Elevated Native American Ancestry on the X Chromosome and Assortative Mating in the HapMap Mexican Americans

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Abstract

Background: No prior studies have assessed differences of ancestry on the X chromosome and the autosomes in Hispanic populations.

Ancestry analysis on subjects from admixed populations has highlighted historical colonization events. Native american ancestry has not yet been analyzed or quantified in subjects from Mexico in the X chromosome and autosomes together. Further, assortative mating for Native American ancestry in this population has not been previously explored.

Results: Using 603,611 genome-wide SNP markers, we estimated proportions of European, Native American (NAm) and African ancestry on 22 autosomes and the X chromosome in the HapMap Mexican Americans from Los Angeles, California. We found that the X chromosome has a statistically significant elevated proportion of NAm ancestry (p=7.4e-05). an elevated proportion of NAm ancestry on the X chromosome (p=7.4e-05). We also estimated spousal correlation of genetic ancestry in HapMap MXL. Strong evidence of assortative mating for NAm and European ancestry was found (p=0.007, p=XX). European ancestry ...

Conclusions: *use sentence from bustamante's paper: increased NAm gene flow * genomic structure is different on the X chromosomes than in the autosomes, in Latino populations. Autosomal and X chromosome ancestry are estimating two different values, in the population analyzed here. Assortative mating for NAm ancestry and X chromosome lineage allow for a persistence of NAm ancestry in the HapMap Mexicans from Los Angeles.

Content

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Tables

Table 1 - Sample table title

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