

## Quest to figure out why our hair turns gray yields new answer

Scientists think they've stumbled upon a newly discovered mechanism that could explain why some people's hair turns gray and others become afflicted with patches of unpigmented skin, a rare, stigmatized condition called vitiligo. Their research, [published](#) Thursday [May 3] in *PLOS Biology*, suggests a gene that regulates the natural pigment melanin also keeps our immune system from turning on itself.

Our skin, eyes, and hair get their color from melanin, which is produced by melanocytes, cells found throughout our skin and various other body parts. Melanocytes also happen to be one of the first things to go as we get older, making it an important cell for scientists in the field of aging to study.

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In mice bred to become prematurely gray, the team had noticed, their production of MITF was unusually high, likely leading them to exhaust their supply of melanocytes. They predicted that breeding these mice to make less MITF would slow down the process. But to their surprise, it didn't...

In their latest work, they believe they've answered the question of why.

MITF not only seems to supervise the production of melanin within melanocytes, but also controls genes responsible for releasing interferons, immune proteins that help fight off viral infection...

Without enough MITF, the breeding experiments revealed, the mouse melanocytes produced too many interferons, which then goads the immune system into attacking the melanocytes. The process was different, but the result was the same: gray fur.

**Read full, original post:** [Scientists Find Another Possible Explanation for Why Hair Goes Gray](#)