

A Neandertal from Chagyrskaya Cave

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including planning, decision-making, motivation and reward perception—may have played a unique role in Neandertals.

More information: Fabrizio Mafessoni et al, A high-coverage Neandertal genome from Chagyrskaya Cave, *Proceedings of the National Academy of Sciences* (2020). [DOI: 10.1073/pnas.2004944117](https://doi.org/10.1073/pnas.2004944117)

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Researchers have sequenced the genome of a Neandertal from Chagyrskaya Cave in the Altai Mountains to high quality. Credit: Dr. Bence Viola, Dept. of Anthropology, U. of Toronto

The researchers extracted the DNA from bone powder and sequenced it to high quality. They estimate that the female Neandertal lived 60,000-80,000 years ago. From the variation in the genome they estimate that she and other Siberian Neandertals lived in small groups of less than 60 individuals.

The researchers also show that the Chagyrskaya Neandertal was more closely related to the Croatian than to the other Siberian Neandertal which lived some 40,000 years before the Chagyrskaya Neandertal. This shows that Neandertal populations from the West at some point replaced other Neandertal populations in Siberia.

"We also found that [genes](#) expressed in the striatum of the brain during adolescence showed more changes that altered the resulting amino acid when compared to other areas of the brain," says Fabrizio Mafessoni, lead author of the study. The results suggest that the striatum—a part of the brain which coordinates various aspects of cognition,

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