Metabolic Effects of Tissue-Specific Deletion of Src Homology Phosphatase 2

Diabetes mellitus caused by resistance to insulin's action in the body is the most common metabolic disease, affecting over 150 million people worldwide. Dr. Haj's research group is studying the protein tyrosine phosphatase, Shp2 and its role in the regulation of insulin with the hope that a better understanding of its regulation will lead to improved treatments for the disease. Using a genetic engineering approach, Shp2 can be removed from individual mouse tissues. These mice, now lacking Shp2, can be used as a model to study the role of Shp2 on insulin regulation. The effects of nutrition treatments such as high fructose consumption can also be studied in this mouse model. It is anticipated that results from these studies will advance the understanding of how high fructose intake affects insulin function and may provide new methods for the treatment of obesity and diabetes.