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Ancestry analysis in rural Brazilian populations of African descent

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Highlights

- Genetic structure and ancestry of African-Brazilian rural populations are described.
- Data on the 46 AIM Indels is consistent with the Quilombos' history and demography.
- Quilombos are not uniform and their African ancestry surpasses the Brazilian average.
- Rural Brazilian populations are diverse, yet under-represented in forensic databases.

Abstract

Rural communities comprise around 20% of Caribbean and South American populations, but are under-represented in autosomal marker databases. That deficiency is problematic for forensic genetics, as it relies on accurate descriptions of genetic variation and population structure. Brazilian populations were shaped by an intense, complex and heterogeneous process of admixture encompassing mainly Amerindians, Sub-Saharan Africans and Europeans. Quilombos are Brazilian populations with significant African descent that have remained genetically isolated to some extent from surrounding populations. In the reported study, we analyzed three rural Quilombo populations: Kalunga; Riacho de Sacutiaba e Sacutiaba; and Mocambo, along with a dataset from the HGDP-CEPH panel. Aiming to contribute to representative genetic databases of

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