

New genetic evidence resolves origins of modern Japanese

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Was there a single migration event or gradual mixing of cultures that gave rise to modern Japanese?

According to current theory, about 2,000-3,000 years ago, two populations, the hunter-gatherer Jomon from the Japanese archipelago, and the agricultural Yayoi from continental East Asia, intermingled to give rise to the modern Japanese population. However, some researchers have suggested otherwise, with the Jomon culture gradually transformed into the Yayoi culture without large migrations into modern day Japan.

To resolve the controversy, researchers Oota, Mano, Nakagome et al., identified the differences between the Ainu people (direct descendants of indigenous Jomon) with Chinese from Beijing (same ancestry as Yayoi).

The results from a genome-wide, [single nucleotide polymorphism](#) (SNP) data strongly support the hybridization model as the best fit for Japanese population history. An initial divergence between the Ainu and Beijing group was dated to approximately 20,000 years ago, while evidence of genetic mixing occurred 5,000 to 7,000 years ago, older than estimates from the archaeological records, probably due to the effect of a further sub-population structure of the Jomon people.

The authors caution that further studies will need to be undertaken (especially ancient genome analysis of Jomon and Yayoi skeletal remains and genomic analysis of northeast Asians) to untangle the true

evolutionary history of Japanese, in particular, the origins of the Jomon and Yayoi people and the source of gene flow to the Ainu.

The study is published in *Molecular Biology and Evolution*.

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