

Antidiabetic effects discovered in the appetite hormone CART

June 30 2016

The study shows that the appetite hormone CART not only controls the sensation of satiety, but it also helps increase insulin secretion and decrease glucagon production.

CART (Cocaine and Amphetamine-Regulated Transcript) is a [hormone](#) that has mainly been studied in the brain's centre for appetite control.

The research group behind the new study made the previously unknown discovery that CART can also be found in human alpha and beta [cells](#) located in the pancreas, and that cells from people with type 2 diabetes contain more CART than cells in people who are healthy.

"The high glucose levels could be what triggers the production of CART", says Nils Wierup.

The study also shows that CART increases the effect of GLP-1, an intestinal hormone that lowers blood sugar levels. GLP-1 represents the basis of the latest drugs against type 2 diabetes by stimulating the body's own insulin production.

Nils Wierup says that the new discoveries can eventually lead to new drugs against type 2 [diabetes](#). However, because CART is currently only available for research purposes, the active molecule of the hormone needs to be further developed to create the equivalent effect artificially. Furthermore, the receptor that binds to the molecule is still unknown.

"However, we believe that we're getting close", says Nils Wierup and continues: "Once we find the unknown receptor, we hope to explain the biological mechanisms behind CART's function, which will hopefully lead to new and better drugs."

More information: Mia Abels et al, CART is overexpressed in human type 2 diabetic islets and inhibits glucagon secretion and increases insulin secretion, *Diabetologia* (2016). DOI: [10.1007/s00125-016-4020-6](https://doi.org/10.1007/s00125-016-4020-6)

Provided by Lund University

Citation: Antidiabetic effects discovered in the appetite hormone CART (2016, June 30)
retrieved 5 May 2024 from
<https://medicalxpress.com/news/2016-06-antidiabetic-effects-appetite-hormone-cart.html>

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