Insights Into the "Isolation" of the Basques: mtDNA Lineages from the Historical Site of Aldaieta (6th–7th Centuries AD)

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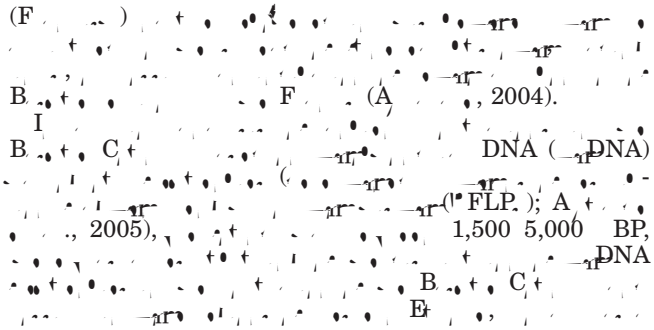
KEY WORDS DNA; B C ; F ;

ABSTRACT I (H I -I) DNA (DNA) A (6 7 - AD) (DNA,), A A N P E (Reihengräberfelder), F DNA F DNA A DNA N A I P N A M B J A B C A J P A 000:000 000, 2006.

DNA I A (6 7 AD), B 1987, 100 (A , 1999). A : (E) ( ) (N) C A F E (A , 2004).

A O , B (2002) A F B (2002) M AD 541 H , A (2004) A N P

G : B C ; G : 1/ P /EH 00154.310-EA-8130/2000, 9/ P 00154.310-14495/2002; G : M 8(9 H);25



- D[illegible]: A[illegible] (65, 45, 10).

RESULTS

Sequencing of mtDNA HVR-I

A H -I 65 A . I 56 403 H -I, 17 H -I 73 H -II (2). 55% H -I.

A -C M1 (17) A (2). FLP C (A ., 2005), H -I (16,129-16,185-16,189-16,223-16,249-16,311), M1 1 (., 2000). H 1 10,000 E -A A , M1, H -I 16,129-16,189-16,223-16,249-16,311 (-M ., 1999), M, C 10,400 (M ., 1999).

Kinship

A 150 6. AD 7. AD. A 00073G DNA H,

(I ., 2005). G DNA F A 17 (B3 B4, F . 2); 14 (F . 2); 12 (F . 2); 11 3, 8 (F . 2). I (2004) E DNA F 2. A 22 56 34 H 3. H

TABLE 4. Nucleotide diversity[1] in late ancient cemetery of Aldaieta[2] (6th–7th centuries AD) and in other populations from Western Europe

P	N	± D
A		0.0145 ± 0.0087
B		0.0158 ± 0.0091
C		0.0185 ± 0.0105
L		0.0205 ± 0.0115
P		0.0219 ± 0.0121
G		0.0204 ± 0.0113
A		0.0270 ± 0.0145
C		0.0216 ± 0.0122
L		0.0203 ± 0.0114
M		0.0186 ± 0.0106
C		0.0216 ± 0.0120
F		0.0224 ± 0.0126
P		0.0234 ± 0.0127
G		0.0216 ± 0.0119
N		0.0212 ±

± 0.0087 D), B C (0.0158 ± 0.0091), A (0.02) C M (L).

S a ed a y e 16092 16362 H -I, A 17 15 (14 15, 1 2; 2). O 15 A (5, 9, 11; G 10,000), A (7, 8, 10, 12, 16, 17) E 1% (5). E (1 2, 3, 4, 6, 13, 14 15) (5). O 15. A , E I E C 34 (A) 100 C 47.9% ± 16.2% (E) 27.3% ± 15.5% (E). A 40% 20%, C A (5, 9, 11) (5), 5 IN CF, F 16,294 16,304 A 9. IN CF, 16,270. A 11, A A E (5), H (1 2, 3), 53% A H H E A (4, 2.94%) E H 2.94% A E B C (11%) C (P , 16%; C , 15%; L , 11%). H 6 (2.94%), 13 (2.94%), 14 15 (J, 8.82% A) E A E 7, 8, 10, 12, 16, 17 (5). A C 8, 10, 16. H 8 (2.94%) B C , L (I P); 8 E : G , F , E (5). H 10 (2.94%) C (L , P). H 16 (5.88%) 10 4,184 E (0.24%): B C C , E (5). M , A 7, 12, 17. H 7 (2.94%) : E E , I , A N (., 2000), A (M ., 2004). H 12 E I A (2.94%).

TABLE 5. Distribution in European, Asian, and African populations of haplotypes found in Aldaieta cemetery

H	H	D
1 2	H	E
3	H	E
4		E
6		E
13	K	E
14 15	J	E
5		A
9	5	A
11	2	A
7		E E (1%), I (<0.1%), (1.4%), N (1.2%), A (2.5%)
8	5	B C (0.6%), L (1.6%), G (0.4%), F (0.6%), G B (1%)
10	5	L (1.4%) P (2.4%)
12	2	G B (1%)
16	J	B C (1.9%), C (1.1%), L (1.4%), P (0.2%), C (2.6%), A (0.9%), G (0.2%), (<0.1%)
17	M1	N A [1]

[1]

-C A- 17, M1, E A. (-M ., 1999). M1 E ; 13 4,184 E (0.31%): I P- I , E 0.11% (. ., 2000). A M1, 17 A 16,185, M1, ., M1. M1 M1 N A. C L (K ., 2004). 17 A , M1, N A. (B G (A), C -. ., 1996; A , P ., 2003; ., 1998; C L , ., 1998), E- M (. ., 2000), A N A.

DISCUSSION

Population affinities

C DNA H -I 16,092 16,362, 15 A E A F A- E (8, 10, 16) B C - C (10 16). C A E A J, B C (4.9%), C (2.27%), M (2.04%), A (5.88%). F- A, A B C , 5 (5 1 5 1) (L ., 2001), - A J, B B C I B C , J (. ., 2000; M -M ., 2003), A , 14.7% (J), -N B 16.7%, L , (I , 1999). 16,069 16,126 (14 15) J E A N, B A (8.82%) 500 75 25% (H C , 1997). A J N, - B C N, B C E , - B C (. ., 1996, 2000). ; J A , B C J,

. (2005),

DNA

APPENDIX. Additional information on each individual from historical site of Aldaieta[1]

	N		[2]			[3]	
			113	287	C		
B1	2						
B3	2					129-185-189-223-249-311	M1
B4	1					129-185-189-223-249-311	M1
B5	2						
B12	1					051-129C-183-189-362	2
B13	2					051-129C-183-189-362	2
B14	2					069-126-278-366	J
B16	2					C!	H
B18	2					C!	H
B19	1					126-294-296-304	2
B20	1					C!	H
B24	1					069-126-390	J
B25	1					069-126-390	J
B28	1					051-129C-183-189-362	2
B29-42 (1)	2					069-126-278-366	J
B29-42 (2)	1						J
B29-42 (3)	2						J
B29-42 (4)	1					362	H
B29-42 (5)	1					172-189-192-270-311	5
B43	2					C!	H
B45	2					051-092-129C-192-362	2
B46	1						J
B48	2					C!	H
B48-53 (1)	3					C!	H
B48-53 (2)	2					C!	H
B55	2					069-126	J
B56	2					069-126	J
B58	2						
B59	1					C!	H
B60	2					069-126	J
B61	3					224-311	K
B62	2					C!	H
B63	2					C!	H
B64	2					362	H
B65	2					362	H
B66	2					362	H
B67	2		50 500			362	H
B68	3		50 500			362	H
B69	2					362	H
B70	2						H
B71	2					362	H
B73	3					362	H
B75	3		50 500			C!	H
B76	2					C!	H
B77	3		50 500			126-266-274-294-304	2
B78	3		50 500			C!	H
B79	4		50 500			C!	H
B85	2					C!	H
B86	3		50 500			176-270	5
B87	3		50 500			C!	H
B89	1					C!	H
B90	2					C!	H
B92	2					126-189-294	
B93	3		>3,000	<50		298	
B100	2					069-126-390	J
B104	1					192-270	5

2854.6(126-266-2)13.4(74-294-304)67, .3(O66-.6(9 6(126-26126-3)3.4(0D(2(03.31 -50N3)-126034)-120126-21)-2622 -26221 J0-10 260 D(50)-3476.8

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