A Big Earth Data Platform for Three Poles

**Y chromosome SNP and STR data of three Tibetan populations in Tibet (2019-2021)**

1、Description

To investigate the paternal genetic structure of Tibetans, 447 male samples were collected from Ngari (n=211), Chamdo (n=119), and Nyingchi (n=117). Firstly, SNP genotyping was performed to allocate samples into haplogroups. To further evaluate the genetic diversity of the major Y-chromosomal haplogroup in Tibetan populations from Lhasa, eight commonly used Y-chromosomal STR (short tandem repeat) loci (DYS19, DYS388, DYS389I, DYS389II, DYS390, DYS391, DYS392, and DYS393) were genotyped using fluorescence-labeled primers with an ABI 3130XL Genetic Analyzer (Applied Biosystems, USA). The results indicated that haplogroup D displayed highest frequency in these three Tibetan populations (Ngari 54.50%, Nyingchi 64.10%, Chamdo 67.23%). Among haplogroup D, D-P47 showed the highest frequency (Ngari 29.39%, Nyingchi 51.28%, Chamdo 55.46%). Differently, D-N1 showed the highest frequency in Ngari (21.33%), followed by Nyingchi (11.97%) and Chamdo (10.92%). Haplogroup O-M117 is the second frequent haplogroup in these three populations, with the highest frequency in Ngari (29.86%), followed by Nyingchi (26.50%) and Chamdo (15.97%). Compared with the other two populations, Ngari Tibetans have higher frequencies of western Eurasian haplogroups, including R-M17 (1.42%), R-M343 (1.42%), and J, probably reflecting more genetic contribution from the west into Ngari. In combination with the data from Lhasa that deposited in 2019 and 2020, our Y chromosome data of Tibetans from different locations on the Tibetan Plateau will be very helpful to understanding the paternal genetic structure of Tibetans. Moreover, the genetic history of Tibetans can also be dissected by phylogeographic and coalescent analyses.

2、Keywords

Theme：Climatic Resources,Population  
Discipline：Human-nature Relationship  
Places：Chamdo, Changdu, NyingchiNgari,   
Time：2019-2021

3、Data details

1.Scale：None

2.Projection：

3.Filesize：0.06MB

4.Data format：None

4、Space scope

|  |  |  |
| --- | --- | --- |
| - | north：32.5 | - |
| west：80.11 | - | east：97.17 |
| - | south：29.65 | - |

5、Time frame:2019-12-31 16:00:00+00:00--2021-12-30 16:00:00+00:00

6、Reference method

References to data:

KONG Qingpeng. Y chromosome SNP and STR data of three Tibetan populations in Tibet (2019-2021). A Big Earth Data Platform for Three Poles, doi:10.11888/HumanNat.tpdc.2718692021

References to articles:

7、Supporting project information

Pan-Third Pole Environment Study for a Green Silk Road-A CAS Strategic Priority A Program

8、Data resource provider

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