

## **Ancient Chinese: their Genetic Diversity and Life History**

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### **【Outline of survey】**

We have previously found drastic changes in population genetic structure of three populations that lived in the same location, Linzi of China, in different periods. Inconsistent with the geographical distribution, the 2500-year-old Linzi population showed greater genetic similarity to present-day European populations than to present-day East Asian populations. The 2000 year-old Linzi population had features that were intermediate between the present-day European/2500-year-old Linzi populations and the present day East Asian populations. These relationships suggest the occurrence of drastic spatiotemporal changes in genetic structure of Chinese people during the past 2500 years. We here address genetic structure of other populations in ancient China and its life history.

### **【Expected results】**

Further ancient DNA analyses of human remains excavated from various archaeological sites in China, especially focusing on the sites that locate on the Central Plains, make clear genetic structure of ancient Chinese people living in the civilization center of ancient China and disclose its temporal changes. In addition, investigations such as carbon and nitrogen analysis of collagen extracted from human remains, DNA analysis of plant remains, pathological and forensic analysis of human remains reveal life history of ancient people in China.

### **【References by the principal researcher】**

- Identification of a bronze weapon based on an embedded fragment in a 3,000-year-old skull. Kurosaki K., Wang L., Tang J., Wang W., Saitou N., Endo T., and Ueda S. (2005) *Forensic Sci. Int.* 151(1), 105-108.
- Genetic structure of a 2500-year-old human population in China and its spatiotemporal changes. Wang L., Oota H., Saitou N., Jin F., Matsushita T., and Ueda S. (2000) *Mol. Biol. Evol.* 17(9), 1396-1400.
- Molecular genetic analysis of remains of a 2,000-year-old human population in China - and its relevance for the origin of the modern Japanese population. Oota H., Saitou N., Matsushita T., and Ueda S. (1999) *Amer. J. Human Genet.* 64(1), 250-258.

**【Term of project】** FY2006 - 2010

**【Budget allocation】** 20,500,000 yen

**【Homepage address】** <http://www.biol.s.u-tokyo.ac.jp/users/shinka/lab.html>