

Supplemental Table S1. Antimalarial IC₅₀ values and *pfmdr1* variation in *Plasmodium falciparum* isolates from Colombia

Study sites	Year	n	Geometric mean IC ₅₀ in nM (95% CI)					<i>Pfmdr1</i>		Pfk13	Ref
			CQ	AQ	MQ	LF	DHA	CN	Alleles		
Antioquia	2004-2005	23	491.8 (29.8-2429.7)	160.2 (8.4-1557.2)	56.6 (2.2-348.6)	-	1.8 (0.13-14.0)	-	86N 100% 1246Y 92%		13
Chocó	2007	17	177.4 (133.8-235.2)	12.8 (10.4-15.7)	29.4 (23-37.7)	2.6 (82.3-3.0)	1.2 (0.9-1.8)	-	-		14
Nariño	2007	17	213.5 (174.4-261.3)	21.3 (17.3-26.3)	22.7 (17.7-29.2)	4 (1.7-9.0)	1 (0.8-1.1)	-	-		
Antioquia Chocó Nariño	2008	25	422.9 (261.9-583.9)	131.4 (33.0-229.8)	56.3 (26.8-85.8)	-	1.9 (0.58-3.1)	-	-		15
Nariño	2012-2013	68	157.77 (50-914.84)	-	-	6.47 (2.5-29.38)	1.32 (0.5-7.58)	>1 32%	86N 100% 184F 100% 1034S 100% 1042D 23% 1246Y 77% (n=13)	wt	10
All		150	297.9 (134.2-661.4)	48.95 (6.4-371.8)	38.2 (18.3-79.8)	4.1 (1.3-12.6)	1.4 (0.9-1.9)				

Supplemental Table S2. Twelve *Plasmodium falciparum* isolates with complete data for phenotypic and genotypic markers of resistance to artemisinin and other antimalarials

	Artemisinin		Other antimalarials									
	Isolate	RSA	K13	IC ₅₀ nM				Pfmdr1				
CQ				AQ	MQ	LF	Copy number	86	184	1034	1042	1246
05051F	0	wt	161.8	42.0	23.4	9.3	1	N	<u>F</u>	S	<u>D</u>	D
05047F	0	wt	128.9	22.0	11.0	9.9	1	N	<u>F</u>	S	<u>D</u>	<u>Y</u>
03021F	0	wt	158.2	2.5	8.8	1.0	1	N	<u>F</u>	S	<u>D</u>	D
05031F	0	wt	58.9	11.3	13.2	6.0	1	N	<u>F</u>	S	<u>D</u>	D
03043F	0	wt	140.7	72.7	53.9	6.0	1	N	<u>F</u>	S	<u>D</u>	D
05046F	0	wt	245.3	10.4	8.4	2.2	1	N	<u>F</u>	S	<u>D</u>	D
03042F	0	wt	173.0	69.1	60.2	7.4	1	N	<u>F</u>	S	<u>D</u>	D
03044F	0	wt	63.6	18.2	31.6	2.5	1	N	<u>F</u>	S	<u>D</u>	D
05048F	0	wt	42.0	10.2	12.7	7.3	1	N	<u>F</u>	S	<u>D</u>	D
05029F	2.1	wt	172.9	22.8	33.9	54.5	1	N	<u>F</u>	S	<u>D</u>	<u>Y</u>
05037F	4.1	wt	238.6	31.4	27.8	4.6	1	N	<u>F</u>	S	<u>D</u>	D
03022F	8.3	wt	83.8	16.2	10.2	4.3	1	N	<u>F</u>	S	<u>D</u>	D

wt, wildtype

Supplemental Table S3. Correlations between antimalarial IC₅₀ values

Spearman correlation r^2 and p values				
	CQ	AQ	MQ	LF
CQ	1	0.41 p=0.09 n=19	0.27 p=0.27 n=18	0.27 p=0.26 n=20
AQ		1	0.76 p<0.001 n=25	0.5 p=0.01 n=24
MQ			1	0.59 p<0.0001 n=27
LF				1

Supplemental Table S4. Comparisons of antimalarial IC₅₀ values according to ring survival rate

IC ₅₀	Geometric mean IC ₅₀ value in nM (95% CI)		Mann Whitney
	RSA >1%	RSA ≤1%	
Chloroquine	134.6 (61.1-296.3) n=4	104.7 (77.2-142.1) n=17	NS
Amodiaquine	12.2 (2.7-55.2) n=6	16.2 (11.0-23.7) n=26	NS
Mefloquine	12.8 (4.0-40.6) n=5	19.5 (14.4-26.4) n=30	NS
Lumefantrine	3.9 (0.8-19.6) n=6	3.7 (2.7-5.0) n=25	NS
Dihydroartemisinin	0.3 (0.1-0.5) n=6	0.3 (0.2-0.4) n=36	NS

NS, not significant

Supplemental Table S5. Comparisons of antimalarial IC₅₀ values according to *pfmdr1* (86-184-1034-1042-1246) haplotype

Antimalarial drug	Geometric mean IC₅₀ in nM (95% CI)	
	<u>NFSDD</u>	<u>NFSDY</u>
Chloroquine	106.8 (76.-148.3) *n=15	128.3 (60.8-270.9) *n=3
Amodiaquine	14.1 (9.0-22.3) *n=23	21.0 (4.2-104.1) *n=5
Mefloquine	19.0 (13.4-27.0) *n=26	23.5 (9.8-56.6) *n=5
Lumefantrine	3.3 (2.3-4.6) *n=21	6.7 (1.1-42.2) *n=5

*Number of core assays