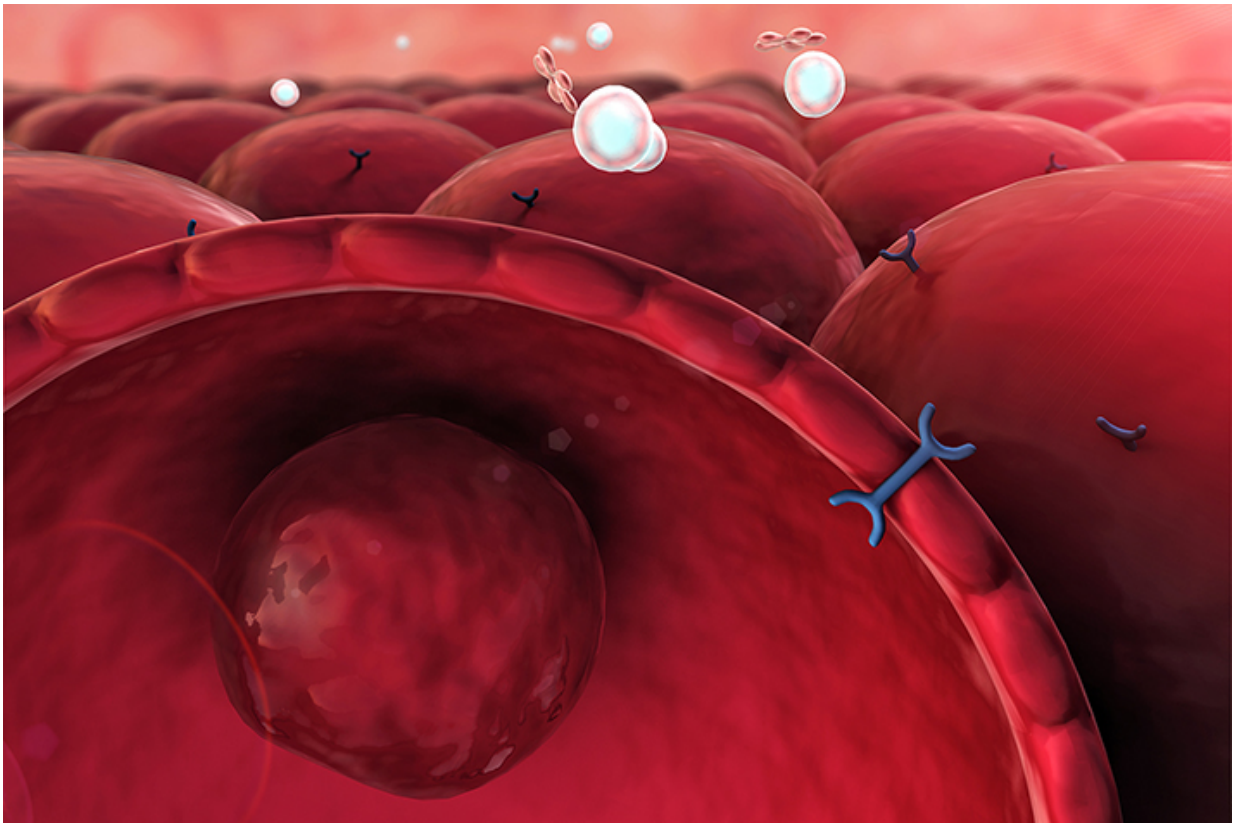


# Study reveals protein to target in type 2 diabetes

September 1 2016, by Ziba Kashef

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When the body's cells don't respond normally to insulin—a condition known as insulin resistance—blood glucose levels can increase, resulting in type 2 diabetes. Researchers have long known that insulin resistance is

linked to defects in the insulin receptor (which controls glucose uptake) in multiple organs, including the liver.

To study the underlying mechanism, a team of researchers led by Narendra Wajapeyee, assistant professor of pathology, and Gerald Shulman, professor of cellular and molecular physiology and internal medicine, used a genomic technique to screen more than 600 proteins. They found that one of the proteins, MARCH1, impairs insulin by promoting the breakdown of the [insulin receptor](#) on the cell surface. MARCH1, which is increased in [obese individuals](#), could be a promising new target for drugs to treat type 2 diabetes, they said.

Lead authors on the study were Arvind Nagarajan and Max Petersen.

**More information:** Arvindhan Nagarajan et al. MARCH1 regulates insulin sensitivity by controlling cell surface insulin receptor levels, *Nature Communications* (2016). [DOI: 10.1038/ncomms12639](https://doi.org/10.1038/ncomms12639)

Provided by Yale University

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