

# THE INNODIA PATIENT GROUP EXTRA NEWS

The *Patient Advisory Committee* of INNODIA represents the voice to the experiences, opinions and desires of the patients to help ensure that INNODIA's goals and strategy are closely aligned with the goals of people living with, and affected by type 1 diabetes

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## KEY FINDINGS ON TYPE 1 DIABETES DISEASE MECHANISM

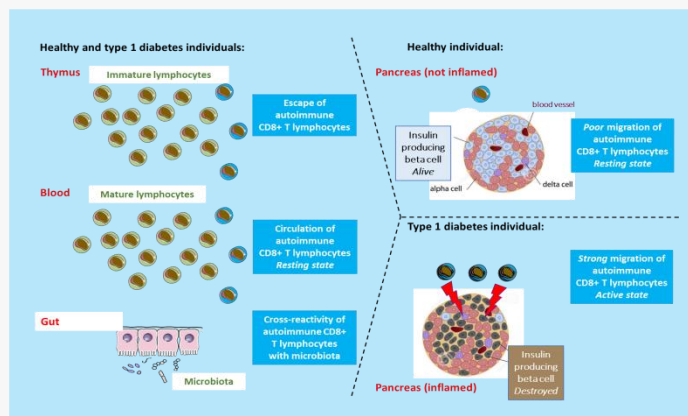
### TYPE 1 DIABETES : A DISEASE OF THE IMMUNE SYSTEM AND OF PANCREATIC BETA-CELL VULNERABILITY ?

The autoimmune white blood cells (lymphocytes) that are responsible for the destruction of beta cells are found circulating in similar numbers in type 1 diabetic and healthy individuals. Moreover, most of them display a naïve status, meaning that they are potentially capable of destroying beta cells but have not yet expressed their potential. The autoimmune lymphocytes actively involved in the disease are rather found in the pancreas of type 1 diabetes patients, but not in that of healthy donors.

#### So, if "we are all autoimmune" why then are we not all diabetic?

This is the compromise needed to be better protected from infections, because the auto-immune T lymphocytes spared by the thymus are also capable of attacking microbial protein fragments that are similar to those of  $\beta$  cells.

But if we are all auto-immune, why then we are not all diabetic? Two possibilities are under investigation. The first one is that non-diabetic individuals may be capable of keeping auto-immune T lymphocytes under control. This control could instead be lost in T1D patients due to an inflammation of the pancreas, which may attract the auto-immune T lymphocytes that we all harbor and make  $\beta$  cells more 'visible' to them.



In this respect, the second possibility is that T1D may be a disease of auto-immunity and of the  $\beta$  cell, and that the difference between T1D and healthy individuals is not just in their T lymphocytes, but also in the vulnerability of  $\beta$  cells to their attack.

The next challenges are to better understand the ingredients that transform the 'benign' auto-immunity of Mr. Average into T1D. Identifying these ingredients will allow to diagnose T1D earlier and to develop therapies to revert auto-immunity to its benign state.

INNODIA proposes an innovative approach to realize a decisive step towards type 1 diabetes prevention and cure. INNODIA develops European infrastructures, establish a tight collaborative network of basic and clinical researchers, advances the development and application of novel methodologies, establishes a unique integrated database and conceives innovative clinical trial designs.

INNODIA is putting together a consortium of the leading clinical and basic science researchers on type 1 diabetes in Europe

### DO YOU WANT TO PARTICIPATE ?

Have you been diagnosed with type 1 diabetes in the last 6 weeks ?  
**OR** Do you have a parent, child, sibling with type 1 diabetes ?

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clinical center on  
[www.innodia.eu](http://www.innodia.eu)



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