

# Inconsistencies with Neanderthal genomic DNA sequences

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Two recent papers describing the sequencing of Neanderthal nuclear DNA from fossil bone held promise for finally answering this question. However, the two studies came to very different conclusions regarding the ancestral role of Neanderthals.

Were Neanderthals direct ancestors of contemporary humans or an evolutionary side branch that eventually died out? This is one of the enduring questions in human evolution as scientists explore the relationship of fossil groups, such as Neanderthals, with people alive today. Two recent papers describing the sequencing of Neanderthal nuclear DNA from fossil bone held promise for finally answering this question [1, 2].

However, the two studies came to very different conclusions regarding the ancestral role of Neanderthals. Jeffrey D. Wall and Sung K. Kim from University of California San Francisco now reveal in *PLoS Genetics* what they found when they reanalyzed the data from the two original studies.

Wall and Kim's reanalysis reveals inconsistencies between them and they believe that possible contamination with modern human DNA and/or a high rate of sequencing errors compromised the findings of one of the original Neanderthal DNA studies. The authors therefore recommend that we carefully evaluate published and future data before arriving at any firm conclusions about human evolution.

References:

1. Noonan JP, Coop G, Kudaravalli S, Smith D, Krause J, et al. (2006) Sequencing and analysis of Neanderthal genomic DNA. *Science* 314: 1113-1118.
2. Green RE, Krause J, Ptak SE, Briggs AW, Ronan MT, et al. (2006) Analysis of one million base pairs of Neanderthal DNA. *Nature* 16: 330-336.

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