

## Whose Heritage in the Giant Stone Culture in Easter Island ?

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### INTRODUCTION

The genetic markers arise from mutation of existing genes and differences are due to the substitution of a single amino acid. These allotypes are inherited in fixed combinations termed Gm haplotypes. So far, it has been recognized that the Gm haplotypes common to Mongoloid populations are Gm ag, axg, ab3st, and afb1b3; among Caucasoids, Gm ag, axg, and fb1b3; and among Negroids, Gm ab1b3, ab1c, and ab3s. Thus, Mongoloids are characterized by the presence of Gm ab3st and afb1b3 haplotypes and Caucasoids, by Gm fb1b3. No Gm haplotype are found in common between Negroids and Caucasoids or Mongoloids. The Gm system thus provides genetic markers that are unparalleled in studies of human genetics, particularly in the characterization of different populations and in studies of genetic drift and gene flow determined by the presence of either a unique haplotype in a particular race or by differences in the frequencies of the same haplotypes in a given ethnic group. The authors investigated Gm haplotype distribution among the inhabitants on the Cook islands which is close to Easter island within southeasternmost Polynesia to make clear where the native people on the Easter island came from.

### RESULT AND DISCUSSION

Easter island, a solitary island known with the giant stone statues, Moai, in the South Pacific Ocean, was discovered by the Dutch admiral Jacob Roggeveen on Easter Sunday of 1722. In those days Polynesian of great voyage people had already lived on the islands of this area in the South Pacific Ocean. On the slope of this volcanic island about 900 huge stone

statues called Moai are scattered here and there. Because of reduction of inhabitants owing to capture by slave trade and death from introduced diseases and additionally spread of racial admixture. It is almost impossible now to search their origin by investigating them.

In 1949 Thor Heyerdahl, an anthropologist in Norway, made an experiment on drifting with a raft named Kon-Tiki from Peruvian coast toward Polynesia from a foundation that the stone figures of Easter island were closely akin to those of Pre-Inca. As the result of his experiment, he reported that he proved the possibility of people in Easter island coming from South America and the stone statues originating in also South America.

However, we judged that natives in Easter island have their origin in South of China from the result of research of distribution of Gm haplotype with Koichi Hiraiwa and others of Fukushima Medical College. So giant stone statues, Moai, were made by Southern Mongoloids who sailed across the sea over ten thousand kms away. The base is that we found islanders of Cook island situated at west of Easter island belong to the Southern Mongoloids by our research. People in islands spreading from Southeast Asia over Polynesia in South Pacific Ocean also belong to them, and it is quite possible that people in Easter island lying to the east of Cook islands belong to the Southern Mongoloids.

Table 1.

Frequencies of Gm phenotypes and haplotypes in Cook islanders.

Phenotype	Obs.No.	Exp.No.	Haplotype	Frequency
ag	15	19.8	ag	0.260
axg	14	13.0	axg	0.075
agfb1b3	110	101.3	ab3st	0.000
axgfb1b3	28	29.1	afb1b3	0.665
afb1b3	126	129.8		
Total	293	293.0		

$$X^2 = 2.127 \quad \text{d.f.} = 1 \quad P = 0.146$$

We have thus far investigated Mongoloids and neighboring populations of over 95 living over Southeast Asia, East Asia,

Siberia, and North and South America. We have described that Mongoloids are divided into two groups, Southern and Northern group, and we Japanese belong to the Northern Mongoloids and its origin is around the Lake Baikal in Siberia. While the origin of Southern group is in south of China, Yunnan and Kuanhsi area, and people living in such area have over 95%, the highest rate of the Southern Mongoloids gene. About the group from Southeast Asia toward the islands in South Pacific Ocean they have over 70% Gm haplotype characteristic of Southern Mongoloids. So we were able to back up the hypothesis that their ancestors came from south of China. As shown in the table 1, the result of 293 islanders consisted of Rarotongan and Mangaian of Cook islands have 67% of Gm afb1b3 characteristic of Southern Mongoloids, on the contrary, are lacking in Gm ab3st characteristic of Northern Mongoloids.

The first migration of Mongoloids have taken place between 40,000 and 20,000 years ago crossing over the Behring strait from Siberia. This migrations probably lasted a long time in succession. American Indians are all classified as Northern Mongoloids on the basis of Gm pattern. South American Indians on the whole have only 0 - 3% of Gm afb1b3 characteristic of Southern Mongoloids. Accordingly, it became clear that they have little racial relationship with the islanders of Cook islands. Not only Cook islanders but also native inhabitants in Easter island who left giant stone statues Moai have their origin in the same Southeast Asia were also supported from the truth of existence of the giant stone statues, Haamogaa in Tonga and huge stone statues, Giki in Tahichi and also linguistic and archaeological evidences.

#### REFERENCES

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