COMMENTARY

A Commentary on The Soliga, an isolated tribe from Southern India: genetic diversity and phylogenetic affinities

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The Subcontinent India is located at the South-Central part of Eurasia, and has been the cross-roads of human dispersal.¹ Now in this issue of *Journal of Human Genetics*, Rene J Herrera and collaborators showed a new genetic connection between one isolated tribe in India, Soliga and Aborigines in Australia.² The Soliga tribe is distributed in the state of Karnataka, Southern India, and phenotypically resemble the Australian Aborigines. This study may be the first one to show that a particular human population in this Subcontinent may be phylogenetically close to Aborigines. Interestingly, morphological similarity between some tribes in Southern India and Australian Aborigines was already noticed by Thomas H. Huxley in 1870.³ After 140 years, Huxley's assertion was shown to be probably true.

Short tandem repeat (STR) or microsatellite DNA loci have high mutation rates, and genetic heterogeneity for one locus is often pretty high. STRs are therefore often used for human population study. For example, Japanese populations were shown to be more closely related with coastal than inland Han populations using 105 STR polymorphism data.⁴ Morlote *et al.*² examined 15 autosomal STR polymorphism for the Soliga population. Although the number of STR loci compared was not large, they successfully showed a close

genetic relationship of the Soliga people and Australian Aborigines.

Vast numbers of single nucleotide polymorphism data are nowadays popular for inferring the evolutionary history of modern humans. Human populations in India⁵ and Australian Aborigines⁶ are not exceptions. More than 50 000 single nucleotide polymorphism data were also compared for ~2000 individuals from 73 Asian human populations.⁷ Therefore, I hope the massive single nucleotide polymorphism typing will be conducted for the Soliga people in near future so as to give detailed genetic affinity analysis with other human populations.

A particular interest is Negritos, who distribute sporadically in various parts of Asia, and phenotypically resemble Pigmies in Africa. Malaysian and Philippine Negritos were genetically closer to people in Melanesia,⁷ and it is very interesting to compare these Negritos with the Soliga people. Moreover, a recent study on ancient Denisovans, named after Denisova cave in South Siberia, showed possible gene flow with Melanesians.⁸ We can imagine that Negritos, Melanesians, and the Soliga people are all remnants of initial migrants from Africa to Eurasia. It may also be possible to add Vedda in Sri Lanka to this list. Mitochondrial DNA of Vedda was studied once,⁹ and a more

extensive DNA studies on this population and other tribal populations in India, including the Soliga people, are expected to be conducted in the near future.

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