

Key Breakthrough in Cure for Baldness

By Zoe Papadakis | 01 July 2019



Scientists have achieved a key breakthrough in the attempt to cure baldness. By using stem cells a team of researchers were able to create natural-looking hair that grows through the skin. The revolutionary results were presented to the annual meeting of the International Society for Stem Cell Research in Los Angeles on June 27.

"This is a critical breakthrough in the development of cell-based hair-loss therapies and the regenerative medicine field," said Alexey Terskikh, of Sanford Burnham Prebys Medical Discovery Institute in California.

With this discovery, scientists may be able to grow natural looking hair for bald men.

For years Terskikh has been studying a specific type of cell called dermal papilla, which resides in the hair follicle and controls hair growth. In 2015 he made his first breakthrough in the search to cure baldness by successfully growing hair underneath mouse skin.

This was achieved by creating dermal papilla derived from human pluripotent stem cells (iPSCs) however, the process needed to be refined. Terskikh and his team have now made a massive breakthrough in their research.

A 3D biodegradable scaffold made from the same material as dissolvable stitches was developed to control the direction of hair growth and help the stem cells integrate into the skin. The experiment was performed on mice and was a success. The next step is to derive the epithelial part of a hair follicle from human iPSCs.

"Hair loss profoundly affects many people's lives. A significant part of my practice involves both men and women who are seeking solutions to their hair loss," said Richard Chaffoo, plastic surgeon and founder of La Jolla Hair MD and medical adviser to Stemson Therapeutics.

Baldness affects an estimated 80 million Americans- 50 million men and 30 million women, The American Academy of Dermatology noted. A report found that women who experienced hair loss also showed symptoms of depression while men displayed signs of anxiety.

"I am eager to advance this groundbreaking technology, which could improve the lives of millions of people who struggle with hair loss," Chaffoo said.