

S9. Chi-square tests with Yates correction for prove the hypothesis of Hardy-Weinberg equilibrium (H-W Eq.) on locus *Pattern* of *C. livia* in cities from different continents.

	n	C^T _Expected individuals	C^T _Observed individuals	X ²	H-W Eq.
Northern South America					
Arequipa	53	5.26	10	3.41	yes
Bogota	214	29.53	55	21.09*	no
Buga	42	8.32	15	4.58*	no
Cali	452	51.42	97	39.50*	no
Cartagena	58	11.05	20	6.45*	no
Cartago	87	15.35	28	9.60*	no
Loja	84	14.80	27	9.23*	no
Manizales	65	3.07	6	1.91	yes
Medellin	64	7.43	14	4.95*	no
Palmira	71	4.65	9	3.18	yes
Popayan	40	6.53	12	3.77	yes
Quito	68	6.84	13	4.67*	no
Santander de Quilichao	46	7.03	13	4.23	yes
Western Europe					
Barcelona	67	2.03	4	1.06	yes
Florence	121	20.18	37	13.19*	no
Lisbon	55	3.08	6	1.88	yes
Madrid	84	2.53	5	1.51	yes
Paris	149	13.62	26	10.35*	no
Rome	83	2.53	5	1.51	yes
Venice	129	56.54	63	0.63	yes
Zaragoza	32	2.98	1	0.74	yes
Southeast Asia					
Singapore	108	12.18	23	8.72*	no

* p < 0.05

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S10. Chi-square tests with Yates correction for prove the hypothesis of Hardy-Weinberg equilibrium (H-W Eq.) on locus *Pattern* of *C. livia* in groups within cities.

	n	C^T_ Expected individuals	C^T_ Observed individuals	X²	H-W Eq.
Barcelona (a)	43	1.52	3	0.61	yes
Barcelona (b)	21	0.50	1	0.00	yes
Bogota (a)	47	11.37	20	5.79*	no
Bogota (b)	167	18.52	35	13.76*	no
Cali (a)	228	25.41	48	19.18*	no
Cali (b)	224	26.01	49	19.44*	no
Florence (a)	32	4.28	8	2.40	yes
Florence (b)	14	2.77	5	1.07	yes
Florence (c)	21	5.80	10	2.35	yes
Florence (d)	22	3.23	6	1.57	yes
Madrid (a)	15	0.00	0	-	-
Madrid (b)	23	0.00	0	-	-
Madrid (c)	17	1.03	2	0.21	yes
Manizales (a)	23	0.50	1	0.00	yes
Manizales (b)	24	1.55	3	0.58	yes
Medellin (a)	23	3.22	6	1.60	yes
Medellin (b)	41	4.21	8	2.55	yes
Singapore (a)	20	0	0	-	-
Singapore (b)	104	12.21	23	8.65*	no
Paris (a)	42	2.57	5	1.43	yes
Paris (b)	71	8.51	16	5.74*	no
Quito (a)	59	6.34	12	4.19*	no
Quito (b)	9	0.51	1	0.00	yes
Rome (a)	13	0.00	0	-	-
Rome (b)	52	2.56	5	1.46	yes
Rome (c)	15	0.00	0	-	-
Venice (a)	37	11.19	19	4.77*	no
Venice (b)	77	24.35	41	10.71*	no
Venice (c)	15	1.58	3	0.53	yes

* p < 0.05

S11. Haldane's exact test for randomness of mating for prove the hypothesis of Hardy-Weinberg equilibrium (H-W Eq.) on locus *Grizzle* of *C. livia* in cities from different continents.

	n	Observed individuals			D	V	X ²	H-W Eq.
		<i>g⁺g⁺</i>	<i>Gg⁺</i>	<i>GG</i>				
Northern South America								
Arequipa	71	70	1	0	0	0.00	-	-
Bogota	317	315	2	0	-2	2528.00	0.00	yes
Buga	66	56	5	5	1100	44187.91	27.38*	no
Cali	578	538	31	9	18438	4995060.51	86.06*	no
Cartagena	114	102	12	0	-132	54489.60	0.32	yes
Cartago	143	109	21	13	5248	869108.72	31.69*	no
Loja	104	93	10	1	282	49219.90	1.62	yes
Manizales	110	109	1	0	0	0.00	-	-
Medellin	111	105	1	5	2100	44512.33	99.07*	no
Palmira	109	97	10	2	686	70111.48	6.71*	no
Popayan	58	54	2	2	430	6366.37	29.04*	no
Quito	155	139	13	3	1512	188022.02	12.16*	no
Santander de Quilichao	70	46	13	11	1868	1897.0511	18.39*	no
Western Europe								
Barcelona	83	82	0	1	328	656.00	164.00*	no
Florence	170	165	2	3	1978	36521.97	107.13*	no
Lisbon	87	87	0	0	0	0.00	-	-
Madrid	117	111	6	0	-30	13443.12	0.07	yes
Paris	258	248	7	3	2934	153570.90	56.05*	no
Rome	104	103	1	0	0	0.00	-	-
Venice	208	206	1	1	824	4944.00	137.33*	no
Zaragoza	44	42	2	0	-2	344.00	0.01	yes
Southeast Asia								
Singapore	175	171	3	1	678	13680.69	33.60*	no

* p < 0.05

S12. Haldane's exact test for randomness of mating for prove the hypothesis of Hardy-Weinberg equilibrium (H-W Eq.) on locus *Grizzle* of *C. livia* in groups within cities.

	Observed individuals			D	V	X ²	H-W Eq.
	n	g^+g^+	Gg^+				
Barcelona (a)	50	50	0	0	0.00	-	-
Barcelona (b)	30	29	0	1	116	232.00	58.00*
Bogota (a)	82	81	0	0	0	0.00	-
Bogota (b)	237	234	2	0	-2	1880.00	0.00
Cali (a)	287	262	7	6	6246	351916.12	110.86*
Cali (b)	316	276	24	3	2760	955701.49	7.97*
Florence (a)	52	50	1	1	200	1200.00	33.33*
Florence (b)	18	18	0	0	0	0.00	-
Florence (c)	31	31	0	0	0	0.00	-
Florence (d)	25	23	1	1	92	552.00	15.33*
Madrid (a)	45	41	2	0	-2	336.00	0.01
Madrid (b)	25	22	2	0	-2	184.00	0.02
Madrid (c)	20	19	1	0	0	0.00	-
Manizales (a)	49	49	0	0	0	0.00	-
Manizales (b)	34	33	1	0	0	0.00	-
Medellin (a)	34	31	0	3	372	3491.08	39.64*
Medellin (b)	80	74	1	2	592	5841.59	59.99*
Singapore (a)	20	20	0	0	0	0.00	-
Singapore (b)	155	151	3	1	598	12080.78	29.60*
Paris (a)	61	61	0	0	0	0.00	-
Paris (b)	142	133	7	1	490	38325.68	6.26*
Quito (a)	142	116	8	3	1336	83183.43	21.46*
Quito (b)	29	23	5	0	-20	1924.53	0.21
Rome (a)	17	17	0	0	0	0.00	-
Rome (b)	67	65	1	0	0	0.00	-
Rome (c)	18	18	0	0	0	0.00	-
Venice (a)	73	71	0	1	284	568.00	142.00*
Venice (b)	120	119	1	0	0	0.00	-
Venice (c)	16	16	0	0	0	0.00	-

* $p < 0.05$ #