

# Moving towards a better treatment for autoimmune diabetes

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Insulin is required for the regulation of blood sugar levels. In type I diabetes, the cells that produce insulin are destroyed by the immune system.

Chantal Mathieu and colleagues at the University of Leuven have attempted to circumvent this response by taking advantage of the fact that the immune system accepts foreign gut bacteria.

The Mathieu group engineered [gut bacteria](#) so that they produce a form of insulin, and asked if these bacteria could retrain the immune system in mice with type I diabetes to accept insulin-producing cells.

They found that these special bacteria increased the frequency of cured mice when compared to traditional methods alone, with seemingly no undesirable effects.

Traditional methods suppress the immune system, which brings with it unfavorable consequences such as increased infections. In fact the Mathieu group confirmed that the immune system functioned in the mice following treatment.

Their study provides a promising step towards the ability to reverse [type I diabetes](#), as well as other [autoimmune disorders](#), without incurring adverse side effects.

**More information:** Reversal of autoimmune diabetes by restoration of

antigen-specific tolerance using genetically modified *Lactococcus lactis* in mice, *Journal of Clinical Investigation*.

Provided by Journal of Clinical Investigation

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