

'Beneficial archaic DNA' still present and impacting humans today

Most Neanderthal variants exist in only around 2 percent of modern people of non-African descent. But some archaic DNA is much more common, an indication that it was beneficial to ancient humans as they moved from Africa into Eurasia, which Neanderthals had called home for more than 300,000 years. In their 2014 study, [evolutionary biologists Benjamin] Vernot and [Joshua] Akey found several sequences of Neanderthal origin that were present in more than half of the genomes from living humans they studied.

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A number of segments harbor genes that relate to skin biology, such as a transcription factor that regulates the development of epidermal cells called keratinocytes. These variants may underlie traits that were adaptive in the different climatic conditions and lower levels of ultraviolet light exposure at more northern latitudes.

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Another area of human biology tightly linked to Neanderthal variants in the genome is the immune system. Given that human ancestors were exposed to a menagerie of different pathogens—some of which came directly from the Neanderthals—as they migrated through Eurasia, the Neanderthal sequences introgressed into the human genome may have helped defend against these threats, to which Neanderthals had long been exposed.

Read full, original post: [Neanderthal DNA in Modern Human Genomes Is Not Silent](#)