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Press release

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**New European research project
to understand the molecular development of diabetes**

Researcher at ULB Center for Diabetes Research, Esteban Gurzov has just obtained a Consolidator Grant from the European Research Council: his project aims to understand why and how metabolic disorders such as diabetes develop in patients, with a focus on a class of « molecular switches » proteins.

The global prevalence of diabetes has reached more than 410 million individuals, underscoring the need for novel therapeutic strategies targeting the pathology as a multi-organ disease.

Researcher at **ULB Center for Diabetes Research, Esteban Gurzov** has just obtained a Consolidator Grant from the European Research Council to explore this question. The project "METAPTPs" ("*Protein Tyrosine Phosphatases in METAbolic diseases*") aims to understand why and how metabolic disorders such as diabetes develop in patients.

Esteban Gurzov and his colleagues focus on a class of enzymes called "protein tyrosine phosphatases" (PTPs). PTPs play a direct role in the fate of metabolic cells in obesity and diabetes: recent studies from the team indeed suggest that PTPs act as molecular switches for key signalling events in the development of diabetes, notably in insulin or glucose signalling.

The researcher's hypothesis is that PTP proteins are affected by inflammation in the pancreas and the liver. The oxidative stress caused by inflammation affects PTP activity, which could trigger the processes that cause diabetes. To test that hypothesis, Esteban Gurzov's project aims to identify major inactivated PTPs and their role in cellular responses in diabetes and obesity development. Moreover, he will test new therapeutic approaches targeting PTPs, with the hope that this will lead to new treatments or ways to prevent diabetes.

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(In English only)



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