

## FOR THE RECORD

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# The Autosomal STR Frequencies in Pakistani Populations

**POPULATIONS:** Pakistani ( $n = 704$ ); Punjabi ( $n = 200$ ), Pushtoon ( $n = 170$ ), Sindhi ( $n = 100$ ), Baluchi ( $n = 35$ ), Makrani ( $n = 48$ ), Brosho ( $n = 54$ ), Kalash ( $n = 97$ ).

**KEYWORDS:** forensic science, DNA typing, short tandem repeat, polymorphisms, population genetics, D3S1358, vWA, FGA, polymerase chain reaction

TABLE 1—STR allele frequencies for different ethnic groups in Pakistani population ( $n = 704$ ).

<i>n</i> Allele	Punjabi			Pushtoon			Sindhi			Baluchi		
	D3	200 vWA	FGA	D3	170 vWA	FGA	D3	100 vWA	FGA	D3	35 vWA	FGA
11		0.003						0.005				
12	0.010	0.018		0.003	0.003							
13	0.083	0.048		0.009	0.006			0.015				
14	0.213	0.098		0.097	0.153		0.045	0.098		0.114	0.029	
15	0.295	0.138		0.226	0.103		0.288	0.098		0.214	0.129	
16	0.245	0.195		0.306	0.241		0.338	0.222		0.257	0.271	
17	0.123	0.233		0.212	0.244		0.192	0.330		0.214	0.300	
18	0.025	0.148	0.018	0.141	0.159	0.009	0.106	0.160		0.171	0.186	
19	0.008	0.098	0.073	0.006	0.076	0.041	0.015	0.067	0.060	0.029	0.086	0.063
20		0.023	0.140		0.015	0.079	0.010	0.010	0.065			0.047
20.2			0.003			0.003			0.005			—
21		0.003	0.179			0.179			0.160			0.078
21.2			0.003			0.012			—			
22			0.177			0.168			0.155			0.109
22.2			—			0.009			0.015			0.031
23			0.164			0.229			0.110			0.234
23.2			—			0.024			—			—
24			0.116			0.144			0.200			0.188
25			0.106			0.003			0.150			0.125
26			0.053			0.085			0.060			0.078
27			0.013			0.056			0.015			0.015
28						0.009			0.005			—
29						0.003						—
32												0.015
33												0.015

Blood samples were obtained by venipuncture in Pakistan from Punjabi, Pushtoons and Sindhi individuals. CEP buccal brushes (Life Technologies Inc., UK) were used to collect buccal cells from

Baluchis, Makrani, Brosho and Kalash individuals. DNA extraction from liquid samples and buccal cells was done in accordance with the manufacturer's instructions using the Puregene® DNA Extraction kit. The Punjabi, Pushtoon and Sindhi samples were amplified using modified primers (1,2). The Baluchi, Borosho, Makrani and Kalash were amplified using the AmpFSTR™ Blue Kit (Perkin-Elmer, USA). All PCR reactions were analyzed using an ABI 373 XL UPGRADE. ROX500 (Perkin-Elmer) was used as a size standard; either "in-house" or commercial allelic ladders were used on all gels. Data were analyzed using the statistical software GDA (3).

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The complete data are available to any interested researcher upon request.

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