

Supporting Information

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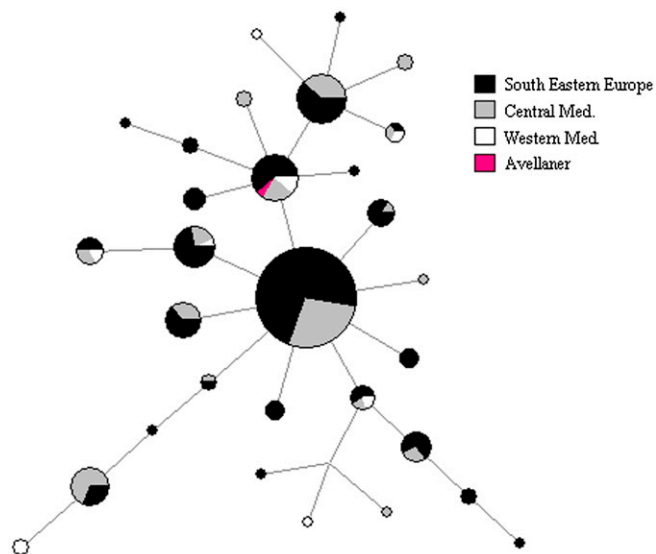


Fig. S1. Median joining network of Y-E1b1b1a1b-V13 haplotypes in current western European populations previously published ($n = 215$) (1–5) and of the Ave07 haplotype.

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Table S1. Percentage of each ancient mitochondrial haplotype in current European populations

Population	Total n	93C, 224C, 311C		CRS		126C, 294T, 296T, 304C		51G, 189C, 270T	
		No. shared seq	Fq haplotype (%)	No. shared seq	Fq haplotype (%)	No. shared seq	Fq haplotype (%)	No. shared seq	Fq haplotype (%)
Middle East									
Iranians	448	1	0.22	32	7.14	2	0.45	0	0.00
Saudi Arabians	702	12	1.71	18	2.56	0	0.00	0	0.00
Syrians	118	1	0.85	8	6.78	2	1.69	0	0.00
Iraqis	52	1	1.92	0	0.00	0	0.00	0	0.00
Druze	356	2	0.56	24	6.74	0	0.00	0	0.00
Yemenis	115	0	0.00	3	2.61	0	0.00	0	0.00
Kurds	82	1	1.22	12	14.63	0	0.00	0	0.00
Dubai	249	2	0.80	4	1.61	0	0.00	0	0.00
Palestinians	117	1	0.85	8	6.84	1	0.85	0	0.00
Turks	340	3	0.88	33	9.71	0	0.00	0	0.00
Middle East: total	2,579	24	0.93	142	5.51	5	0.19	0	0.00
Caucasus									
Western Russians	358	0	0.00	45	12.57	10	2.79	0	0.00
Other North Caucasus populations	353	4	1.13	23	6.52	6	1.70	0	0.00
Georgians	188	6	3.19	16	8.51	0	0.00	0	0.00
Armenians	358	2	0.56	27	7.54	0	0.00	0	0.00
Azerbaijanis	48	0	0.00	3	6.25	1	2.08	0	0.00
Caucasus: total	1,305	12	0.92	114	8.74	17	1.30	0	0.00
Northwestern Europe									
British	100	0	0.00	13	13.00	1	1.00	0	0.00
French (Brittany)	62	0	0.00	11	17.74	0	0.00	0	0.00
French (Normandie)	39	1	2.56	2	5.13	1	2.56	0	0.00
French (Limousin)	72	0	0.00	7	9.72	3	4.17	0	0.00
French (Var)	37	0	0.00	8	21.62	2	5.41	0	0.00
Welsh	92	2	2.17	23	25.00	0	0.00	0	0.00
Cornish	92	1	1.09	16	17.39	0	0.00	3	3.26
Irish	300	3	1.00	56	18.67	6	2.00	0	0.00
Northwestern Europe: total	794	7	0.88	136	17.13	13	1.64	3	0.38
North-Central Europe									
Germans	682	5	0.73	96	14.08	15	2.20	8	1.17
Danish	38	0	0.00	9	23.68	2	5.26	0	0.00
Czechs	262	3	1.15	32	12.21	1	0.38	0	0.00
Polish	849	6	0.71	138	16.25	21	2.47	0	0.00
Slovakians	335	1	0.30	36	10.75	4	1.19	0	0.00
Swiss	224	2	0.89	32	14.29	5	2.23	2	0.89
Latvians	299	0	0.00	41	13.71	13	4.35	0	0.00
Estonians	149	0	0.00	19	12.75	3	2.01	2	1.34
Austrians	99	3	3.03	21	21.21	1	1.01	0	0.00
South Tyrol populations	263	1	0.38	50	19.01	3	1.14	0	0.00
North-Central Europe: total	3,200	21	0.66	474	14.81	68	2.13	12	0.38
Scandinavia									
Norwegians	626	1	0.16	129	20.61	16	2.56	5	0.80
Finns	755	2	0.26	95	12.58	6	0.79	1	0.13
Scandinavia: total	1,381	3	0.22	224	16.22	22	1.59	6	0.43
Southeastern Europe									
Bulgarians	30	0	0.00	3	10.00	0	0.00	0	0.00
Hungarians	386	5	1.30	43	11.14	8	2.07	0	0.00
Bosnians	304	1	0.33	36	11.84	2	0.66	0	0.00
Serbians	56	0	0.00	4	7.14	0	0.00	0	0.00
Romanians	105	1	0.95	13	12.38	0	0.00	0	0.00
Southeastern Europe: total	881	7	0.79	99	11.24	10	1.14	0	0.00
Western Mediterranean									
Northern Portuguese	271	5	1.85	60	22.14	3	1.11	0	0.00
Central Portuguese	317	7	2.21	64	20.19	10	3.15	0	0.00
Southern Portuguese	260	0	0.00	52	20.00	3	1.15	0	0.00

Table S1. Cont.

Population	Total n	93C, 224C, 311C		CRS		126C, 294T, 296T, 304C		51G, 189C, 270T	
		No. shared seq	Fq haplotype (%)	No. shared seq	Fq haplotype (%)	No. shared seq	Fq haplotype (%)	No. shared seq	Fq haplotype (%)
Galicians	135	1	0.74	28	20.74	2	1.48	0	0.00
Spanish Catalans	133	2	1.50	23	17.29	0	0.00	0	0.00
Andalusians	189	4	2.12	36	19.05	0	0.00	0	0.00
Balearic islanders	67	2	2.99	14	20.90	0	0.00	0	0.00
Basque Spanish	211	1	0.47	48	22.75	1	0.47	0	0.00
Western Mediterranean: total	1,583	22	1.39	325	20.53	19	1.20	0	0.00
Central Mediterranean									
Northern Italians	319	3	0.94	45	14.11	3	0.94	0	0.00
Central Italians	637	10	1.57	96	15.07	5	0.78	0	0.00
Central Southern Italians	199	2	1.01	35	17.59	4	2.01	0	0.00
Sicilians	106	0	0.00	30	28.30	2	1.89	0	0.00
Corsicans	99	1	1.01	20	20.20	1	1.01	0	0.00
Sardinians	234	2	0.85	52	22.22	1	0.43	0	0.00
Slovenians	104	1	0.96	14	13.46	2	1.92	0	0.00
Croatians	59	1	1.69	5	8.47	2	3.39	0	0.00
Central Mediterranean: total	1,757	20	1.14	297	16.90	20	1.14	0	0.00
Eastern Mediterranean									
Macedonians	237	2	0.84	28	11.81	5	2.11	0	0.00
Albanians	84	0	0.00	14	16.67	1	1.19	0	0.00
Cretans	200	2	1.00	28	14.00	11	5.50	0	0.00
Cypriots	91	3	3.30	8	8.79	0	0.00	0	0.00
Greeks	553	3	0.54	57	10.31	3	0.54	2	0.36
Eastern Mediterranean: total	1,165	10	0.86	135	11.59	20	1.72	2	0.17
Total	14,645	126	0.86	1946	13.29	194	1.32	23	0.16

Table S2. Results of the shared haplotype analysis between Avellaner haplotypes and other ancient Neolithic sequences

Culture	Location	References	Dates	Positions	n	93C, 224C, 311C (no. shared seq)	CRS (no. shared seq)	126C, 294T, 296T, 304C (no. shared seq)	51G, 189C, 270T (no. shared seq)
Gatherer/hunter cultures	Germany, Russia, Poland, Lithuania	(1)	13400–2500 BC	15997–16409	20	0	1	0	0
Neolithic, LBK/AVK	Austria, Hungry, Germany	(2, 3)	5500–500 BC	15997–16409	42	2	4	2	0
Neolithic	Spain	(4)	3500–3000 BC	16022–16378	11	0	3	0	0
Neolithic, Megalithic	Western France	(5)	4200 BC	16165–16390	3	0	0	0	0
Late Neolithic, Corded Ware Culture	Germany	(6)	2700–2400 BC	15997–16409	9	0	0	0	0
Late Neolithic, Treilles Culture	France	(7)	3030–2890 BC	16009–16390	29	0	6	2	0
Chalcolithic	Austria/Italy	(8)	3500–3100 BC	16040–16401	1	0	0	0	0

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Table S3. Percentage of each ancient Y-haplotype in current European populations

Population (size)	No. profiles	G2a		E1b1b1a1b	
		No. shared haplotype	Fq haplotype (%)	No. shared haplotype*	Fq haplotype (%)
Middle East					
Iranians	340	0	0	1	0.29
Syrians	161	0	0	0	0
Druze	283	0	0	38	13.43
Palestinians	364	0	0	2	0.55
Lebanese	577	2	0.35	14	2.43
Turks	663	1	0.15	17	2.56
Middle East: total	2,388	3	0.13	72	3.02
Caucasus					
Georgians	77	0	0	0	0
Armenians	100	0	0	0	0
Azerbaijanis	119	0	0	7	5.88
Caucasus: total	296	0	0	7	2.36
Northwestern Europe					
French	100	0	0	0	0
Irish	155	0	0	0	0
Belgians	113	0	0	0	0
Dutch	72	0	0	0	0
Northwestern Europe: total	440	0	0	0	0
North-central Europe					
Germans	1,414	2	0.14	3	0.21
Danish	185	0	0	0	0
Czechs	1,750	6	0.34	4	0.23
Polish	208	0	0	1	0.48
Eastern Slovaks	629	0	0	6	0.95
Swiss (Zurich area)	150	0	0	0	0
North-central Europe: total	4,336	8	0.18	14	0.32
Scandinavia					
Norwegians	1,766	0	0	0	0
Swedish	708	1	0.14	1	0.14
Scandinavia: total	2,474	1	0.04	1	0.04
Southeastern Europe					
Hungarians	215	1	0.47	2	0.93
Bosnians Herzegovinians	181	0	0	2	1.10
Serbians	179	0	0	4	2.23
Montenegrins	404	1	0.25	61	15.10
Southeastern Europe: total	979	2	0.20	69	7.05
Western Mediterranean					
Northern Portuguese	235	0	0	1	0.43
Southern Portuguese	78	0	0	0	0
Northwestern Spanish	239	0	0	0	0
Northeastern Spanish	114	0	0	0	0
Southern Spanish	168	1	0.60	0	0
Balearic islanders	340	0	0	2	0.59
Central Spanish	188	1	0.53	0	0
Basque Spanish	115	0	0	0	0
Western Mediterranean: total	1,477	2	0.14	3	0.20
Central Mediterranean					
Northern Italians	155	2	1.29	0	0
Southern Italians	193	0	0	3	1.55
Sicilians	491	1	0.20	1	0.20
Sardinians	100	0	0	0	0
Croatians	200	2	1	0	0
Central Mediterranean: total	1,139	5	0.44	4	0.35
Eastern Mediterranean					
Maltese	50	0	0	0	0
Cretans	71	0	0	0	0
Cypriots	163	0	0	1	0.61
Northern Greeks	183	0	0	5	1.79
Central and southern Greeks	73	0	0	0	0
Eastern Mediterranean: total	637	0	0	6	0.94
Total	14,166	42	0.30	346	2.44

*All these shared haplotypes were assigned to E1b1b haplogroup thanks to the haplogroup predictor software (1) or were previously described as belonging to E1b1b1a2 or to E1b1b1c haplogroups.

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Table S4. Cont.

Population (size)	No. seq	References HVS-I	Population (size)	No. profiles	References Y-STRs
Central Southern Italians	199	(90)	Southern Italians	193	(82)
Sicilians	106	(91)	Sicilians	491	(92, 93)
Corsicans	99	(94, 95)			
Sardinians	234	(81, 96, 97)	Sardinians	100	(98)
Slovenians	104	(69)			
Croatians	59	(68)	Croatians	200	(99)
Eastern Mediterranean					
Macedonians	237	(72, 100)			
Albanians	84	(72, 101)			
			Maltese	50	(9)
Cretans	200	(8, 102)	Cretans	71	(103)
Cypriots	91	(104)	Cypriots	163	(9)
Greeks	553	(2, 8, 72, 104, 105)	Northern Greeks	280	(106, 107)
			Central and southern Greeks	73	(103)

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