Novel mechanism of insulin resistance in type 2 diabetes
17 September 2015

Credit: Darren Lewis/public domain

Insensitivity to insulin, also called insulin resistance, is associated with type 2 diabetes and affects several cell types and organs in the body. Now, scientists from Sweden's Karolinska Institutet have discovered a mechanism that explains how insulin-producing cells can be insulin resistant and insulin sensitive at the same time.

The findings are being published in the journal *Cell Reports*, and may lead to future novel treatment strategies for type 2 diabetes.

Insulin is critical in lowering blood glucose concentration. Individuals with type 2 diabetes suffer from insulin resistance and this means that their cells/organs are insensitive to insulin. In type 2 diabetes the body tries to compensate by producing more insulin, and also by increasing the number of insulin-producing cells. Finding new treatment strategies is only possible by gaining a greater understanding of what happens in the body of a diabetic patient. One scientific challenge is to explain how a cell/organ at the same time can be insulin resistant in one biological function and insulin sensitive in another.

More information: 'PI3K-C2? Knockdown Results in Rerouting of Insulin Signaling and Pancreatic Beta Cell Proliferation', Barbara Leibiger, Tilo Moede, Meike Paschen, Na-Oh Yunn, Jong Hoon