

New genetic links to baldness discovered

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Credit: Laura Tiitto/public domain

By the time they turn 50, half of European men have some degree of hair loss. For many, it will begin far earlier than that, and yet male pattern baldness is poorly understood.

In the largest-ever genetic study of male patterned baldness, scientists at the University of Bonn in collaboration with 23andMe and other

institutions have found new genetic variants associated with losing one's hair. Researchers of the study, due for publication today in the journal *Nature Communications*, identified 63 genetic variants associated with balding, 22 of which are novel. The study used data of more than 22,000 people, 17,000 of whom are 23andMe customers who consented to participate in research.

Several studies indicate that losing one's hair early in life is also associated with serious health conditions including [prostate cancer](#) and Parkinson's disease, so understanding how and why men go bald, could enhance understanding of a wide range of other conditions, according to researchers.

The variants found in this study were in or near genes that play a role in hormonal status - melatonin signaling, fat cell differentiation, and the growth phases of hair. Six of the genetic variants identified are on the X-chromosome and may account for some of the similarities in hair loss between men and their grandfathers on their maternal side. The remaining variants are on the autosomes, the non-sex chromosomes.

Taken together, the findings will help researchers predict who is at risk of male patterned baldness, but the findings also place [hair loss](#) into a wider medical and biological context. Researchers believe that the identified genes could be promising targets for drugs to treat the condition. Beyond that, the research also illustrates that male pattern balding shares similar biology with other traits and conditions.

More information: Stefanie Heilmann-Heimbach et al. Meta-analysis identifies novel risk loci and yields systematic insights into the biology of male-pattern baldness, *Nature Communications* (2017). [DOI: 10.1038/ncomms14694](https://doi.org/10.1038/ncomms14694)

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