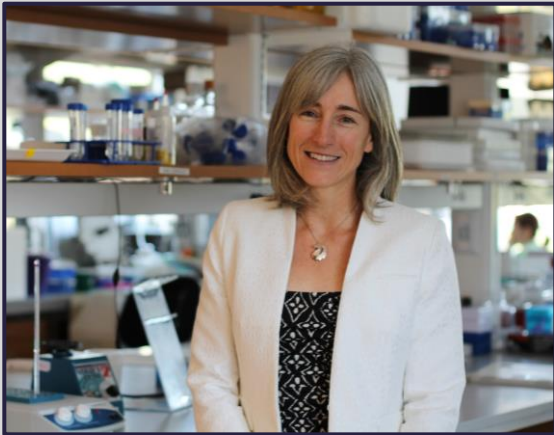


Laura C. Alonso, PhD

Is Diabetes in our DNA?



Focus: Type 2 diabetes

Project Title: *Type 2 diabetes risk SNPs at the CDKN2AB locus*

Institution: University of Massachusetts, Worcester, MA

Dates of Award: Funded for 3 Years, 1/1/2018 through 12/31/2020

Grant Number: 1-18-IBS-233

Total Grant Amount: \$345,000

Project description: The risk of getting type 2 diabetes is determined, in part, by genetics. Large studies in thousands of people have identified certain genetic factors that increase diabetes risk, but how these genetic differences lead to diabetes is not known. This project sets out to study whether the genetic changes that increase diabetes risk alter human beta cell characteristics, like insulin production, insulin secretion, and beta cell regeneration. The investigators are comparing human beta cells from donors with protective genetic profiles to those with risk-increasing genetic profiles. Results from these studies may help understand what cellular processes are defective in people at risk for diabetes.

How this will help people with diabetes: In the long run, studies such as this will lead to personalized medicine for diabetes prevention and treatment. By understanding *how* specific genetic variants impact risk for developing type 2 diabetes, doctors may one day be able to identify people and prevent diabetes or tailor treatments around their genetics. Indeed, this is beginning to happen in type 1 diabetes, in which individuals can take genetic risk tests and preemptively take steps to mitigate disease burden.