

## Penises grown from stem cells may soon be used for transplants

Penises grown in laboratories could soon be tested on men by scientists developing technology to help people with congenital abnormalities, or who have undergone surgery for aggressive cancer or suffered traumatic injury.

Researchers at the Wake Forest Institute for Regenerative Medicine in Winston-Salem, North Carolina, [are assessing engineered penises for safety, function and durability](#). They hope to receive approval from the U.S. Food and Drug Administration and to move to human testing within five years.

Professor Anthony Atala, director of the institute, oversaw the team's successful engineering of penises for rabbits in 2008. "The rabbit studies were very encouraging," he said, "but to get approval for humans we need all the safety and quality assurance data, we need to show that the materials aren't toxic, and we have to spell out the manufacturing process, step by step."

The penises would be grown using a patient's own cells to avoid the high risk of immunological rejection after organ transplantation from another individual. Cells taken from the remainder of the patient's penis would be grown in culture for four to six weeks.

For the structure, they wash a donor penis in a mild detergent to remove all donor cells. After two weeks a collagen scaffold of the penis is left, on to which they seed the patient's cultured cells – smooth muscle cells first, then endothelial cells, which line the blood vessels. Because the method uses a patient's own penis-specific cells, the technology will not be suitable for female-to-male sex reassignment surgery.

**Read full, original article:** [Scientists ready to test lab-grown penises on men](#)