## FOR THE RECORD

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## HLA-DQA1 and Polymarker in the Uros Population from Peruvian Highland

POPULATION: The Uros from the Peruvian Highland

KEYWORDS: forensic science, DNA typing, HLA-DQA1, LDLR, GYPA, HBGG, D7S8, GC, population genetics, The Uros, Peru

The Uros population is one of the probably older indigenous populations from the Peru. It is located in the floating islands on Lake Titicaca in the Peruvian Highland. Its native language is Aymara, which persists in all its residents, being children and young adults who also dominate Spanish as a second language. The waters of the lake, as well as its firm ancestral culture have been factors that have maintained this closed population; they have maintained their ethnic characteristics for centuries. The total population of the Uros in the year 2002 is little less than 400 inhabitants (1).

Whole blood samples were obtained after informed consent from 45 native residents from the floating islands denominated Los Uros in Lake Titicaca (due to the scarce number of the population's individuals, a certain degree of genetic relationship between individuals cannot be discarded). Samples were placed on FTA<sup>R</sup> paper (Whatman BioScience) and the immobilized DNA washed according to the manufacturer's recommendations. The samples were

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typed for HLA-DQA1/PM loci by using the Amplitype PM and DQA1 kit following manufacturer's instructions (PE-Biosystems, Foster City, CA). Exact tests were performed by using the computer program GDA for checking the Hardy-Weinberg expectations (2). Data were analyzed by PowerStats (3).

The complete dataset is available to any interested researcher upon request from the corresponding author.

## References

- Bouysse-Cassagne T. Poblaciones humanas antiguas y actuales. El lago titicaca. Síntesis del Conocimiento limnológico actual. Hisbol La Paz 1991:481–98.
- Tereba A. Tools for analysis of population statistics. Promega Corporation. Profiles in DNA 1999(2):14–6.
- Lewis PO, Zaykin D. Genetic data analysis: computer program for the analysis of allelic data. Version 1.0 (d16c). 2001. Free program distributed by the authors over the internet from the GDA Home Page at http://lewis.eeb.uconn.edu/lewishome/software.html.

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			HLA-DQA1									
	<i>N</i> =	= 45	Allele		Frequency							
	H PD CE P* P**		$ \begin{array}{c} 1.2\\3\\4.1\\4.2/4.3\\0.6000\\0.7733\\0.2909\\0.4330\\0.3415\end{array} $		0.0111 0.5111 0.1556 0.3222							
	LDLR		GYPA		HBGG			D7S8		GC		
Ν	А	В	А	В	А	В	С	А	В	А	В	С
45 H PD CE P* P**	0.6444 0.3556 0.4889 0.5886 0.1780 0.7305 0.7645		0.5 0.1 0.1	0.2778 111 205 974 465 430	0.1222	0.8778 0.2000 0.3546 0.0298 0.9950 0.4950		0.5 0.1 0.4	0.3000 6667 6600 600 9955 7055	0.1778	0.3333 0.6222 0.7763 0.3184 0.1430 0.1935	0.4889

 TABLE 1—Observed allele frequencies for HLA-DQA1/PM loci in The Uros population from Peru.

H: (observed heterozygosity), PD: (Power of discrimination), CE: (a priori chance of exclusion), P\*: (Hardy-Weinberg equilibrium, chi square test), P\*\*: (Hardy-Weinberg equilibrium, exact test based on 2000 shufflings).