



# MILLION DOLLAR BIKE RIDE GRANT WINNERS

## 2017

### RESEARCH TOPIC:

Bihormonal Bionic Pancreas for the Treatment of Diabetes Post-Pancreatectomy in Children with Congenital Hyperinsulinism – A Pilot Study

Dr. De León-Crutchlow

and her research team are collaborating with Dr. Steven Russell from Massachusetts General Hospital and Dr. Ed Damiano from Boston University on this clinical study that aims at examining the safety and efficacy of the Bionic Pancreas system in children and young adults with hyperinsulinism who have developed diabetes after pancreatectomy. The Bionic-Pancreas Glycemic-Control System has been shown to improve blood glucose control in children, adolescents, and adults with Type 1 diabetes by using an automated system to deliver insulin and glucagon, the two most important pancreatic hormones.

In this pilot study children and young adults with hyperinsulinism and post-pancreatectomy diabetes will be admitted to the research unit in two occasions. In one occasion, subjects will continue their home insulin regimens and their blood glucose will be monitored closely. In the other occasion, they will be connected to the Bionic Pancreas, which will control their blood glucose in an automated way. Ultimately, the results from this study may benefit not only children with hyperinsulinism and post-pancreatectomy diabetes but also infants and children with hypoglycemia due to hyperinsulinism in whom an automated system may be used to prevent hypoglycemia.

## RIDING FOR RESEARCH!

AWARD RECIPIENT:

Dr. Diva De León,  
MD, MSCE

HOME INSTITUTION:

Children's Hospital  
of Philadelphia

AWARD AMOUNT:

\$87,109



Penn Medicine  
Orphan Disease Center