

# Hair-Loss Solution May be Found in Arthritis Drug

By ACSH Staff — October 27, 2015



Baldness isn't just something men inherit from their mother's

father, nor is the condition just a result of them producing too much testosterone. For those who have any of the forms of alopecia -- the autoimmune disorder -- such as alopecia areata (spot baldness) or alopecia totalis (scalp), an effective cure for baldness would provide a tremendous quality of life enhancement.

Unfortunately for sufferers, the treatment options measured by their effectiveness run from [pseudo-science to imperfect science](#) [1]. That said, hope may be on the horizon.

According to a [study](#) [2] recently published in *Science Advances*, researchers might be close to a solution by using drugs that are already approved. They are called Janus kinase (JAK) inhibitors, which are currently used to treat a variety of ailments, such as rheumatoid arthritis.

As their name suggests, JAK inhibitors block the enzyme [JAK](#), [3] which is one of the most extensively studied enzymes. The JAK/STAT cell pathway is important in many cellular processes such as mammary gland development, blood cell development, and it's also critical in immune system activation. It is also considered the most important cell pathway for responding to growth factors and cytokines. Pathologically, it is frequently seen to be disrupted in leukemias.

[Previous work](#) [4] had found some success in administering JAK inhibitors orally, however this time the researchers applied the drug topically to mice and found it to be more effective.

Local blocking of JAK resulted in speedy and robust hair growth in mice. In fact, treated mice demonstrated hair growth within 10 days, while untreated mice showed no growth during this period. The research team, from Columbia University, also reported that the dormant follicles were being reawakened to grow hair, in a pathway similar to normal hair growth. They also found the drugs worked successfully on human cell culture, providing evidence that this may be translatable to humans.

Current treatments for baldness often pray on desperation, as evident by infamous late-night TV commercials touting the miracles of "spray-on hair." On the internet, some sites will claim that simple changes to one's diet can treat the condition, while others, promise benefits from surgery

with lasers.

The FDA has two approved options, Propecia (also known as Finasteride) and Minoxidil (also known as Rogaine), but these both [have serious drawbacks](#) [5].

---

COPYRIGHT © 1978-2016 BY THE AMERICAN COUNCIL ON SCIENCE AND HEALTH

---

**Source URL:** <https://www.acsh.org/news/2015/10/27/hair-loss-solution-may-be-found-in-arthritis-drug>

**Links**

[1] <http://www.mensfitness.com/styleandgrooming/grooming/6-best-fixes-hair-loss/slide/8>

[2] <http://advances.sciencemag.org/content/1/9/e1500973>

[3] <http://jcs.biologists.org/content/joces/117/8/1281.full.pdf>

[4] <http://www.sciencedirect.com/science/article/pii/S2352396415000894>

[5] <http://blogs.law.harvard.edu/billofhealth/2013/01/31/finasteride-as-an-fda-approved-baldness-remedy-is-it-effective/>