

# Insulin research points way to better diabetes treatments

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New research that significantly improves our understanding of how insulin interacts with cells in the human body is published today.

The study could have major implications for the development of treatments for Type I diabetes.

By developing and analysing a range of super active insulins, scientists from the York Structural Biology Laboratory at the University of York have been able to identify common features that point to the likely [molecular structure](#) of human insulin when it is active in the body.

The research also offers new insight into how insulin binds to insulin receptors on cells.

The research was conducted with colleagues at the Institute of [Organic Chemistry](#) and Biochemistry of the Academy of Sciences of the Czech Republic, and is published in the journal [Proceedings of the National Academy of Sciences](#).

Dr Marek Brzozowski, from the York Structural Biology Laboratory, said: "The structures of inactive forms of insulin and the insulin receptor are reasonably well known, but documenting how they interact has proven to be a considerable scientific challenge.

"Improving our understanding of this interaction holds the key to developing far more sophisticated treatments for Type I diabetes and this

research represents an important step forward."

The research could help the development of insulin treatments that can be more carefully controlled or that could be delivered without the need for injections.

Provided by University of York

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