FOR THE RECORD

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Y-Chromosomal Short Tandem Repeat Haplotypes at the Loci DYS393, DYS19, DYS392, and DYS385-I/II, DYS390, DYS389-I/II, and DYS391 in a Filipino Population Sample

Population: Male population sample (n = 106) from the Metro Manila area (largest urban center in the Philippines)

Keywords: forensic science, forensic DNA typing, short tandem repeat (STR), Y chromosome, genetic fingerprint, Philippines

Whole blood samples were obtained from 106 unrelated male individuals living in Metro Manila, Philippines, through the Department of Health, Manila. DNA was extracted by isopropanol fractionation-sodium iodide precipitation (4) and quantified by spectrophotometry. Nine Y-chromosomal short tandem repeats (STR's) were analyzed from a population sample of 106 unrelated males by means of a quadruplex PCR (DYS393, DYS19, DYS392, DYS385-I/II) and a triplex PCR (DYS390, DYS389-I/II, and DYS391).

Primers were Cy5-labeled, and based on sequences described by Kayser et al. (1). PCR products were separated on ReproGel™ High Resolution polyacrylamide gels, and laser-detected by an ALFexpress sequencer (Amersham Pharmacia Biotech). Allelic ladders, and nomenclature were standardized against allelic ladders from P. de Knijff (Leiden), L. Roewer (Berlin), J. Edelmann (Leipzig), and P. Schneider (Mainz).

Discrimination capacity for the nine-loci system was 83%. Gene diversity was calculated following Kayser et al. (3). Frequencies of the individual alleles are shown in Table 2. Haplotype data (88 distinct haplotypes, 75 of which were unique) are given in Table 1. Gene diversity values ranged between 0.37 for DYS91 and 0.94 for DYS385, which is similar to frequences reported elsewhere (2,3).

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TABLE 1—*The 88 haplotypes observed in 106 unrelated males from Metro Manila, Philippines. Nr.: haplotype number; n: individuals observed for each haplotype.*

Nr.	DYS19	DYS385	DYS389-I	DYS389-II	DYS390	DYS391	DYS392	DYS393	*n*
1	12	13–18	14	31	23	10	13	13	2
2	12	13–19	13	30	25	10	13	13	1
3	13	13–14	12	28	25	10	14	13	1
4	13	13–19	13	29	25	10	13	13	1
5	13	13–20	13	29	25	10	13	13	1
6	14	11–14	14	30	25	11	13	12	1
7	14	11–15	13	29	24	11	13	13	1
8	14	12–14	12	27	23	10	14	13	1
9	14	12–14	12	29	21	9	12	13	1
10	14	12–21	13	29	23	10	14	14	1
11	14	13–17	12	27	24	10	14	13	1
12	14	13–18	13	29	23	10	14	12	1
13	14	13–18	12	30	23	10	12	12	1
14	14	13–19	12	27	25	11	14	12	1
15	14	13–19	14	31	22	11	11	14	1
16	14	14–15	13	30	23	10	11	13	1
17	14	14–17	13	29	25	11	14	12	1
18	14	15–17	13	28	23	10	12	13	1
19	14	15–18	12	28	23	10	14	12	2
20	14	16–18	13	30	24	10	14	13	1
21	15	11–11	13	30	22	10	13	12	1
22	15	11–13	12	28	23	10	14	13	1
23	15	11–15	12	28	24	10	13	14	1
24	15	12–12	12	28	24	10	13	14	2
25	15	12–13	12	28	23	10	14	13	3
26	15	12–13	12	30	21	9	14	14	1
27	15	12–14	12	29	21	9	12	13	1
28	15	12–15	12	28	25	10	13	13	2
29	15	12–15	12	29	25	11	13	13	2
30	15	12–15	12	29	21	9	12	14	2
31	15	12–15	12	29	25	10	13	14	1
32	15	12–16	12	28	23	10	12	12	1
33	15	12–16	12	28	24	11	13	12	1
34	15	12–16	12	29	23	10	12	12	1
35	15	12–16	12	30	23	10	13	13	2
36	15	12–16	12	29	24	10	13	13	1
37	15	12–16	12	28	24	10	13	13	5
38	15	12–16	14	31	25	10	13	14	1
39	15	12–17	12	28	24	11	13	12	1
40	15	12–17	12	28	24	10	13	13	2
41	15	12–17	12	28	24	11	13	13	1
42	15	12–17	12	28	23	10	13	14	1

continues

TABLE 1—*Continued.*

Nr.	DYS19	DYS385	DYS389-I	DYS389-II	DYS390	DYS391	DYS392	DYS393	*n*
43	15	12–18	12	30	24	10	13	12	1
44	15	12–18	12	28	24	11	13	12	1
45	15	12–19	12	28	25	10	13	12	1
46	15	12–19	13	31	23	10	13	12	1
47	15	13–13	13	30	24	10	13	13	1
48	15	13–13	12	28	23	10	14	13	1
49	15	13–13	12	28	23	10	15	13	1
50	15	13–14	13	28	24	10	13	12	1
51	15	13–14	12	28	23	10	14	13	3
52	15	13–14	12	28	23	11	14	13	1
53	15	13–14	13	30	22	10	14	13	1
54	15	13–14	14	31	25	11	11	13	1
55	15	13–14	13	31	21	9	12	14	1
56	15	13–15	12	27	24	10	14	13	1
57	15	13–16	12	28	24	10	13	13	1
58	15	13–18	15	32	26	11	13	15	1
59	15	13–20	13	29	24	10	13	12	1
60	15	13–20	12	27	24	10	14	12	2
61	15	13–20	14	30	24	10	13	12	1
62	15	14–18	14	32	23	10	11	12	1
63	15	16–19	11	27	24	10	13	14	1
64	16	10–19	14	29	23	10	13	13	1
65	16	11–14	13	30	25	11	11	13	1
66	16	11–17	12	27	21	11	11	12	1
67	16	11–17	13	29	22	10	12	14	1
68	16	12–12	12	28	24	11	14	12	1
69	16	12–13	12	27	23	10	14	13	1
70	16	12–16	12	29	23	10	12	12	1
71	16	12–16	12	28	23	10	14	13	1
72	16	12–19	12	28	25	10	13	12	1
73	16	12–19	13	29	24	11	13	12	1
74	16	12–19	12	30	25	10	13	12	1
75	16	13–13	12	29	23	10	14	13	1
76	16	13–14	12	28	23	10	14	12	1
77	16	13–14	12	29	23	10	14	13	1
78	16	13–14	13	31	25	10	11	13	1
79	16	14–14	12	28	23	10	14	13	1
80	16	14–14	12	27	23	10	14	13	1
81	16	14–14	12	28	23	10	15	13	1
82	16	16–16	14	31	21	10	9	13	1
83	17	12–20	13	29	25	10	13	12	1
84	17	13–14	12	31	22	10	14	13	1
85	17	13–14	13	30	23	10	14	13	1
86	17	13–14	12	28	24	10	14	13	1
87	17	13–14	12	28	23	10	14	13	2
88	17	14–14	12	28	23	10	14	13	1

TABLE 2—*Allele frequencies and gene diversity values of the nine Y-STR loci.*

Locus	Allele	Frequency	Gene Diversity
DYS19	12	0.028	0.64
	14	0.028	
	13	0.151	
	15	0.547	
	16	0.179	
	17	0.066	
DYS385-I/II	10–19	0.009	0.94
	11–11	0.009	
	11–13	0.009	
	11–14	0.019	
	11–15	0.019	
	11–17	0.019	
	12–12	0.028	
	12–13	0.047	
	12–14	0.028	
	12–15	0.066	
	12–16	0.132	
	12–17	0.047	
	12–18	0.019	
	12–19	0.047	
	12–20	0.009	
	12–21	0.009	
	13–13	0.037	
	13–14	0.160	
	13–15	0.009	
	13–17	0.009	
	13–18	0.047	
	13–19	0.037	
	13–20	0.047	
	14–14	0.037	
	14–15	0.009	
	14–17	0.009	
	14–18	0.009	
	15–17	0.009	
	15–18	0.019	
	16–16	0.009	
	16–18	0.009	
	16–19	0.009	
DYS389-I	11	0.009	0.49
	12	0.670	
	13	0.217	
	14	0.094	
	15	0.009	
DYS389-II	27	0.094	0.73
	28	0.424	
	29	0.217	
	30	0.151	
	31	0.094	
	32	0.019	
DYS390	21	0.075	0.72
	22	0.047	
	23	0.387	
	24	0.292	
	25	0.189	
	26	0.009	
DYS391	9	0.057	0.37
	10	0.773	
	11	0.170	
DYS392	9	0.009	0.66
	11	0.066	
	12	0.104	
	13	0.443	
	14	0.358	
	15	0.019	
DYS393	12	0.283	0.57
	13	0.575	
	14	0.132	
	15	0.009	