

Preventing Cardiovascular Complications of Diabetes

5-6% of Canadians are currently diagnosed with diabetes. In people with diabetes, inadequate pharmaceutical management predisposes the patient to heart failure, which is the leading cause of diabetes related deaths. One instigator for this cardiac dysfunction is change in fuel utilization by the heart. Thus, following diabetes, when cardiac glucose utilization is impaired, the heart undergoes metabolic transformation wherein it switches to using fats as an exclusive source of energy. Although this switching is geared to help the heart initially, in the long term, this has terrible end results. These include the generation of noxious by products which kill cardiac cells, reduce cardiac function and ultimately result in an increased morbidity and mortality.

My laboratory studies the molecular mechanisms that regulate how the heart produces its energy during diabetes. Given the disturbing news that diabetes is rampant across the globe, and that its incidence will double in Canada by 2016, results from these studies may assist in devising new therapeutic strategies to restore metabolic equilibrium, to help prevent or delay heart disease seen during diabetes.



Brian Rodrigues

PhD

Dr. Rodrigues is a Professor in the Faculty of Pharmaceutical Sciences, University of British Columbia. He currently serves/has served as a member of all of the major grant review panels including the Heart and Stroke Foundation of Canada, the Canadian Diabetes Foundation, and CIHR.

rodrigue@mail.ubc.ca
604-822-4758