

**SUPPLEMENTARY TABLE S1.**

<b>RegionID<sup>1</sup></b>	<b>LocID<sup>2</sup></b>	<b>DATE<sup>3</sup></b> (mm YYYY)	<b>Bolivian Repeat<sup>4</sup></b>	<b><i>dhfr</i> allele<sup>5</sup></b>	<b><i>dhps</i> allele<sup>6</sup></b>	<b>Resistance genotypes<sup>7</sup></b>	<b><i>mDHR</i><sup>8</sup></b>	<b><i>MAI</i><sup>9</sup></b>	<b><i>m0.8</i><sup>10</sup></b>	<b><i>m4.3</i><sup>11</sup></b>	<b><i>PfPK2</i><sup>12</sup></b>	<b><i>Polyα</i><sup>13</sup></b>	<b><i>msFR_Hap</i><sup>14</sup></b>	<b><i>msPS_Hap</i><sup>15</sup></b>	<b><i>msUnlinked</i><sup>16</sup></b>	<b><i>msFRPS</i><sup>17</sup></b>	<b><i>msFR_Unlinked</i><sup>18</sup></b>	<b><i>msPS-unlinked</i><sup>19</sup></b>	<b><i>msFRPSUnlinked</i><sup>20</sup></b>	
<b>Amazonas1</b>	Amazonas1	05/2005	NO	ICNL	GKG	ICNL/GKG			119		171									
Amazonas2	Amazonas2	09/2005		NCNI	AKA	NCNI/AKA	98		115	104				19						
Amazonas3	Amazonas3	06/2006		ICNI	GEG	ICNI/GEG	98	201	115	104	171	183	4	19	46	60	86	113	163	
Amazonas4	Amazonas4	05/2005		ICNL	GKG	ICNL/GKG	96	199	113	102	168		1	17		52				
<b>Amazonas5</b>	Amazonas5	05/2006	NO	RICNI	GEG	ICNI/GEG	98	201	115	104	171	183	4	19	46	60	86	113	163	
Amazonas6	Amazonas6	12/2005		NCNI	AKA	NCNI/AKA	98		115	104	162	165		19	37				109	
<b>Amazonas7</b>	Leticia7	05/2006	NO	RICNI	GEG	ICNI/GEG	98	201	115	104	171	183	4	19	46	60	86	113	163	
Amazonas8	Tarapaca8	08/2007		ICNI	GEG	ICNI/GEG	98	201	115	104	171	183	4	19	46	60	86	113	163	
Amazonas9	Leticia9	10/2006		ICNI	GEG	ICNI/GEG	98	201	115	104	171	183	4	19	46	60	86	113	163	
Amazonas10	Leticia10	05/2006		ICNI	GEG	ICNI/GEG	98	201	115	104	171	183	4	19	46	60	86	113	163	
Amazonas11	Tarapaca11	12/2006		ICNI	GEG	ICNI/GEG	98	201	115	104	171	183	4	19	46	60	86	113	163	
Amazonas12	Pedreira12	12/2006		ICNI	GKA	ICNI/GKA	98	201	123	110	162	159	4	27	35	66	81	127	151	
Amazonas13	Leticia13	08/2007		ICNI	GEG	ICNI/GEG	98	201	115	104	171		4	19		60				
Amazonas14	Leticia14	08/2006		ICNI	GEG	ICNI/GEG	98	201	115	104	171	183	4	19	46	60	86	113	163	
Amazonas15	Leticia15	06/2006		NCNI	AKA	NCNI/AKA	125	221	115	104	171	165	12	19	45	77	101	112	162	
Amazonas16	Leticia16	05/2006		ICNI	GEG	ICNI/GEG	98	201	115	104	171	183	4	19	46	60	86	113	163	
Amazonas17	Leticia17	07/2006		ICNI	GEG	ICNI/GEG	98	201	115	104	171	183	4	19	46	60	86	113	163	
Amazonas18	Leticia18	06/2006		ICNI	GEG	ICNI/GEG	98	201	115	104	171	183	4	19	46	60	86	113	163	
Amazonas19	Leticia19	08/2006		ICNI	GEG	ICNI/GEG	98	201	115	104	171	183	4	19	46	60	86	113	163	
<b>Amazonas20</b>	Leticia20	06/2006	NO	ICNI	GEG	ICNI/GEG	98	201	115	104	171	183	4	19	46	60	86	113	163	
<b>Amazonas21</b>	Pedreira21	11/2006	NO	ICNI	GKA	ICNI/GKA	98	201	119	110	162	159	4	21	35	61	81	114	148	
Amazonas22	Tarapaca22	08/2007		NCNI	AKA	NCNI/AKA	98	221	115	104	162	165	6	19	37	70	92	109	156	
Amazonas23	Tarapaca23	09/2007		NCNI	AKA	NCNI/AKA		221	115	104	162	165		19	37			109		
Amazonas24	Tarapaca24	09/2007		NCNI	AKA	NCNI/AKA	125	221	115	104	162	165	12	19	37	77	100	109	157	
<b>Amazonas25</b>	Tarapaca25	08/2007	NO	NCNI	AKA	NCNI/AKA		221	115	104	162	165		19	37			109		
<b>Amazonas26</b>	Tarapaca26	08/2007	NO	NCNI	AKA	NCNI/AKA	125	221	115	104	162	165	12	19	37	77	100	109	157	
<b>Amazonas27</b>	Tarapaca27	08/2007	NO	NCNI	AKA	NCNI/AKA	125	221	115	104	162	165	12	19	37	77	100	109	157	
Amazonas28	Pedreira28	11/2007		ICNI	GKA	ICNI/GKA		201	123	110	162	159		27	35			127		
Amazonas29	Leticia29	05/2005		ICNI	GEG	ICNI/GEG	98	201	115	104	171	183	4	19	46	60	86	113	163	
Amazonas30	Leticia30	04/2006		ICNI	GEG	ICNI/GEG	98	201	115	104	171	183	4	19	46	60	86	113	163	
Amazonas31	Leticia31	12/2006		ICNI	AKA	ICNI/AKA	125	221	115	104	171	165	12	19	45	77	101	112	162	
Orinoco32	Vista	12/2005					98	199	115	104	171		3	19		54				
	Hermosa32																			
Orinoco33	Vista	10/2005		ICNI	GKA	ICNI/GKA		199	123	104	171	183		24	46			121		
	Hermosa33																			
Orinoco34	Meta34	12/2005		ICNI	GKG	ICNI/GKG	98	201	115	104	171		4	19		60				



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Orinoco58	Meta58	06/2006		ICNI	GKA	ICNI/GKA		201	115		165	159			38				
Orinoco59	Agualinda59	12/2005		NCNI			102			104	165	183			39				
Orinoco60	Meta60	01/2006		ICNI	GKA	ICNI/GKA	98	203		104	162	159	5		35		91		
<b>Orinoco61</b>	Meta61	07/2006	NO	ICNI	GKG	ICNI/GKG	98	201	115	104	171	183	4	19	46	60	86	113	163
Orinoco62	Meta62	12/2005		ICNI	GKA	ICNI/GKA	104		115	104	174			19					
Orinoco63	Guaviare63	11/2005		ICNI	GKA	ICNI/GKA	98	201	123	110	174	159	4	27	49	66	89	129	174
<b>Orinoco64</b>	Guaviare64	04/2006	NO	NCNI	GKA	NCNI/GKA	98	201	121	110	162	162	4	23	36	63	82	118	154
Amazonas65	unknown65	06/1999			GKG		102	221	115	104	171	183	8	19	46	72	95	113	165
Amazonas66	unknown66	06/1999		ICNL	GKG	ICNL/GKG													
Amazonas67	unknown67	07/1999		ICNL	GEG	ICNL/GEG	102	221	115	104	165	183	8	19	39	72	94	110	159
<b>Amazonas68</b>	unknown68	08/1999	YES	ICNL	GEG	ICNL/GEG	102	221	115	104	165	183	8	19	39	72	94	110	159
<b>Amazonas69</b>	Tarapaca69	06/2003	YES	ICNL	GEG	ICNL/GEG	102	221	115	104	165	183	8	19	39	72	94	110	159
<b>Amazonas70</b>	Tarapaca70	06/2003	YES	ICNL	GEG	ICNL/GEG	102		115	104	165	183		19	39			110	
<b>Amazonas71</b>	Tarapaca71	06/2003	YES	ICNL	GEG	ICNL/GEG	102	221	115	104	165	183	8	19	39	72	94	110	159
<b>Amazonas72</b>	Tarapaca72	11/2002	YES	ICNL	GKA	ICNL/GKA	102	221	115	104	171	183	8	19	46	72	95	113	165
<b>Amazonas73</b>	Tarapaca73	10/2002	YES	ICNL	GKG	ICNL/GKG	102	221	115	104	171	183	8	19	46	72	95	113	165
<b>Amazonas74</b>	Tarapaca74	11/2002	YES	ICNL	GKG	ICNL/GKG	100	221	115	104	171	183	7	19	46	71	93	113	164
<b>Amazonas75</b>	Tarapaca75	06/2003	YES	ICNL	GEG	ICNL/GEG	102	221	115	104	165	183	8	19	39	72	94	110	159
Amazonas76	Tarapaca76	04/2003		ICNL	GEG	ICNL/GEG	102	221	115	104	165	183	8	19	39	72	94	110	159
Orinoco77	Guaviare77	uncertain		ICNI	GKA	ICNI/GKA	98	201	123	110	162	159	4	27	35	66	81	127	151
Orinoco78	Guaviare78	uncertain			GKA		98	201	111	108	162	159	4	15	35	57	81	104	145
Orinoco79	Guaviare79	uncertain		ICNI	GKA	ICNI/GKA	98	201	111	108	162	159	4	15	35	57	81	104	145
Orinoco80	Guaviare80	uncertain		ICNI			98		123	110	162			27					
Orinoco81	Guaviare81	uncertain		ICNI	GKA	ICNI/GKA	98	201	111	108	162	159	4	15	35	57	81	104	145
Orinoco82	Guaviare82	uncertain		ICNI	GKA	ICNI/GKA	98	201	111	108	162	159	4	15	35	57	81	104	145
Orinoco83	Guaviare83	uncertain		ICNI	AKA	ICNI/AKA	98	201	133	106	174	156	4	30	48	69	88	139	172
Orinoco84	Guaviare84	uncertain		ICNI	GKA	ICNI/GKA	98	201	123	110	162	159	4	27	35	66	81	127	151
Orinoco85	Guaviare85	uncertain		ICNI	GKA	ICNI/GKA	98	201	111	108	162	159	4	15	35	57	81	104	145
Orinoco86	Guaviare86	uncertain		ICNI	GKA	ICNI/GKA	98	201	111	108	162	159	4	15	35	57	81	104	145
SWP87	Tumaco87	10/2003		NCSI	AKA	NCSI/AKA	102	224	127	108	174	180	9	28	51	73	97	134	178
SWP88	Tumaco88	10/2003		NCNI	AKA	NCNI/AKA	98	201	123	106	159	149	4	25	31	64	79	122	140
SWP89	Tumaco89	09/2003		NCSI	AKA	NCSI/AKA	102	224	127	108	168	149	9	28	40	73	96	130	160
SWP90	Tumaco90	10/2003		NCSI	AKA	NCSI/AKA	102	224	127	108	174	180	9	28	51	73	97	134	178
SWP91	Tumaco91	09/2003		NCSI	AKA	NCSI/AKA	102	228	127	108	174	149	10	28	47	75	99	132	170
SWP92	Tumaco92	08/2003		NCSI	AKA	NCSI/AKA	102	228	127	108	174	149	10	28	47	75	99	132	170
SWP93	Tumaco93	07/2006		NCSI	AKA	NCSI/AKA	102	224	127	108	168	149	9	28	40	73	96	130	160
SWP94	Tumaco94	05/2006		NCNI	AKA	NCNI/AKA	98	201	121	110	174	174	4	23	50	63	90	120	176
SWP95	Tumaco95	10/2006		NCSI	AKA	NCSI/AKA	102	224	127	108	174	180	9	28	51	73	97	134	178

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SWP96	Tumaco96	06/2006		NCSI	AKA	NCSI/AKA	102	224		108	168	149	9		40		96		
SWP97	Tumaco97	10/2003		NCNI	AKA	NCNI/AKA	98	201	123	108	162	159	4	26	35	65	81	126	150
SWP98	Tumaco98	10/2003		NCSI	AKA	NCSI/AKA	102	228	123	106	159	149	10	25	31	74	98	122	141
SWP99	Tumaco99	08/2003		NCSI	AKA	NCSI/AKA	102	228	127	108	174	149	10	28	47	75	99	132	170
<b>SWP100</b>	Tumaco100	10/2003	NO	NCNI	AKA	NCNI/AKA	98	201	121	110	174	174	4	23	50	63	90	120	176
SWP101	Tumaco101	10/2003		NCSI	AKA	NCSI/AKA	102		127	108	168	149		28	40			130	
<b>SWP102</b>	Tumaco102	10/2003	NO	NCSI	AKA	NCSI/AKA	102	224	127	108	174	180	9	28	51	73	97	134	178
SWP103	Tumaco103	08/2003		ICNI	AKA	ICNI/AKA	98	201	123	106	174	149	4	25	47	64	87	124	167
SWP104	Tumaco104	10/2003		NCNI	AKA	NCNI/AKA	98		121	110	174	174		23	50			120	
SWP105	Tumaco105	10/2003		NCSI	AKA	NCSI/AKA	102	224	127	108	174	180	9	28	51	73	97	134	178
SWP106	Tumaco106	06/2003		NCSI	AKA	NCSI/AKA	102	224	127	108	168	149	9	28	40	73	96	130	160
SWP107	Tumaco107	05/2006		NCSI	AKA	NCSI/AKA		228	127	108	171	149		28	43			131	
SWP108	Tumaco108	07/2006		NCSI	AKA	NCSI/AKA		224	127	108	174	180		28	51			134	
SWP109	Tumaco109	08/2006		NCNI	AKA	NCNI/AKA	98	201	127	108	174	174	4	28	50	67	90	133	177
SWP110	Tumaco110	05/2006		NCSI	AKA	NCSI/AKA	102	228	127	108	174	149	10	28	47	75	99	132	170
SWP111	Tumaco111	10/2003		NCNI	AKA	NCNI/AKA	98	201	129	106	174	149	4	29	47	68	87	137	169
SWP112	Tumaco112	10/2003		NCNI	AKA	NCNI/AKA	98	201	129	106	174	149	4	29	47	68	87	137	169
SWP113	Tumaco113	10/2003		NCSI	AKA	NCSI/AKA	102	224	127	108		149	9	28		73			
SWP114	Tumaco114	08/2003		ICNI	AKA	ICNI/AKA	98	201	123	106	174	149	4	25	47	64	87	124	167
SWP115	Tumaco115	10/2003		NCSI	AKA	NCSI/AKA	102	228	123	106	159	149	10	25	31	74	98	122	141
SWP116	Tumaco116	12/2006		NCNI	AKA	NCNI/AKA	98	201	121	110	174	174	4	23	50	63	90	120	176
NWP117	Quibdo117	11/2001		ICNI	AKA	ICNI/AKA	98	201	133	106	174	156	4	30	48	69	88	139	172
NWP118	Quibdo118	08/2001		ICNI	GKA	ICNI/GKA	98	201	121	110	162	159	4	23	35	63	81	117	149
NWP119	Quibdo119	04/2001		ICNI	AKA	ICNI/AKA			129	106	159	183		29	32			135	
NWP120	Quibdo120	08/2006		ICNI	AKA	ICNI/AKA	98	201	121	110	174	149	4	23	47	63	87	119	166
NWP121	Quibdo121	08/2001		ICNI	GKA	ICNI/GKA	98	201			171	149	4		43		84		
NWP122	Quibdo122	11/2001		ICNI	AKA	ICNI/AKA	98	201	129	106	162	162	4	29	36	68	82	136	155
NWP123	Quibdo123	06/2001		ICNI	GKA	ICNI/GKA	98	201	111	110	162	159	4	16	35	58	81	107	146
NWP124	Quibdo124	08/2001		ICNI	GKA	ICNI/GKA	98		121	110	162	159		23	35			117	
NWP125	Quibdo125	08/2001		ICNI	GKA	ICNI/GKA			117		168	152			41				
NWP126	Quibdo126	04/2001		ICNI	GKA	ICNI/GKA			111		162								
NWP127	Quibdo127	04/2001								106	159								
NWP128	Quibdo128	08/2001		ICNI	GKA	ICNI/GKA	98	201	113	108	162	159	4	18	35	59	81	108	147
NWP129	Quibdo129	03/2001		NCNI	AKA	NCNI/AKA	98	201	107	106			4	13		55			
NWP130	Quibdo130	03/2001		ICNI	GKA	ICNI/GKA	98		111	108	162	162		15	36			105	
NWP131	Quibdo131	08/2001		ICNI	GKA	ICNI/GKA	96	201	121	110	162	156	2	23	34	53	78	116	143
NWP132	Quibdo132	03/2007		ICNI	GKA	ICNI/GKA	98	201	123	110	174	149	4	27	47	66	87	128	168
NWP133	Quibdo133	08/2001		ICNI	AKA	ICNI/AKA	98	201	129	106	174	159	4	29	49	68	89	138	175

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NWP134	Quibdo134	05/2007		NCNI	<b>GKA</b>	NCNI/GKA	98	201	123	110	174	149	4	27	47	66	87	128	168
NWP135	Quibdo135	08/2006		ICNI	<b>GKA</b>	ICNI/GKA	98	201	111	108	162	162	4	15	36	57	82	105	152
NWP136	Quibdo136	09/2006		ICNI	<b>GKA</b>	ICNI/GKA	98	201	129	106	174	149	4	29	47	68	87	137	169
NWP137	Quibdo137	04/2006		ICNI	<b>AKA</b>	ICNI/AKA	98	201	123	106	174	159	4	25	49	64	89	125	173
NWP138	Quibdo138	10/2006		ICNI	<b>AKA</b>	ICNI/AKA				104	168	162			42				
NWP140	Quibdo140	10/2006		ICNI	<b>AKA</b>	ICNI/AKA	98	201	129	106	174	149	4	29	47	68	87	137	169
NWP139	Quibdo139	10/2006		ICNI	<b>GKA</b>	ICNI/GKA	98	201	111	108	162	149	4	15	33	57	80	103	142
NWP141	Quibdo141	11/2006		ICNI	<b>AKA</b>	ICNI/AKA	98	201	111	108	162	149	4	15	33	57	80	103	142
NWP142	Quibdo142	11/2006		ICNI	<b>GKA</b>	ICNI/GKA	98	201	111	108	162	149	4	15	33	57	80	103	142
NWP143	Quibdo143	11/2006		ICNI	<b>GKA</b>	ICNI/GKA	98	201	123	106	165	159	4	25	38	64	83	123	158
NWP144	Quibdo144	05/2006		ICNI	<b>GKA</b>	ICNI/GKA	98	201	111	108	174	156	4	15	48	57	88	106	171
<b>NWP145</b>	Quibdo145	08/2006	NO	ICNI	<b>GKA</b>	ICNI/GKA	98	201	111	108	162	159	4	15	35	57	81	104	145
NWP146	Quibdo146	08/2006		ICNI	<b>GKA</b>	ICNI/GKA	98	201	111	108	174	156	4	15	48	57	88	106	171

<sup>1</sup>Region ID: Region identification number; <sup>2</sup>LocID: Locality identification number; <sup>3</sup>Date of sample collection; <sup>4</sup>Presence or absence of the Bolivian Repeat (for sequenced samples); <sup>5</sup>*dhfr* allele (positions 51,59, 108, 164), sequenced samples (in bold) are wild type at position 50 (i.e. Cysteine) except for 2 samples from Amazonas (Amazonas3 and 5) that bear the R substitution as indicated; <sup>6</sup>*dhps* allele (positions 437, 540, 581); <sup>7</sup>combined *dhfr/dhps* resistance genotype; <sup>8</sup>*dhfr*-linked *mDHFR* microsatellite allele size (bp); <sup>9</sup>*dhfr*-linked *MAI* microsatellite allele size (bp); <sup>10</sup>*dhps*-linked *m0.8* microsatellite allele size (bp); <sup>11</sup>*dhps*-linked *m4.3* microsatellite allele size (bp); <sup>12</sup>*PfPK2* unlinked microsatellite allele size (bp); <sup>13</sup>*Polyα* unlinked microsatellite allele size (bp); <sup>14</sup>*dhfr*-linked (*mDHFR*, *MAI*) microsatellite haplotype code; <sup>15</sup>*dhps*-linked (*m0.8*, *m4.3*) microsatellite haplotype code; <sup>16</sup>unlinked (*PfPK2*, *Polyα*) multilocus association genotype code; <sup>17</sup>*dhfr* and *dhps*-linked multilocus association genotype code; <sup>18</sup>*dhfr*-linked and unlinked microsatellites multilocus association genotype; <sup>19</sup>*dhps*-linked and unlinked microsatellites multilocus association genotype code; <sup>20</sup>complete microsatellites multilocus association genotype code. In bold are sequenced samples. NWP: North West Pacific; SWP: South West Pacific.

**SUPPLEMENTARY TABLE S2**

<b>Allele frequencies before 2006</b>					<b>Allele frequencies after 2006</b>				
Locus					Locus				
<i>dhfr</i>	Amazonas	Orinoco	NWP <sup>1</sup>	SWP <sup>2</sup>	<i>dhfr</i>	Amazonas	Orinoco	NWP <sup>1</sup>	SWP <sup>2</sup>
<u>NCSI</u>	0.00	0.00	0.00	61.90	<u>NCSI</u>	0.00	0.00	0.00	66.67
<u>NCNI</u>	12.50	4.55	7.14	28.57	<u>NCNI</u>	26.92	5.88	6.67	33.33
<u>ICNI</u>	6.25	95.45	92.86	9.52	<u>ICNI</u>	73.08	94.12	93.33	0.00
<u>ICNL</u>	81.25	0.00	0.00	0.00	<u>ICNL</u>	0.00	0.00	0.00	0.00
<i>dhps</i>					<i>dhps</i>				
<u>AKA</u>	11.76	5.26	35.71	100.00	<u>AKA</u>	30.77	0.00	33.33	100.00
<u>GKA</u>	5.88	84.21	64.29	0.00	<u>GKA</u>	11.54	88.24	66.67	0.00
<u>GKG</u>	35.29	5.26	0.00	0.00	<u>GKG</u>	0.00	11.76	0.00	0.00
<u>GEG</u>	47.06	5.26	0.00	0.00	<u>GEG</u>	57.69	0.00	0.00	0.00

Allele frequencies for the different *dhfr* and *dhps* alleles (see text) before and after 2006. <sup>1</sup>Northwest Pacific. <sup>2</sup>Southwest Pacific.

**SUPPLEMENTARY TABLE S3.** Shared resistance genotypes, haplotypes, and multilocus association genotypes

	Amazonas	Orinoco	NW Pacific <sup>b</sup>	SW Pacific <sup>c</sup>
Resistance genotypes <sup>a</sup>	ICNI/GEG	ICNI/GEG NCNI/GKA	NCNI/GKA	
	ICNI/GKA	ICNI/GKA	ICNI/GKA	
	NCNI/AKA		ICNI/AKA	ICNI/AKA
	ICNI/AKA	ICNI/AKA	ICNI/AKA	ICNI/AKA
<i>dhfr</i> -linked microsatellite haplotype <sup>d</sup>	4	4	4	4
<i>dhps</i> -linked microsatellite haplotype <sup>e</sup>	21 19	21 19	29 25	29 25
	27	27 23 30 15	27 23 30 15	23
<i>Polya/PfPK2</i> microsatellite association <sup>f</sup>	39 46	39 46	43 47	43 47
		36 38 48 49	36 38 48 49	
	35	35	35	35
<i>dhfr/dhps</i> linked microsatellite association <sup>g</sup>	60 61	60 61		

			64	64
			68	68
	66	66	66	
		63	63	63
		57	57	
		69	69	
<hr/>				
<i>dhfr</i> -linked/Unlinked microsatellite association <sup>h</sup>	86	86		
			87	87
		82	82	
		88	88	
		89	89	
	81	81	81	81
<hr/>				
<i>dhfr</i> -linked/Unlinked microsatellite association <sup>i</sup>	86	86		
			87	87
		82	82	
		88	88	
		89	89	
	81	81	81	81
<hr/>				
Complete multilocus association <sup>j</sup>	151	151		
	163	163		
			169	169
		145	145	
		149	149	
		172	172	
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<sup>a</sup>The combination of *dhfr/dhps* alleles; <sup>b</sup>North West Pacific; <sup>c</sup>South West Pacific; <sup>d</sup>*dhfr*-linked microsatellites (*mDHFR* and *MAI*) haplotype;

<sup>e</sup>*dhps*-linked microsatellites (*m0.8* and *m4.31*) haplotype; <sup>f</sup>*PfPK2* and *Polyα* microsatellite multilocus association genotype; <sup>g</sup>*dhfr*-linked



(*mDHFR* and *MAI*) and *dhps*-linked (*m0.8* and *m4.31*) microsatellite multilocus association genotype; <sup>h</sup>*dhfr*-linked (*mDHFR* and *MAI*) and unlinked (*PfPK2* and *Polyα*) multilocus association genotype; <sup>j</sup>complete microsatellite multilocus association genotype (*mDHFR*, *MAI*, *m0.8*, *m4.3*, *PfPK2* and *Polyα*). Numbers relate to microsatellite haplotypes and multilocus association genotypes coded as in supplementary table S1.

**Supplementary Table S4.** Genetic diversity (expected heterozygosity) at the *dhfr* and *dhps*, *dhfr* (*mDHFR*, *MAI*)- and *dhps* (*m0.8*, *m4.3*)-linked microsatellites and neutral unlinked (*PfPK2*, *Polyα*) microsatellite loci.

Locus	Amazonas	Orinoco	NWP <sup>1</sup>	SWP <sup>2</sup>
<i>dhfr</i>	0.647	0.102	0.133	0.522
<i>dhps</i>	0.647	0.264	0.468	0
<i>mDHFR</i>	0.623	0.380	0.08	0.495
<i>MAI</i>	0.539	0.211	0	0.680
<i>m0.8</i>	0.224	0.816	0.809	0.611
<i>m4.3</i>	0.184	0.746	0.709	0.545
<i>PfPk2</i>	0.611	0.667	0.692	0.547
<i>Polyα</i>	0.482	0.417	0.783	0.591

<sup>1</sup>North West Pacific (Quibdo), <sup>2</sup>South West Pacific (Tumaco).