

Dr. Amy Wong



TREATMENT | BIOMEDICAL RESEARCH

Project: How Early Pancreas Development Shapes Diabetes Risk in Cystic Fibrosis

Thank you. Through donor support, Dr. Amy Wong, Scientist in Developmental & Stem Cell Biology at the Hospital for Sick Children and Assistant Professor with the Faculty of Medicine at the University of Toronto, in collaboration with Dr. Cristina Nostro at University Health Network, are bringing us one step closer to understanding how to prevent cystic fibrosis from causing diabetes in the womb.

Cystic fibrosis (CF) is a genetic condition that impacts multiple organs, including the pancreas. More than half of people with CF develop cystic fibrosis-related diabetes, adding significant challenges to their health.

This research explores how CF may lead to diabetes during a baby's development in the womb. Damage to the cells of the pancreas caused by CF may begin very early in a baby's growth, and by pinpointing the earliest signs of damage to the cells of the pancreas, she and her team can identify how and when CF leads to diabetes. This may lead to new potential therapies that could help prevent or reverse diabetes for people with CF.

Interestingly, CF leads to inflammation and pancreas cell death with similarities to both type 1 diabetes and type 2 diabetes. Understanding the CF cell death will help uncover how cells in the pancreas die in the development of diabetes, and may help in the development of future therapies that help people with diabetes beyond CF related diabetes.

Thank you for your generosity. Diabetes Canada is grateful to our donors for supporting critical research that will improve the lives of people with diabetes.