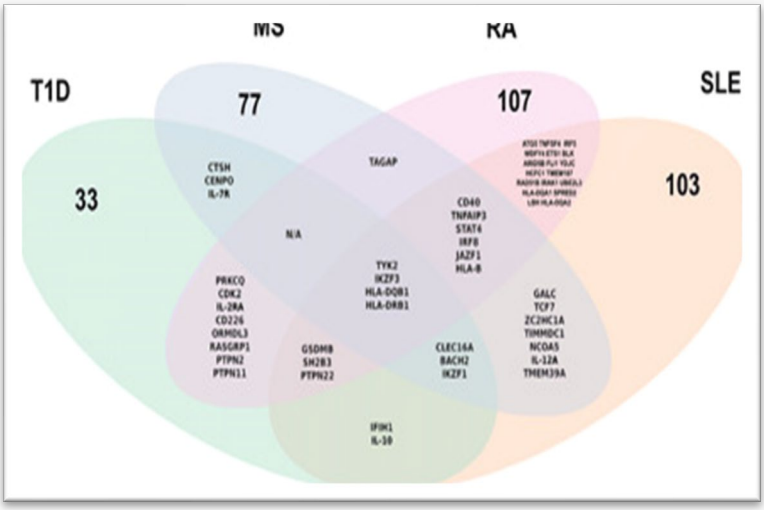
THE INNODIA PATIENT GROUP EXTRA NEWS

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.

Gene expression signatures of target issues in type 1 diabetes.

Gene expression signatures of target tissues in type 1 diabetes, lupus erythematosus, multiple sclerosis, and rheumatoid arthritis



Type 1 diabetes (T1D), along with systemic lupus erythematosus (SLE), multiple sclerosis (MS), and rheumatoid arthritis (RA) are all characterized by an immune-mediated attack against select tissues of the body. Increasing evidence suggests that these target tissues are not merely bystanders, but actively participate in the disease. A deeper insight into the role of these target tissues is crucial to our understanding of the disease mechanisms, which could lead to novel therapeutic strategies.

For this, we studied the gene expression signatures of the target tissues from patients with T1D, SLE, MS and RA, compared to those of healthy control donors. We found a significant interferon (IFN) signature in the target tissues of the patients that was not present in the healthy donor tissue. Interferons are signaling molecules that are typically released by the host cells during inflammation. Drugs targeting these signaling molecules were recently approved for the treatment of RA. The commonality of the IFN signature in all four autoimmune diseases suggests that already-studied drugs could be repurposed for the treatment of multiple autoimmune diseases. We also found that more than 80% of the risk genes for T1D, SLE, MS and RA are highly expressed in the respective target tissues. Together, our findings provide a better understanding of the communication between the immune system and the target tissues in T1D, SLE, MS and RA and accentuate the importance of focusing on this communication when studying autoimmune diseases.

Pancreatic samples collected in the INNODIA consortium contributed to these findings.

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.