



25 Breakthroughs in Georgia



NO. 11:

A better treatment for kidney implants

Your body knows to attack anything foreign. But what if that foreign entity is important to your survival, such as a transplanted kidney?

Two Emory scientists figured out a better way to help the body accept a new kidney – and their work led to what is now a leading drug for kidney transplant patients.

It's called belatacept (bella-TAH-sept), and Emory's Chris Larsen and Tom Pearson proved to be pivotal at two key points in the drug's 20-year development.

First, the scientists identified the power of a key signaling pathway in cells, a discovery that opened the door for pharmaceutical company Bristol Myers Squibb to design the drug and invest in clinical trials in non-human primates.

Those trials didn't go well at first, so Larsen and Pearson worked with Bristol Myers Squibb to explore other approaches – until they found one that had 10 times the effect in keeping the immune system from rejecting a kidney.

From there, they helped shape clinical trials in humans, the success of which led to the FDA's approval of belatacept in 2011.

What makes the drug so significant is that it brings far fewer side effects and doesn't have to be taken as often as other immunosuppressants. For the 50,000 or so people who have kidney transplants each year, that's welcome news.

And they have Emory scientists to thank.

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