

FIGURE S1. Relationship between sample size and the genetic diversity of *Plasmodium falciparum* populations in Papua New Guinea. The number of alleles ( $A$ ) identified in each population was compared with the number of isolates and the total number of clones, which was calculated by summing the number of clones per isolate.

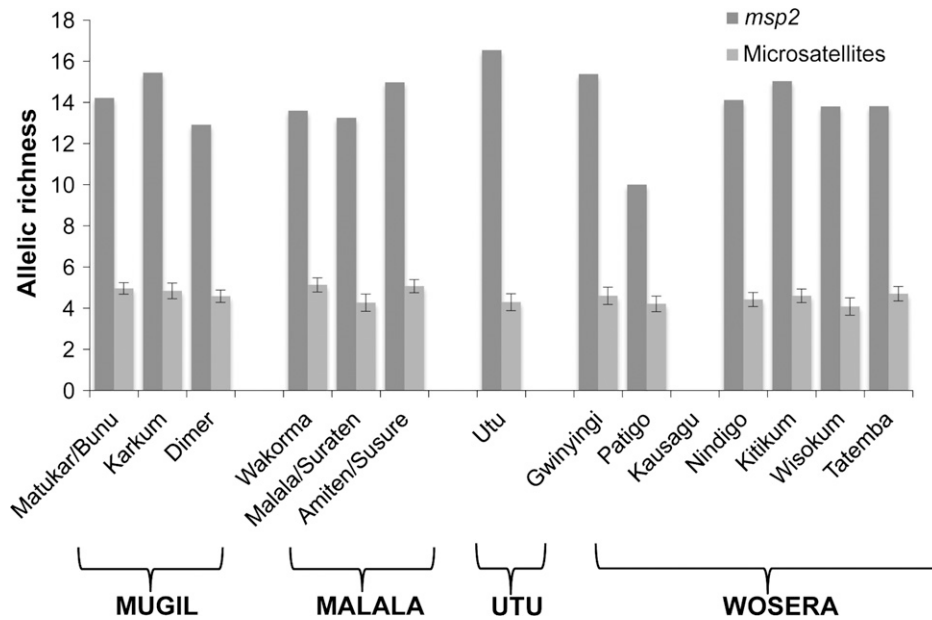


FIGURE S2. Comparison between *Pfmsp2* genotype and microsatellite haplotype diversity of *Plasmodium falciparum* populations of Papua New Guinea. The allelic richness ( $R_s$ ) calculated for each population on the basis of *Pfmsp2* genotypes or microsatellite haplotypes (i.e., the mean for 10 loci), is shown for each village. Error bars indicate the standard error (microsatellites).

SUPPLEMENTAL TABLE 1  
Allele frequencies for *Pfmsp2* in 14 *Plasmodium falciparum* populations of Papua New Guinea

			MADANG							EAST SEPIK						ALL	
			Mugil			Malala		Uturu	North	South		North-West					
			Matukar-Bunu	Karkum	Dimer	Wakorma	Malala-Suraten	Amiten-Susure	Uturu	Gwinyingi	Patigo	Nindigo	Kitikum	Wisogum	Tatamba	Weighted	Unweighted
Allele	Family	Size (bp)	Frequency														
1	3D7	171	0.010	0.022				0.010	0.019							0.009	0.005
2	3D7	174								0.013					0.002	0.002	
3	3D7	183	0.029	0.011	0.082			0.020	0.016	0.013		0.013			0.017	0.018	
4	3D7	189	0.010	0.005	0.020	0.013						0.010	0.036	0.022	0.005	0.005	
5	3D7	195	0.010	0.005				0.040	0.026	0.039		0.007		0.018	0.016	0.014	
6	3D7	201		0.005				0.010				0.010			0.002	0.002	
7	3D7	204						0.010				0.010		0.043	0.003	0.005	
8	3D7	207	0.005												0.001		
9	3D7	210		0.016											0.007	0.009	
10	3D7	213	0.019		0.020	0.025	0.032	0.040		0.013	0.143	0.007		0.018	0.009	0.020	
11	3D7	216						0.010							0.001	0.001	
12	3D7	219	0.038	0.033	0.041			0.051	0.049				0.010		0.026	0.017	
13	3D7	231								0.013			0.010		0.001	0.002	
14	3D7	237							0.003	0.013		0.026			0.004	0.003	
15	3D7	240	0.029	0.033		0.013		0.006							0.011	0.006	
16	3D7	243	0.029	0.016	0.020	0.051	0.032	0.030	0.029	0.079		0.046	0.070		0.033	0.031	
17	3D7	246										0.007			0.001	0.001	
18	3D7	249	0.010	0.011				0.010	0.013			0.013	0.030		0.010	0.007	
19	3D7	252							0.003						0.001		
20	3D7	258								0.013		0.007	0.010		0.002	0.002	
21	3D7	261	0.173	0.120	0.020	0.266	0.161	0.101	0.071	0.013	0.071				0.085	0.077	
22	3D7	264					0.032	0.010	0.039	0.026				0.018	0.001	0.004	
23	3D7	267	0.038	0.066		0.013	0.032	0.010	0.039	0.026		0.013	0.070	0.089	0.038	0.034	
24	3D7	270						0.040	0.013						0.006	0.004	
25	3D7	273		0.005											0.001	0.002	
26	3D7	279							0.003						0.001		
27	3D7	285			0.020			0.010							0.001	0.002	
28	3D7	288		0.011											0.001	0.001	
29	3D7	291							0.003			0.007			0.001	0.001	
30	3D7	294	0.005	0.022		0.063		0.010	0.013				0.010		0.012	0.011	
31	3D7	297							0.010	0.013	0.071	0.118	0.030	0.018	0.019	0.020	
32	3D7	300				0.013	0.032					0.007			0.002	0.004	
33	3D7	303						0.010							0.001	0.001	
34	3D7	306	0.010	0.005		0.013		0.010							0.004	0.003	
35	3D7	309										0.007			0.001	0.001	
36	3D7	312	0.019	0.011		0.025	0.065		0.049		0.071	0.039	0.030	0.036	0.022	0.024	
37	3D7	315								0.118	0.143	0.039	0.020	0.071	0.018	0.033	
38	3D7	318	0.005	0.005	0.122	0.025		0.010	0.010				0.020	0.071	0.010	0.014	
39	3D7	321					0.065								0.001	0.005	
40	3D7	324	0.005	0.011	0.041		0.032	0.010	0.045	0.026		0.026	0.010	0.018	0.022	0.019	
41	3D7	327		0.011									0.010		0.002	0.002	
42	3D7	330		0.005					0.010			0.013	0.020	0.018	0.022	0.007	
43	3D7	333	0.019	0.016		0.013	0.032	0.040	0.032	0.118	0.071	0.033	0.040	0.036	0.032	0.036	
44	3D7	336	0.048	0.077	0.041	0.051	0.097	0.091	0.094	0.039	0.071	0.052	0.100	0.036	0.073	0.073	
45	3D7	342	0.063	0.060	0.163		0.032	0.010	0.071	0.013		0.033	0.020	0.107	0.052	0.049	
46	3D7	345							0.003						0.001		
47	3D7	348							0.006						0.001		
48	3D7	351												0.013	0.018	0.002	
49	3D7	354										0.013			0.001	0.001	
50	3D7	357	0.048	0.027		0.063		0.071	0.003	0.026				0.018	0.022	0.020	
51	3D7	360	0.010	0.005	0.020		0.032	0.030	0.016			0.033	0.010		0.015	0.015	
52	3D7	366	0.010		0.061	0.013			0.010	0.013				0.018	0.008	0.010	
53	3D7	372	0.014	0.033		0.025						0.007			0.009	0.008	
54	3D7	375										0.007			0.001	0.001	
55	3D7	378	0.019	0.022	0.041	0.013			0.039	0.039		0.007		0.018	0.020	0.015	
56	3D7	384		0.016					0.006	0.013		0.007	0.010	0.018	0.006	0.005	
57	3D7	390											0.010		0.001	0.001	
58	3D7	393		0.022		0.013		0.030	0.010	0.013					0.009	0.007	
59	3D7	396		0.005					0.003						0.002	0.002	
60	3D7	408												0.018	0.001	0.001	
61	3D7	411		0.011			0.032		0.006	0.013					0.004	0.005	
62	3D7	423	0.010	0.011	0.041				0.003						0.005	0.005	
63	3D7	485							0.003						0.001		
64	FC27	184				0.013			0.003						0.001		
65	FC27	222	0.005						0.006						0.003	0.002	
66	FC27	259						0.010	0.003					0.022	0.002	0.003	
67	FC27	268		0.005					0.003						0.002	0.001	
68	FC27	295	0.005						0.003	0.039	0.071	0.007	0.060		0.009	0.014	
69	FC27	316	0.005			0.013			0.006						0.003	0.002	
70	FC27	328										0.007			0.001	0.001	
71	FC27	331	0.149	0.142	0.082	0.127	0.226	0.192	0.104	0.105		0.092	0.120	0.125	0.123	0.118	
72	FC27	334											0.020		0.001	0.002	
73	FC27	352										0.007			0.001	0.001	
74	FC27	355	0.010	0.011	0.020	0.013		0.010	0.032	0.053	0.143	0.098	0.140	0.089	0.044	0.056	
75	FC27	364										0.007			0.001	0.001	
76	FC27	367	0.115	0.098	0.143	0.063	0.032	0.051	0.078	0.079	0.143	0.209	0.060	0.161	0.105	0.108	
77	FC27	370		0.005						0.013					0.001	0.001	
78	FC27	403	0.024			0.038	0.032	0.010	0.016	0.026			0.020		0.014	0.013	
79	FC27	406				0.013									0.001	0.001	
80	FC27	412	0.005						0.003						0.001	0.001	
81	FC27	415										0.007			0.001	0.001	
82	FC27	451										0.007		0.022	0.001	0.002	
83	FC27	512							0.003						0.001		