

CORRECTION

Correction: Distribution and Frequency of *kdr* Mutations within *Anopheles gambiae* s.l. Populations and First Report of the *Ace.1G119S* Mutation in *Anopheles arabiensis* from Burkina Faso (West Africa)

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There is an error in the fifth sentence of the Abstract. The correct sentence is: Furthermore we report, for the first time, the identification of the *ace.1* G119S mutation in *An. arabiensis* populations collected at 8 sites.

There is also an error in the first sentence of the Discussion section. The correct sentence is: This study provides current information on the distribution of three members of the *Anopheles gambiae* complex across Burkina Faso and the frequency and distribution of three important target-site resistance mechanisms in these populations.

In Tables 2 and 3, the values in the column [95% CI] are incorrect. Please view the corrected Tables 2 and 3 here.



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Table 2. Allelic and genotypic frequencies at the *kdr* 1014F and 1014S locus in *An. gambiae* s.l populations.

Species	Sites	N	Genotypes		f(L1014F)	[95%CI]	p(HW)	Genotypes		f(L1014F)	[95%CI]	p(HW)	
			1014L 1014L	1014F 1014F				1014L 1014L	1014L 1014F				
<i>An. arabiensis</i>	Gaoua	5	1	0	2	0.66	[0.24–1]	-	0	2	0.66	[0.24–1]	0.2000
	Banfora	0	0	0	0	-	-	-	0	0	0	-	-
	Sindou	10	5	0	0	0	-	-	1	4	0.9	[0.71–1]	-
	Orodara	1	1	0	0	0	-	-	0	0	0	-	-
	Dioulassoba	30	1	5	14	0.82	[0.68–0.95]	0.4678	2	8	0.42	[0.24–0.59]	0.0003
	Sourmouso	11	1	1	5	0.78	[0.53–1]	0.0956	2	2	0.37	[0.08–0.65]	0.2914
	Boromo	17	2	3	12	0.79	[0.59–0.98]	0.000	6	3	0.28	[0.06–0.49]	0.3405
	Décougu	23	6	0	10	0.62	[0.42–0.81]	0.1652	5	2	0	-	0.3213
	Koudougou	13	2	3	8	0.73	[0.48–0.97]	-	0	0	0.5	[0.22–0.77]	-
	Nanoro	6	4	0	0	0	-	0.4406	0	2	0.5	[0.09–0.90]	0.0857
	Koupela	13	2	3	3	0.56	[0.29–0.82]	0.2970	2	3	0.53	[0.25–0.80]	0.1795
	Fada	25	6	5	3	0.39	[0.19–0.58]	0.0933	8	3	0.57	[0.37–0.76]	0.9035
	Kaya	17	4	3	5	0.54	[0.30–0.77]	-	1	4	0.37	[0.14–0.59]	0.0061
Quahigouya	1	0	1	0	0.5	[0–1]	0.0031	0	0	0	-	-	
Dori	22	6	2	8	0.56	[0.35–0.76]	-	4	2	0.26	[0.07–0.44]	0.2260	
<i>An. coluzzii</i>	Gaoua	1	1	0	0	0	-	-	0	0	0	-	-
	Banfora	7	0	1	5	0.91	[6.69–1]	-	0	1	0.16	[0–0.43]	0.0909
	Sindou	12	1	1	4	0.75	[0.50–0.99]	0.2727	1	5	0.91	[0.74–1]	-
	Orodara	5	2	1	1	0.37	[0–0.79]	0.4286	1	0	0.12	[0–0.40]	-
	Dioulassoba	9	1	1	3	0.7	[0.40–0.99]	0.3333	1	3	0.7	[0.40–0.99]	0.3333
	Sourmouso	4	2	1	0	0.16	[0–0.51]	-	0	1	0.33	[0–0.79]	0.2000
	Boromo	0	0	0	0	-	-	-	0	0	-	-	-
	Décougu	3	1	1	0	0.25	[0–0.74]	-	0	1	0.5	[0–1]	0.6190
	Koudougou	7	0	3	2	0.7	[0.36–1]	1	2	0	0.2	[0–0.5]	-
	Nanoro	39	1	5	18	0.85	[0.73–0.96]	0.3983	12	3	0.37	[0.21–0.52]	0.3333
	Koupela	9	3	5	0	0.31	[0–0.61]	1	1	0	0.06	[0–0.21]	0.7446
	Fada	46	7	7	13	0.61	[0.46–0.75]	0.0186	17	2	0.38	[0.23–0.52]	0.0817
	Kaya	8	2	0	3	0.6	[0.26–0.93]	0.0476	2	1	0.4	[0.06–0.73]	0.3333
Quahigouya	17	4	0	6	0.6	[0.36–0.83]	0.0017	2	5	0.6	[0.36–0.83]	1	
Dori	9	3	0	2	0.4	[0.07–0.72]	0.0476	1	3	0.7	[0.40–0.99]	-	
<i>An. gambiae</i>	Gaoua	74	14	8	17	0.53	[0.41–0.64]	0.0002	0	35	0.92	[0.85–0.98]	1
	Banfora	29	7	7	10	0.56	[0.37–0.74]	0.0494	3	2	0.14	[0.01–0.26]	0.1518
	Sindou	46	8	3	13	0.6	[0.45–0.74]	0.0003	5	17	0.81	[0.69–0.92]	0.0611
	Orodara	33	5	7	11	0.63	[0.46–0.79]	0.0904	1	9	0.41	[0.24–0.57]	0.0420
	Dioulassoba	8	0	1	3	0.87	[0.63–1]	-	2	2	0.75	[0.44–1]	0.3257
	Sourmouso	29	8	9	3	0.37	[0.19–0.54]	0.5690	5	4	0.32	[0.15–0.48]	0.0000
	Boromo	25	8	7	1	0.28	[0.10–0.45]	0.7912	4	5	0.43	[0.23–0.62]	0.1201
	Décougu	19	5	0	7	0.58	[0.35–0.80]	0.0004	7	0	0.29	[0.08–0.49]	0.0150
	Koudougou	26	9	2	8	0.47	[0.27–0.66]	0.0005	4	3	0.26	[0.09–0.42]	1
	Nanoro	5	1	0	3	0.75	[0.37–1]	0.0025	0	1	0.25	[0–0.62]	0.1429
	Koupela	24	7	1	6	0.46	[0.26–0.65]	0.0013	4	6	0.57	[0.37–0.76]	0.0003
	Fada	30	3	9	7	0.6	[0.42–0.77]	0.6254	5	6	0.44	[0.26–0.61]	0.0473
	Kaya	19	5	7	3	0.43	[0.20–0.65]	0.5785	3	1	0.16	[0–0.32]	0.0000
Quahigouya	30	10	3	7	0.42	[0.24–0.59]	0.0020	2	8	0.45	[0.27–0.62]	0.0632	
Dori	18	4	4	4	0.5	[0.26–0.73]	0.2900	1	5	0.55	[0.32–0.77]	0.0520	

N: number of mosquitoes

f(1014F): frequency of the *kdr* W resistant allele

f(1014S): frequency of the *kdr* E resistant allele

p(HW): probability of the exact test for goodness of fit to Hardy Weinberg equilibrium

-: not determined

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Table 3. Allelic and genotypic frequencies at the ace-1 locus in *An. gambiae s.l.* populations from 15 sites in Burkina Faso.

Species	Sites	N	Genotypes			f(119S)	[95%CI]	p(HW)
			119G 119G	119G 119S	119S 119S			
<i>An. arabiensis</i>	Gaoua	3	3	0	0	0	-	-
	Banfora	0	0	0	0	-	-	-
	Sindou	5	5	5	0	0	-	-
	Orodara	1	1	1	0	0	-	-
	Dioulassoba	20	4	4	12	0.7	[0.49–0.90]	0.0264
	Soumouso	7	1	1	5	0.78	[0.47–1]	0.2308
	Boromo	15	5	9	1	0.36	[0.11–0.60]	0.9488
	Dédougou	14	4	6	4	0.5	[0.23–0.76]	0.0444
	Koudougou	12	5	0	7	0.58	[0.30–0.85]	0.0004
	Nanoro	3	2	0	1	0.33	[0–0.86]	0.2000
	Koupela	8	8	0	0	0	-	-
	Fada	13	4	8	1	0.38	[0.11–0.64]	0.9449
	Kaya	12	11	0	1	0.08	[0–0.23]	0.0435
	Ouahigouya	1	1	0	0	0	-	-
	Dori	14	14	0	0	0	-	-
	<i>An. coluzzii</i>	Gaoua	1	1	0	0	0	-
Banfora		6	6	0	0	0	-	-
Sindou		6	6	0	0	0	-	-
Orodara		4	4	0	0	0	-	-
Dioulassoba		5	4	1	0	0.1	[0–0.36]	-
Soumouso		3	3	0	0	0	-	-
Boromo		0	0	0	0	-	-	-
Dédougou		2	0	0	2	0.5	[0–1]	1
Koudougou		5	2	3	0	0.3	[0–0.70]	1
Nanoro		23	17	6	0	0.13	[0–0.26]	1
Koupela		8	6	2	0	0.12	[0–0.34]	1
Fada		27	27	0	0	0	-	-
Kaya		5	5	0	0	0	-	-
Ouahigouya		9	6	3	0	0.16	[0–0.39]	1
Dori	5	5	0	0	0	-	-	
<i>An. gambiae</i>	Gaoua	36	22	11	3	0.23	[0.09–0.36]	0.2811
	Banfora	24	20	4	0	0.08	[0–0.18]	1
	Sindou	24	21	3	0	0.06	[0–0.15]	1
	Orodara	23	22	0	1	0.04	[0–0.12]	0.0222
	Dioulassoba	4	4	0	0	0	-	-
	Soumouso	20	18	0	2	0.1	[0–0.23]	0.0021
	Boromo	15	9	4	2	0.26	[0.03–0.48]	0.2260
	Dédougou	12	8	4	0	0.16	[0–0.36]	1
	Koudougou	18	14	1	3	0.19	[0–0.37]	0.0029-
	Nanoro	4	3	1	0	0.12	[0–0.43]	-
	Koupela	12	12	0	0	0	-	-
	Fada	19	18	0	1	0.05	[0–14]	0.0270
	Kaya	15	11	4	0	0.13	[0–0.30]	1
	Ouahigouya	19	14	2	3	0.21	[0.02–0.39]	0.0096

(Continued)

Table 3. (Continued)

Species	Sites	N	Genotypes			f(119S)	[95%CI]	p(HW)
			119G 119G	119G 119S	119S 119S			
	Dori	11	10	0	1	0.09	[0–0.25]	0.0476

N: number of mosquitoes

f(119S): frequency of the 119S resistant ace.1 allele

p(HW): probability of the exact test for goodness of fit to Hardy Weinberg equilibrium

-: not determined

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Reference

1. Dabiré RK, Namountougou M, Diabaté A, Soma DD, Bado J, Toé HK, et al. (2014) Distribution and Frequency of *kdr* Mutations within *Anopheles gambiae* s.l. Populations and First Report of the *Ace.1G119S* Mutation in *Anopheles arabiensis* from Burkina Faso (West Africa). PLoS ONE 9(7): e101484 doi:[10.1371/journal.pone.0101484](https://doi.org/10.1371/journal.pone.0101484) PMID: [25077792](https://pubmed.ncbi.nlm.nih.gov/25077792/)