

We now know a possible trigger for Type 1 diabetes

It seems that a common bacterium found in the human gut makes a protein that looks just enough like insulin to cause the immune system to attack not only this bacterium, but indeed to attack insulin and the pancreas itself. This process could very well be one of the main triggers of Type 1 diabetes, and knowing this would substantially change the way we think about this disease. And it all may be just a crazy accident of nature.

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In 2018, a [study](#) published in *Nature* took a look at gut bacteria that were most commonly overrepresented in children that had developed Type 1 diabetes compared to normal gut bacteria profiles. The bacterial genus that led all others in that respect ($P < 0.001$, or 99.9% likelihood of a real effect) is called *Parabacteroides*.

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I know there's a ways to go before this translates to any therapeutic success, but the best place to start is knowing the culprit. Here we have a common gut bacterium that is strongly associated with the development of Type 1 diabetes, and it turns out this particular bacterium — of all the bacteria, fungi, and viruses out there — just so happens to have the one sequence that looks enough like insulin to elicit an immune response from T cells directed against insulin. *Of all the [gin joints](#) in all the towns in all the world.....*

The smoking-gun nature of it is astonishing, don't you think?

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