

## News & Comments

# The Black Death Mystery Unravelled

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The mid-14th Century health catastrophe is one of the most significant disease episodes in human history. *Yersinia pestis*, which caused the Black Death, was the first wave of the second plague pandemic that lasted about 500 years and was one of the greatest infectious disease disasters in humanity's history. Approximately 60% of western Europeans were wiped out by the Black Death over its eight-year period.

Since the medieval Black Death pandemic from AD 1346-1353 had such long-term consequences and wide-scale demographic effects, ongoing investigations have been conducted into its origins. Although multidisciplinary investigations have been conducted extensively, we do not yet know where the second plague pandemic originated. To investigate probable evidence associated with the origin of the second plague pandemic,

The ancient DNA samples were taken from the teeth of skeletons in cemeteries near Lake Issyk Kul in Kyrgyzstan by a research team from the University of Stirling in Scotland and Germany's Max Planck Institute and the University of Tübingen. Researchers document ancient DNA data from 7 individuals exhumed from Burana and Kara-Djigach cemeteries. It was chosen because 1338 and 1339 marked a significant increase in burials there. The teeth were chosen because of the high probability of detecting blood-borne pathogens, which would be the possible cause of death.

Surprisingly, the team detected the plague bacterium, in 3 out of 7 examined samples. Based on various lines of evidence, the study findings suggest that the second plague pandemic in central Eurasia in the early 14th century may have originated from there. "We could finally show that the epidemic mentioned on the tombstones was indeed caused by the plague," says Slavin, the historian.

According to the researchers, the ancestral strain did resemble modern strains circulating in rodent populations around the Tian Shan Mountains, suggesting that the Black Death originated in the area rather than having been introduced from outside. Consequently, Black Death's ancestors originated in Central Asia.

### KEYWORDS

Archaeology, Evolutionary genetics, Pathogens; Cell, Contamination, DNA, Genetic, Genomic, Hops, Hybridization

