5 is involved in type 1 diabetes pathogenesis; what does that mean?

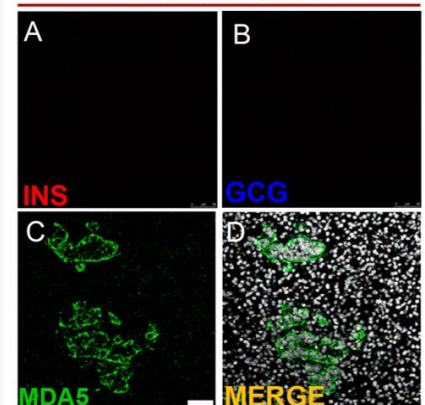
MDA5-dsRNA



MDA5 (Melanoma Differentiation Associated gene 5) is a protein involved in inflammatory and immunoregulatory processes typical of T1D. Following viral infection, MDA5 feels the presence of the virus and is activated to limit  $\beta$  cell damage. An extensive analysis of MDA5 expression in pancreatic islets of T1D and in non-diabetic conditions has not been fully elucidated. For this purpose, we investigated through colorimetric analysis the expression of MDA5 in pancreatic tissues obtained from non-diabetic, recent-onset and long-standing T1D donors. In non-diabetic as well as in T1D donors MDA5 was found expressed both in  $\alpha$ - and in  $\beta$ -cells, but preferentially in  $\alpha$  cells, suggesting that  $\alpha$  cells are more able to respond to the virus attack.

Moreover, MDA5 expression was found increased in pancreatic islets of T1D compared to non-diabetic donors. This result highlights that some beta cells, following elevated inflammation, are equipped to respond to viral infection. Strikingly, in recent-onset T1D donors we observed for the first time the presence of endocrine structures only positive for MDA5 that could be derived from immature pancreatic islets cells or could represent newly forming islets, thus opening to novel roles of MDA5 in T1D mechanisms.

T1D Recent Onset



INNODIA is a unique and interdisciplinary network of 40 partners, including preeminent academic institutions from Europe, industrial partners, charitable foundations and small sized enterprises, bringing together their knowledge and experience to achieve one common goal: "To fight type 1 diabetes". Launched in January 2016, this European-based public private partnership (PPP) receives funding from the Innovative Medicines Initiative 2 Joint Undertaking (Grant Agreement Number: 115797) and is supported by the European Union's Horizon 2020 Research and Innovation program, European Federation of Pharmaceutical Industries and Associations (EFPIA), The Leona M. and Harry B. Helmsley Charitable Trust and JDRF.

INNODIA aims to improve the understanding of type 1 diabetes and pave the way for the development of novel therapies to prevent and cure it.