New prospects for diabetes treatment have been found

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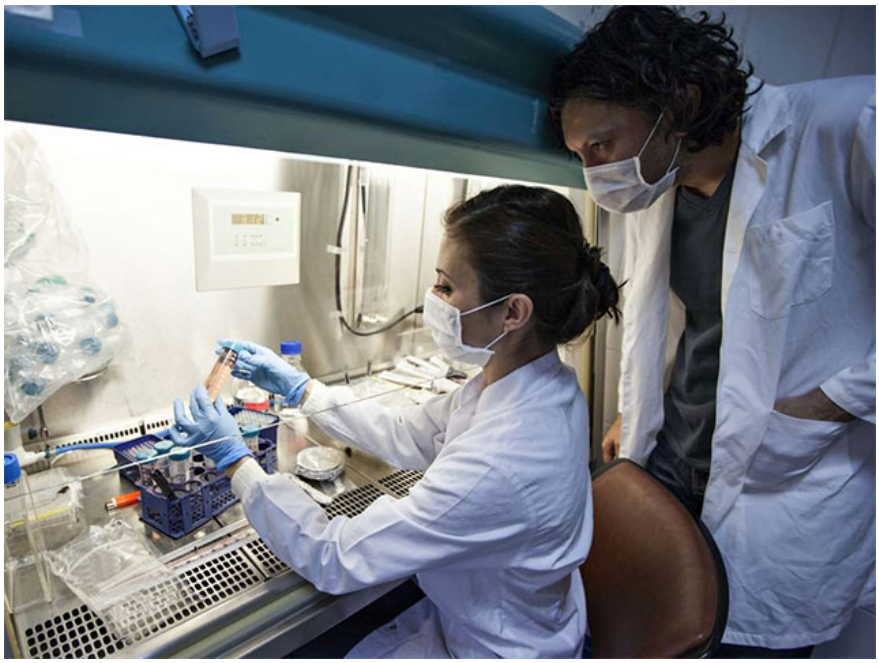
To date, the most common treatment is to follow a strictly controlled diet, and inject insulin regularly as needed. After all, these are still 'maintenance' therapies, not really a definitive solution to this increasingly dangerous and rejuvenating disease. However, the recent success in a diabetes study in mice could very well open a new path for millions of diabetics worldwide.

A team led by Professor Jeffrey Millman at the University of Washington, USA has found that infusing stem cells into mice could lead to a better diabetes treatment in the animal.



Diabetes is characterized by difficulties in the body's production or administration of insulin. This requires careful follow-up, strict diet, exercise and costly insulin injections - the cause of the economic burden for many diabetics.

Insulin is usually produced in the pancreas, but in diabetics the amount of insulin that the pancreas produces is not enough to lower blood sugar. Therefore, to treat diabetes, patients must regularly monitor blood sugar and inject insulin directly into the bloodstream as needed to lower blood sugar.

However, the method of Jeffrey Millman's group is completely different, stimulating beta cells in the pancreas to release insulin to the body naturally. The principle of this treatment is based on pluripotent stem cells (iPS cells). IPS cells can basically be transformed to become almost any other cell type in the body.

The team found a technique to produce and put these cells into the bloodstream - the hardest step to get iPS into the body. When the process of converting stem cells into another type of cell, there are always errors, random cells will invade the mixture of insulin-producing cells and become a part of them.

The body needs about 1 billion beta cells to cure diabetes. The team built a process that targets cells, the structure that gives cells their shape, and not only creates a higher rate than effective beta cells, but also makes them work well. than. When these new cells were transferred to diabetic mice, their blood sugar levels stabilized, and the disease could be cured in about 9 months.

Of course this is only an experiment with animals. There is no evidence that this treatment will ever work in humans. But this success opens a promising start.

Jeffrey Millman's group plans to continue testing this method in larger animals and for longer periods of time, with the ultimate goal of future clinical trials in humans.