

Researchers Analyzing African-Indian Population with Eye to Admixture Mapping

October 13, 2011

By [Andrea Anderson](#)

MONTREAL (GenomeWeb News) – Researchers from India are studying a recently admixed population with ancestry from west Africa and north/northwest India in an effort to learn more about the population, which they believe holds potential for doing admixture mapping.

During a session on population genetics at the International Congress of Human Genetics here yesterday afternoon, Analabha Basu, a researcher with the National Institute of Biomedical Genomics in India, described some of the genetic analyses that have already been done in the Siddi population from the Gujarat region of western India, which is thought to have lived in the region for some 500 years.

Basu touched on some of the genetic patterns that he and his colleagues have identified in the population so far using information from more than 18,500 autosomal markers shared between characterized populations in Indian and populations sampled by HGDP-CEPH and HapMap — and pointed to features that makes the admixed population particularly well suited for admixture mapping.

Genetic analyses of the Siddi population suggest it does not cluster genetically with individuals from the main language groups in India or with genetic clusters corresponding to the country's geography. Nor did the team find evidence of Portuguese ancestry, Basu noted.

Instead, the population appears to be most closely related to Bantu-speaking populations in Africa and to populations from the north and northwestern parts of India.

From their analysis, the team estimated that individuals in the Siddi population had an average of 60 percent African ancestry and 40 percent Indian ancestry in their genomes overall.

Even so, Basu noted, when the team compared some allele frequency patterns in the African-Indian population with those reported for Bantu and Indo-European populations, they found that the admixed population shared more allele frequency patterns with the Indian population than with the African population.

The researchers also did some analyses of ancestry-informative markers in relation to gene function and to information in disease-gene databases.

Because the population has undergone admixture relatively recently and appears to have stemmed from a small founder population, Basu explained, the team believes that more extensive studies of this Indo-African group could offer clues about human history and health.

"Identification and study of genetic variation in recently admixed populations not only provides insight into historical population events but is also a powerful approach for mapping disease genes," he and his co-authors wrote in the abstract for the presentation.

The team reported on [some of their findings](#) in a study published in the *American Journal of Human Genetics* this past July. In the same issue of *AJHG*, another group of researchers from India, the US, the UK, and Estonia described findings from their own [genetic analysis of the Siddi population](#).