TREATMENT | BIOMEDICAL RESEARCH

Project: Harnessing Bacteroides to improve blood glucose

Through donor support, Dr. Fernando Forato Anhê, Assistant Professor in the Faculty of Medicine at Laval University is learning whether the gut microbiome can be harnessed to control diabetes.

In healthy individuals, blood sugars are controlled by a hormone called insulin, which lowers blood sugar levels. For people with diabetes, they can no longer produce or use enough insulin to control their blood sugars, which can lead to health complications such as nerve damage, sight loss, heart disease, kidney failure, anxiety, amputations, and even death.

The gut microbiome consists of trillions of microbes living in a person's gut that help us stay alive: protecting us against germs, breaking down food to release energy, and producing vitamins and other essential nutrients. The gut plays an important role in controlling blood sugar levels by absorbing sugars. Currently, we have no treatments to help control blood sugar levels through the gut microbiome.

Dr. Forato Anhê is studying whether the effectiveness of specific bacteria that help with sugar absorption can be boosted. He and his team will then test if transferring these boosted bacteria can help improve blood sugar control in the gut microbiome affected by type 2 diabetes.

This is a new, innovative treatment option that may help people with diabetes achieve better blood sugar control.