Below is a list of possible project topics. Please check the top 3 choices of your interest.

[ ] Design an improvement of device for continuous glucose monitoring that extends its working life in the body.

[ ] Design a device to predict and prevent nocturnal and post-exercise hypoglycemia.

[ ] Design a method to detect and monitor progression of islet cell damage in pre-diabetic people or experimental animals.

[ ] Design a novel device that detects glucose based on the biological mechanisms used by islet cells for this purpose.

[ ] Propose an approach for increasing the supply of human islets of Langerhans or islet β cells for transplantation.

[ ] Design an approach to improve the procurement of islets for transplantation.

[ ] Propose an improved approach for protecting allogenic or xenogeneic islet transplants from immune attack.

[ ] Develop an assay to detect and quantify human alloimmune vs autoimmune islet β cell rejection and protection.

[ ] Design a mechanism for imaging islet mass, function and inflammation.

[ ] Design an improvement on nutritional management of diabetes.

[ ] Identify a specific complication of diabetes (ie, cardiovascular, renal, neurological, eye, etc) and design an innovative approach to diagnosis or treatment.

[ ] Design an approach/program for diabetes-related health need for use in under-developed areas, ie, “low-tech.”

[ ] Evaluate the current state of information on the genetics of Type 2 diabetes and design an innovative experimental or technical (including computational) approach in this area.

[ ] Develop an improved drug delivery system for insulin.

[ ] Evaluate the current state of computer-based patient self-management programs in diabetes and design an improved version or a version targeted to an under-served population of patients with either type 1 or type 2 diabetes.

[ ] Design a novel or improved diagnostic test for insulin resistance that can be used to screen for undiagnosed type 2 diabetes.
Propose an approach to identifying prognostic markers for type 2 diabetes mellitus for a target population of your choice.

Design a novel drug therapy for type 2 diabetes. Include rationale for pathway to be targeted and types of initial testing to be performed.

Design an approach to identifying genes involved in diabetes susceptibility (type 1 or type 2) in a population group with a high incidence of diabetes.

Develop a genetic animal model for insulinomas.

Develop a device to image insulinomas.

Develop an interface for vision-impaired patients.

Develop an implantable glucose monitoring device.

Develop a project related to the issue of depression in people with diabetes.

Develop software for self-tracking of blood glucose levels by diabetic patients.

Develop software for healthcare providers to summarize patient data.

Develop software for diabetes researchers to track study variables.