Decoding the role of VEGF-B in type 2 diabetes mellitus

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Diabetes is a major health problem around the globe. The numbers of diabetes patients are in rise due to the modern lifestyle. High intake of fat (junk foods) and lack of physical activity causes this disease. The basic mechanism behind the type 2 diabetes is inability of the body to maintain normal blood glucose levels. This is because the secreted insulin by β-cells in pancreas fails to do its job. The recent discovery has identified a protein (VEGF-B) responsible for transporting fats from circulation to different organs like heart and muscles. The blockage of this protein in mice stopped the transportation of fat to these organs; instead the fats are transported to the adipose tissues. As a result the mice became fat, but did not develop diabetes.

From the above findings we also wanted to explore the role of this protein in pancreas, which is unknown. The reason behind this was high fat levels in our body also affects the insulin secretion of β-cells in pancreas. Since pancreas is an important organ for maintaining normal glucose levels in the blood. The main aim of our study was to find how VEGF-B together with its associated members influences the fat transport in pancreatic islets. This study will hopefully help us to understand the functions of VEGF-B in normal and in diabetic conditions, which can lead to a potential drug to treat type 2 diabetes mellitus.

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