Genetic variation and population structure in Native Americans

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We examined genetic diversity and population structure in the American landmass using 678 autosomal microsatellite markers genotyped in 422 individuals representing 24 Native American populations sampled from North, Central, and South America. These data were analyzed jointly with similar data available in 54 other indigenous populations worldwide, including an additional five Native American groups. The Native American populations have lower genetic diversity and greater differentiation than populations from other continental regions. We observe gradients both of decreasing genetic diversity as a function of geographic distance from the Bering Strait and of decreasing genetic similarity to Siberians - signals of the southward dispersal of human populations

from the northwestern tip of the Americas. We also observe evidence of: (1) a higher level of diversity and lower level of population structure in western South America compared to eastern South America, (2) a relative lack of diffe