Supplemental Material

Table S1. Baseline characteristics of cohort participants (N = 422)

	Total		Cahuide		Lupuna	
	N	%	n=258	%	n=164	%
Gender						
Female	232	55.1	143	55.4	90.0	54.9
Male	189	44.9	115	44.6	74	45.1
Age groups (years)						
<15	219	51.9	129	50.0	90	54.9
>15	203	48.1	129	50.0	74	45.1
Main occupation (≥18 years)						
None	82	19.4	45	17.4	37	22.6
Labourer	23	5.5	18	7.0	5	3.0
Logger or lumberjack	14	3.3	11	4.3	3	1.8
Fishermen	0	0.0	0	0.0	0	0.0
Breeder	4	0.9	4	1.6	0	0.0
Farmer	49	11.6	31	12.0	18	11.0
Trader	15	3.6	11	4.3	4	2.4
Housewife	65	15.4	39	15.1	26	15.9
Student	168	39.8	98	38.0	70	42.7
Other	2	0.5	1	0.4	1	0.6

Table S2. Baseline characteristics of cross-sectional study participants (N=1,251)

			Primero de Enero		Urco Mirano		Libertad		Puerto Alegre		Salvador		Gamitanacocha		Lago Yuracyacu	
	Total	**%**	n=93	%	n=223	%	n=230	%	n=192	%	n=334	%	n=70	%	n=109	%
Gender																
Female	643	51.4	41	44.1	109	48.9	112	48.7	98	51.0	182	54.5	44	62.9	57	52.3
Male	608	48.6	52	55.9	114	51.1	118	51.3	94	49.0	152	45.5	26	37.1	52	47.7
Age groups (years)																
<15	634	50.7	45	48.4	117	52.5	101	43.9	103	53.6	178	53.3	33	47.1	57	52.3
≥15	617	49.3	48	51.6	106	47.5	129	56.1	89	46.4	156	46.7	37	52.9	52	47.7
Main occupation (≥18 years)																
None	257	20.5	15	16.1	43	19.3	65	28.3	29	15.1	61	18.3	19	27.1	25	22.9
Labourer	1	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.9
Logger or lumberjack	6	0.5	1	1.1	0	0.0	2	0.9	3	1.6	0	0.0	0	0.0	0	0.0
Fishermen	16	1.3	0	0.0	0	0.0	3	1.3	3	1.6	0	0.0	0	0.0	10	9.2
Breeder	1	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.9
Farmer	435	34.8	35	37.6	76	34.1	95	41.3	68	35.4	111	33.2	29	41.4	21	19.3
Trader	5	0.4	0	0.0	0	0.0	0	0.0	1	0.5	2	0.6	0	0.0	2	1.8
Housewife	53	4.2	3	3.2	4	1.8	14	6.1	8	4.2	15	4.5	2	2.9	7	6.4
Student	465	37.2	38	40.9	97	43.5	49	21.3	79	41.1	141	42.2	20	28.6	41	37.6
Other	12	1.0	1	1.1	3	1.3	2	0.9	1	0.5	4	1.2	0	0.0	1	0.9

Table S3. Participants from the cross-sectional study classified by age groups and exposure condition (N=1,251)

				Primero de Enero		Urco Mirano		Libertad		Puerto Alegre		Salvador		Gamitanacocha		Lago Yuracyacu	
		Total	**%**	n=93	%	n=223	%	n=230	%	n=192	%	n=334	%	n=70	%	n=109	%
Age groups (years)	**First definition***																
<15	Non-exposed	603	48.2	42	45.2	115	51.6	85	37.0	100	52.1	176	52.7	28	40.0	57	52.3
	Exposed	31	2.5	3	3.2	2	0.9	16	7.0	3	1.6	2	0.6	5	7.1	0	0.0
≥15	Non-exposed	567	45.3	44	47.3	103	46.2	109	47.4	83	43.2	1 51	45.2	28	40.0	49	45.0
	Exposed	50	4.0	4	4.3	3	1.3	20	8.7	6	3.1	5	1.5	9	12.9	3	2.8
	Second definition°																
<15	Non-exposed	587	46.9	40	43.0	115	51.6	76	33.0	100	52.1	176	52.7	24	34.3	56	51.4
	Exposed	47	3.8	5	5.4	2	0.9	25	10.9	3	1.6	2	0.6	9	12.9	1	0.9
≥15	Non-exposed	553	44.2	40	43.0	103	46.2	104	45.2	80	41.7	151	45.2	27	38.6	48	44.0
	Exposed	64	5.1	8	8.6	3	1.3	25	10.9	9	4.7	5	1.5	10	14.3	4	3.7
	Malaria antecedent (past month)																
<15	No	616	49.2	43	46.2	117	52.5	90	39.1	103	53.6	178	53.3	29	41.4	56	51.4
	Yes	18	1.4	2	2.2	0	0.0	11	4.8	0	0.0	0	0.0	4	5.7	1	0.9
≥15	No	603	48.2	44	47.3	106	47.5	124	53.9	86	44.8	156	46.7	36	51.4	51	46.8
	Yes	14	1.1	4	4.3	0	0.0	5	2.2	3	1.6	0	0.0	1	1.4	1	0.9

* First definition of *P. vivax* exposure was a positive *P. vivax* result (by microscopy and/or PCR) at the time of sample collection

° Second definition included individuals with a positive result and/or the antecedent of *P. vivax* malaria in the past month (red line).

Figure S1: Variation of sensitivity (Sn), specificity (Sp), positive likelihood ratio (PLR) and negative likelihood ratio (NLR) with the cutoff used to determine seropositivity.

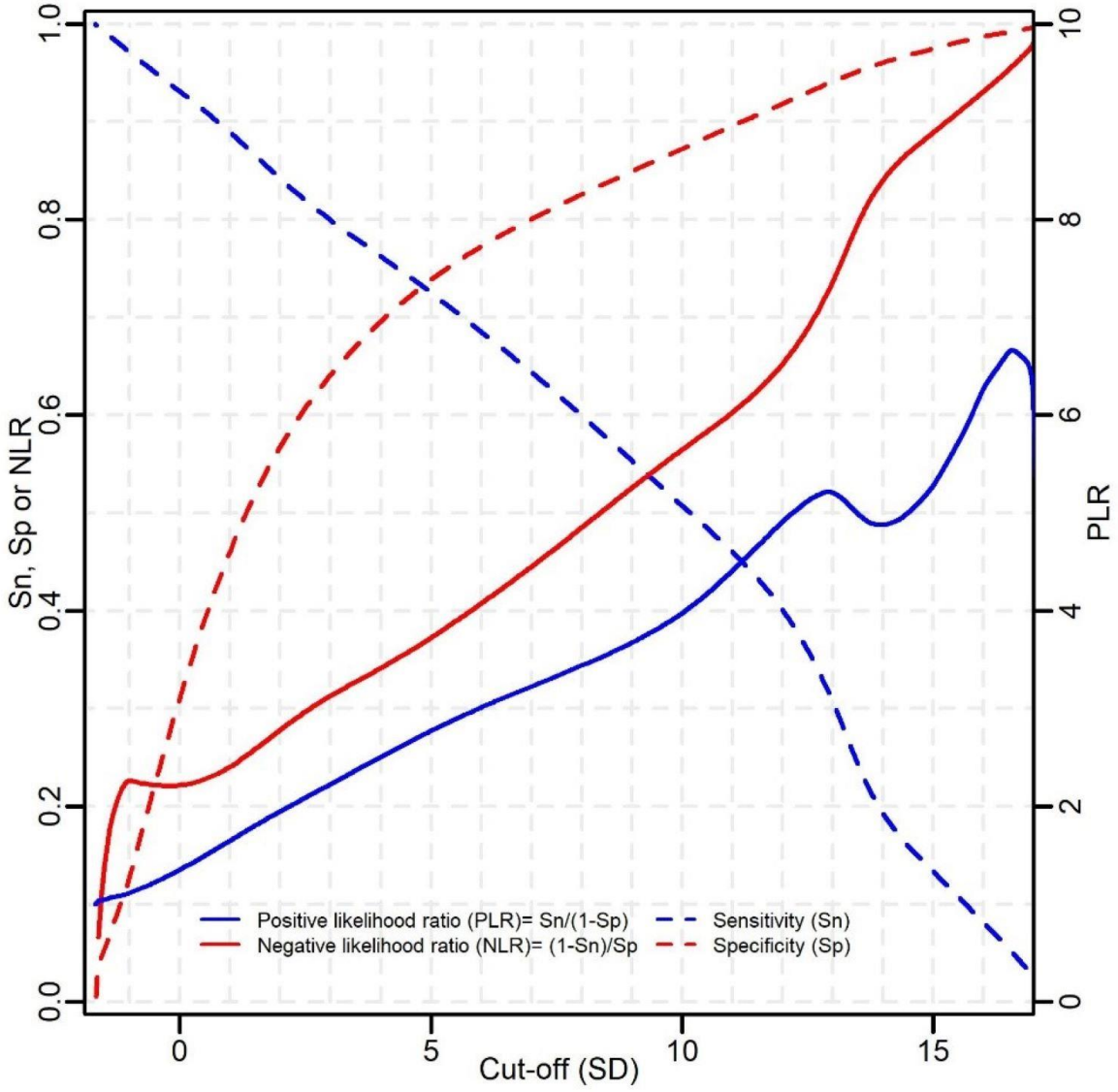

Figure S2: Misclassification/error rates (MER) of dichotomized serological responses to PvMSP8, in discriminating *P. vivax* exposure. (A) Variation of MER with cutoff used to determine seropositivity; (B) variation of false negatives (FN) and false positive (FP) rates with the cutoff used to determine seropositivity.

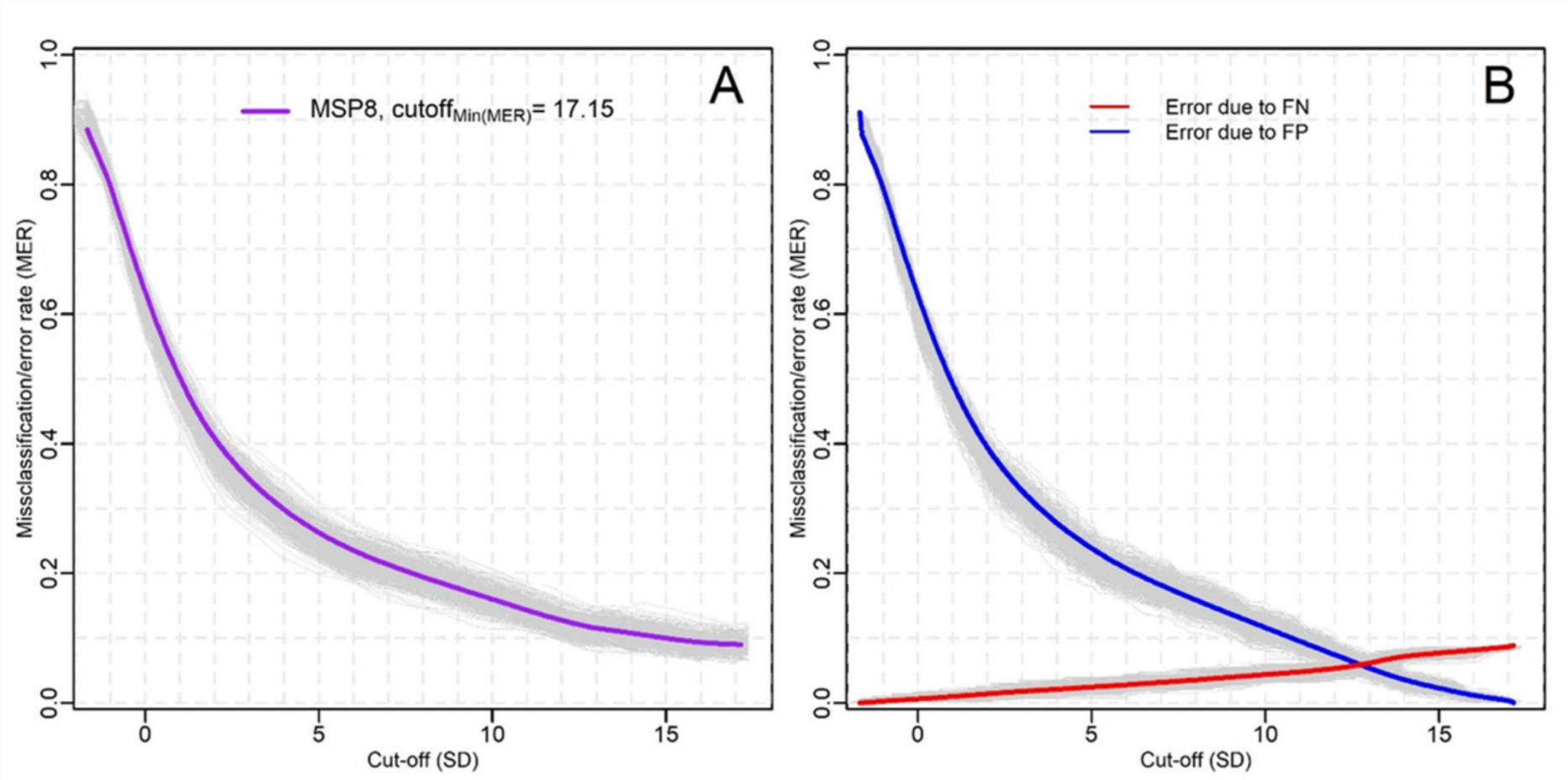

Figure S3: Misclassification/error rates (MER) and misclassification cost rates of dichotomized serological responses to MSP8 in discriminating *P. vivax* exposure: **(**A) Variation of MER with the cutoff used to determine seropositivity, assuming different *P. vivax* exposure prevalence; (B) variation of MCR with cutoff used to determine seropositivity, assuming different cost ratios between false negatives (FN) and false positives (FP).