# Researchers Discover Oldest Human Viruses in 50,000-Year-Old Neanderthal Bones



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Scientists from Brazil's Federal University of São Paulo have identified the oldest known human viruses in 50,000-year-old Neanderthal remains found in a cave in the Altai Mountains, Siberia. The study uncovered remnants of herpesviruses, which cause cold sores; the sexually transmitted papillomavirus; and adenovirus, which is responsible for the common cold. These findings were derived from the DNA of two male Neanderthals excavated from Siberia's Chagyrskaya cave.

Lead author Marcelo Briones hopes to synthesize these ancient viruses in a laboratory to compare their reproductive and pathogenic traits with modern versions. Despite the challenges in reconstructing these ancient viral genomes and understanding their interactions in today's environment, Briones believes these studies could provide valuable insights.

The research suggests that these viruses were authentic infections of Neanderthals, not transmitted from predators or humans handling the remains. The findings support theories that diseases, particularly herpesviruses, could have contributed to Neanderthals' extinction. However, further testing is necessary to confirm this hypothesis.

The Neanderthal remains, first discovered in 2022, included a group of individuals sharing DNA, indicating familial relationships. There were no signs of a burial site, and the collection included a range of ages from children to adults, suggesting they perished at the same time. This new DNA discovery may illuminate the causes behind their deaths and broader extinction.

By comparing these ancient viruses with those affecting humans today, researchers hope to gain crucial evolutionary insights into disease interactions and origins.