

SUPPLEMENTARY FILE FOR

Elevated East Eurasian Maternal Genetic Ancestry in the Haryana Jaat Population: Insights from Mitochondrial DNA Haplogroup Distribution and Comparative Analysis

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Haplogroup	No. of Samples	Frequency	Geographical Location
M*	6	0.0287	SOUTH ASIA
M18	1	0.0048	SOUTH ASIA
M2	5	0.0239	SOUTH ASIA
M3	21	0.1005	SOUTH ASIA
M30	10	0.0478	SOUTH ASIA
M35	6	0.0287	SOUTH ASIA
M37	2	0.0096	SOUTH ASIA
M38	1	0.0048	SOUTH ASIA
M39	1	0.0048	SOUTH ASIA
M4	5	0.0239	SOUTH ASIA
M40	1	0.0048	SOUTH ASIA
M43	1	0.0048	SOUTH ASIA
M49	3	0.0144	SOUTH ASIA
M5	17	0.0813	SOUTH ASIA
M52	2	0.0096	SOUTH ASIA
M57	1	0.0048	SOUTH ASIA
M6	1	0.0048	SOUTH ASIA
M60	1	0.0048	SOUTH ASIA
M65	2	0.0096	SOUTH ASIA
M66	1	0.0048	SOUTH ASIA
R30	2	0.0096	SOUTH ASIA
R31	1	0.0048	SOUTH ASIA
R5	6	0.0287	SOUTH ASIA
R6	3	0.0144	SOUTH ASIA
R8	4	0.0191	SOUTH ASIA
U2	4	0.0191	SOUTH ASIA
U2a	4	0.0191	SOUTH ASIA
U2b	8	0.0383	SOUTH ASIA
U2c	1	0.0048	SOUTH ASIA
U2e	5	0.0239	SOUTH ASIA
Total (%)	126	60.2871	

Table 1. Frequency of South Asian Haplogroups in the Jaat population

Haplogroup	No. of Samples	Frequency	Geographical Location
H101	1	0.0048	West-Eurasian
H14	2	0.0096	West-Eurasian
HV	5	0.0239	West-Eurasian
H2a	8	0.0383	West-Eurasian
J1	1	0.0048	West-Eurasian
JT	1	0.0048	West-Eurasian
K	1	0.0048	West-Eurasian
N1a	6	0.0287	West-Eurasian
R0a	1	0.0048	West-Eurasian
R2	1	0.0048	West-Eurasian
U3	1	0.0048	West-Eurasian
U4	5	0.0239	West-Eurasian
U5	1	0.0048	West-Eurasian
U7	14	0.067	West-Eurasian
T	1	0.0048	West-Eurasian
T1	4	0.0191	West-Eurasian
T2	4	0.0191	West-Eurasian
W	7	0.0335	West-Eurasian
Total (%)	64	30.63	

Table 2. Frequency of West Eurasian Haplogroups in the Jaat population

Haplogroup	No. of Samples	Frequency	Geographical Location
A	1	0.00478	EAST-EURASIAN
C4	3	0.01435	EAST-EURASIAN
D	7	0.03349	EAST-EURASIAN
F	4	0.01914	EAST-EURASIAN
G2	1	0.00478	EAST-EURASIAN
Total (%)	16	7.65550	

Table 3. Frequency of East Eurasian Haplogroups in the Jaat population

No. of Haplogroups	Geographical Location	Total Frequency (%)
6	EAST EURASIAN	7.66
18	WEST EURASIAN	30.62
30	SOUTH ASIA	60.29
54	Total	98.56

Table 4. Geographical Distribution and number of Haplogroups in each geographical location.

Sequence	Haplogroup	Mutations
J423	A	A73G, T152C, A200G, A235G, A263G, C16223T, C16290T, G16319A, T16362C
J687	C4a	T15968C, T16093C, G16129A, C16223T, T16298C, G16319A, C16327T
J384	C4a	A73G, T195C, A249d(=A248d†), A263G, T15968C, A16077C, T16093C, G16129A, T16298C, C16327T
J926	C4a	A73G, T195C, A249d(=A248d†), A263G, T15968C, T16093C, G16129A, T16298C, C16327T
J357	D	A73G, A263G, C345T, T489C, C16223T, C16232T, T16362C
J196	D4a	A73G, T146C, A263G, T16093C, G16129A, C16223T, T16249C
J451	D4e	A73G, A263G, C16223T, T16362C
J735	D4i	A73G, T195C, A263G, T489C, A750G, C16223T, C16294T, T16311C, T16362C
J368	D4q	A73G, A200G, A263G, C16223T, C16256T, T16311C, T16362C
J179	D4q	A73G, A200G, A263G, T489C, C16223T, C16256T, T16311C, T16362C
J206	D5b	A73G, A263G, T489C, T655G, T681C, A750G, A753G
J107	F	A73G, A249d(=A248d†), A263G

J390	F1a	A73G, T146C, A153G, T16172C, C16193d(=C16190d†), T16304C
J223	F1c	A73G, C150T, T152C, A234G, A249d(=A248d†), A263G, A750G, C16111T, G16129A, T16304C
J728	F1c	A73G, T152C, A234G, A249d(=A248d†), A263G, C327T, C16111T, G16129A, T16304C, T16311C
J922	G2a	A73G, G260A, A263G, C16223T, C16278T, T16362C
J636	H	No mutations found
J947	H101	C16184T, T16357C
J650	H14a	A263G, T507C, C516A, T667C, A16180C, C16256T, C16286G, T16352C
J819	H14a	A263G, A614G, A16180C, C16256T, C16286G, T16352C
J498	H2a	C151T, T152C, A263G, T16311C
J353	H2a	T152C, A263G, C311CTCC, C345T, A363C, T16311C
J805	H2a	T152C, A263G, C311CTCC, T16311C
J931	H2a	T152C, A263G, G709C, A750G
J344	H2a	T152C, A263G, T16311C
J930	H2a	T152C, A263G, T667C, G676A, A750G
J351	H2a	T152C, A263G, T16311C
J916	H2a	A263G
J932	HV12b	G16129A, C16242T, T16356C
J702	HV14	C150T, A263G, T480C, A750G, T16304C, T16311C
J910	HV2	T16217C
J927	HV2a	T72C, A73G, T152C, C182T, T195C, A263G, T16217C, T16325C

J619	HV2a	T72C, A73G, T152C, T195C, A263G,C16168T
J110	J1	C16069T, T16126C, C16193T
J218	JT	A73G, A263G,T655G, T16126C, A16181G, T16209C
J936	K2b	A73G, T146C, T16224C, C16270T, T16311C
J354	M	A73G, T146C, T154C, A263G, T489C, C16223T
J350	M	A73G, T146C, T154C, A263G,C16223T
J814	M	A73G, T146C, T154C, A263G,T489C, T667C, C16223T
J352	M	A73G, T146C, T154C, C16223T
J252	M	A73G, T152C, A263G, A16163G, C16223T, A16284G, C16327T, G16398A
J394	M	A73G, A263G,T489C, C16223T
J183	M18a	A73G, A93G, C194T, T246C, A263G,T489C, C16223T, A16318t
J297	M2	A73G, G143A, A263G,T489C, G16129A, C16223T, G16274A, T16311C, T16362C
J46	M2a	A73G, A263G,T489C,A750G, T16209C, C16223T, 16270, 16319, T16362C
J921	M2a	A73G, T195C, T204C, A263G,C447g, T489C, T655G, A750G, C16223T, C16270T, G16319A, T16352C
J221	M2a	A73G, T195C, T204C, G207A, C16192T, C16223T, C16270T, G16319A, T16352C
J300	M2b	C16223T, C16234T, 16274, C16295G, T16311C, C16320T
J172	M3	A73G, A227G, A263G,T482C, T489C, T589C, T655G, T16126C
J112	M3	A73G, T146C, A263G, T16126C, C16223T, G16319A

J933	M3	A73G, T195C, A263G, T482C, T489C, C646d, A750G, A15924G, T16126C, C16147T, T16172C, C16223T
J911	M3	A73G, T217C, A263G, T482C, T489C, A614G, A750G, T16126C, C16223T, T16311C
J227	M3	T16093C, T16126C, C16223T
J944	M3	T16126C, C16223T, T16311C
J198	M30	C16111T, T16172C, C16223T
J274	M30	A73G, C150T, T195a, A263G, C16179d, C16223T
J182	M30	A73G, T125C, T127C, T195a, A263G, T489C, C16223T
J923	M30	A73G, T195a, A263G, C338A, A388C
J155	M30	A73G, T195a, A263G, T489C, T589A, C16179d, C16223T
J425	M30	A73G, T195a, A263G, C16223T, C16234T
J398	M30	A73G, T195a, A263G, T489C, A574C, C575A, C16223T, C16234T, T16325C
J906	M30	A73G, T195a, A263G, T489C, A750G, C16223T, C16234T
J901	M30	A73G, T195a, A263G, T489C, T589C, C16223T, C16234T
J818	M30g	A73G, T195a, T204C, G207A, A263G, T489C, G16145A, C16223T
J191	M35	A73G, A263G, T489C, T655G, A750G, C16223T, C16327T, G16398A
J677	M35b	A73G, T199C, A263G, G15928A, C16223T
J208	M35b	G15928A, C16223T, C16291T, G16391A
J211	M35b	A73G, C114T, G15928A, C16223T, T16304C
J939	M35b	A73G, T199C, T204C, A263G, G15928A, C16223T, T16304C, G16390A

J928	M35b	A73G, T199C, T204C, A263G,T489C, T589C, A750G, G15928A, C16223T, T16304C
J385	M37	A73G, A263G, C16111T, C16184T, T16189C, C16223T, G16274A
J45	M37	A73G, C151T, T152C, A263G,C16223T, T16311C
J254	M38	C16111T, C16223T, C16239T, C16266T, G16390A
J634	M39b	A56d, T58A, T65TT, G66T, A73G, A153G, A263G, C15938T, A16038G, C16223T
J671	M3a	A73G, A189G, T204C, T217C, A263G,T482C, T489C, T16126C, C16223T, C16256T, T16311C
J194	M3a	A73G, T146C, T204C, A263G,T482C, T489C, T16126C, C16223T
J904	M3a	A73G, T152C, T204C, T217C, A263G,T482C, T489C, A614G, T16126C, C16223T, T16311C
J13	M3a	A73G, T204C, A263G, T16126C, C16223T, T16311C
J940	M3a	A73G, T204C, A263G,T482C, T489C, C524CAC, T589C, T16126C, C16223T, T16311C
J210	M3a	A73G, T204C, A263G,T482C, T489C, G513d, T655G, A750G, T16126C, C16223T, C16287T
J913	M3a	A73G, T204C, T217C, A263G,T482C, T489C, A750G, T16126C, C16223T, C16256T, T16311C
J808	M3a	A73G, T204C, T217C, A263G,T482C, T489C, T16126C, C16223T, T16311C
J397	M3a	A73G, T204C, T217C, A263G,T482C, T489C, T655G, A750G, T16126C, C16223T, C16266T, T16311C
J369	M3c	A73G, T152C, A263G,T482C, T489C, T16126C, C16223T, A16247G
J247	M3c	A73G, T152C, A263G, A388C, T482C, T489C
J64	M3d	A73G, G109A, T146C, G171A, T16126C, C16223T, C16344T

J920	M3d	A73G, T152C, A263G,C345T, T482C, T489C, C516A, A750G, C16223T, C16344T
J905	M3d	A73G, T152C, A263G,T482C, T489C, A614G, A750G, C16223T, C16344T
J106	M3d	A73G, T195C, A263G, T16126C, A16170G, C16223T, T16288C, C16344T
J649	M4	A73G, T152C, A263G,T489C, G16145A, C16186T, C16223T, C16261T, T16311C
J164	M40	A73G, A263G, G16455GC, A16463G
J908	M43	A73G, T146C, T154C, A263G,T489C, G709A, C16223T
J692	M49	A73G, A263G,T489C, A750G, C16223T, C16234T, C16295G, T16311C
J613	M49	A73G, C150T, A263G,T489C, C16223T, C16234T, C16295G, T16311C
J105	M49a	A73G, A263G, A297G, T489C, G16153A
J233	M4a	A73G, A263G, G16145A, C16176T, C16223T, C16261T, T16311C
J178	M4a	A73G, A263G,T489C, G16145A, C16176T, C16223T, C16261T, T16311C
J303	M4a	A73G, T152C, A263G,T489C, G16145A, C16176T, C16223T, C16261T, C16291T, T16311C
J638	M4a	T60d(=T57d ⁺), A73G, A263G,C320d, C349d(=C348d ⁺), A451d, T485C, T489C, A614G, G16145A, C16176T, C16223T, C16261T, T16311C
J612	M5	A73G, T246C, A263G, G16129A, C16148T, C16223T
J925	M5	A73G, A263G, G15927A, G16129A, C16223T, C16320T, T16325C
J266	M5	A73G, A263G, G16129A, C16223T, T16491TG
J302	M5	A73G, A263G,T489C, G16129A, C16223

J616	M52a	A73G, A263G,T489C, C16223T, A16275G, G16390A
J433	M52a	A73G, A263G, C16223T, C16327A, C16344T, G16390A
J477	M57a	A73G, T152C, A263G,G329A, C345T, T489C, C516A, C16111T, G16153A, C16223T, T16311C
J23	M5a	A73G, A263G, G16129A, C16223T, C16291T, T16298C
J273	M5a	A73G, T152C, A263G,T334C, T489C, G16129A, C16223T, C16291T
J915	M5a	A73G, T152C, A263G,T334C, T489C, T589G, G709A, G16129A, C16223T, C16291T
J652	M5a	A73G, A263G,T489C, T589C, G16129A, C16223T, A16265C
J427	M5a	A73G, A263G, G16129A, C16223T, C16264T, A16265C
J914	M5a	A73G, A263G,C456T, T489C, G16129A, C16223T, C16264T, A16265C
J618	M5a	A73G, A263G,G323d(=G322d [†]), A352d(=A350d [†]), T455d(=T452d [†]), T489C, G16129A, C16223T, C16264T, A16265C
J389	M5a	T55d, A73G, T152C, T195C, A263G,G323d(=G322d [†]), A352d(=A350d [†]), T455d(=T452d [†]), T489C, G499A, G16129A, T16144A, C16223T
J777	M5a	T60d(=T57d [†]), A73G, T152C, T195C, A263G, G16129A, T16144A, C16223T, C16454d(=C16453d [†])
J216	M5a	A73G, A263G,T489C, G709A, G16129A
J355	M5a2	A73G, A263G,G316A, A750G, C16114A, G16129A, T16362C
J902	M5b	A73G, A263G, G16048A, G16129A, C16223T
J945	M5c	A73G, C150T, A263G, T333C, G429A, T489C, G16129A, C16223T
J207	M60a	A73G, A263G, C16223T, A16284G, C16327T, G16398A
J714	M65	A73G, T195C, A263G,T489C, C511T, T15905C, C16185T, T16189C

J298	M65a	C16223T, T16276C, A16289G
J903	M66b	A73G, C150T, T195C, C198T, G207A, A263G, T489C, A750G, C16104T, C16184T, C16223T, A16241G, T16311C, G16391A
J656	M6a	A73G, T146C, A263G, C461T, T489C, A750G, C16223T, T16231C, T16311C, T16356C, T16362C
J200	N1a	A73G, G143A, T199C, T204C, T250C, A263G, A297G, A15924G, A15954G, C16223T, T16311C, G16391A
J391	N1a	A73G, T199C, T204C, A263G, C16223T, C16301T, T16356C
J362	N1a	A73G, A189G, T195C, T204C, G207A, A210G, A263G, C16201T, C16223T, A16265G
J784	N1a1b	A73G, G143A, A183G, T199C, T204C, T250C, A263G, A15924G, A15954G, G16129A, C16223T, T16311C, G16391A
J943	N1a1b	A73G, T152C, T199C, T204C, T250C, A263G, T455TT, A15924G, G16129A, C16150T, G16213A, C16223T, C16264T, C16270T, C16291T, T16311C, G16319A, T16362C, G16391A
J821	N1a1b	A73G, T199C, T204C, T250C, A263G, A15924G, G16129A, C16223T, G16391A
J226	R	C16111T
J199	R	T152C, A263G, A750G, T16311C
J934	R0a	T60TT, C64T, T152C, A263G, C345T, G366A, A750G, T16126C, T16362C
J392	R2	A73G, T152C, G225A, A263G, C16071T
J497	R30	A73G, T152C, A263G
J611	R30	A73G, T220C, A263G
J153	R31a	T16172C, A16265T, T16304C, T16362C
J209	R5	C16186T, T16304C, A16524G

J929	R5a	A73G, A93G, A95C, A200G, A263G, C16192T, C16266T, C16287T, T16304C, A16524G
J918	R5a	C44CC, A73G, T152C, A263G, A750G, C16147T, C16266T, T16304C, T16311C, T16356C, A16524G
J287	R5a	G16129A, C16266T, T16304C, T16311C, T16356C, A16524G, G16526A
J396	R5a	A73G, T152C, A263G, A493G, T589A, C597CT, C16266T, C16290T, T16304C, A16309G, T16325C, T16356C, A16524G
J239	R5a	A73G, T152C, A263G, C597CT, T16304C, A16309G, T16325C, T16356C, A16524G
J786	R6	A73G, T195C, A263G, A750G
J393	R6a	A73G, G228A, A263G, A373G, G16129A, C16266T, C16290T, A16318G, C16320T, T16362C
J82	R6b	A73G, T146C, T195C, T246C, A263G, G16145A, C16179T, A16227G, C16245T, C16278T, T16362C
J109	R8	A73G, T152C, A263G
J941	R8a	C16167T, C16292T, A16497G
J386	R8a	A73G, G185A, A189G, T195C, A263G, C324G
J111	R8b	G16129A, T16172C, G16213A, G16274A, G16319A, T16362C, G16390A
J707	T	G15928A, T16126C, C16294T
J750	T1	A73G, A263G, G15928A, T16126C, A16163G, C16294T
J445	T1	A73G, T152C, T195C, A257G, A263G, G15928A, T16126C, A16163G, C16185CT, C16294T
J217	T1a	G15928A, T16126C, A16163G, C16186T, T16189C, C16294T, T16362C

J417	T1a	A73G, T152C, T195C, A263G,G15928A, T16126C, A16163G, C16186T, T16189C, C16294T
J907	T2a	A73G, T195C, T204C, A263G,C537T, T655G, G709A, A750G, G15928A, T16126C, A16275G, C16294T, C16296T, T16325C
J442	T2a	A73G, T195C, T204C, A263G,G15928A, T16126C, A16275G, C16294T, C16296T, T16325C
J348	T2d	A73G, C194T, A200G, A263G,G15928A, T16126C, C16294T
J317	T2d	A73G, C194T, A200G, A263G,T593d, G709C, G15928A, T16126C, C16294T
J255	U2	A16051G, G16129A, T16189C
J197	U2	A73G, C150T, T152C, A263G, A16051G, A16247G, A16254G, T16311C, A16326G
J935	U2	A73G, T152C, A263G, A16051G
J108	U2	A73G, T152C, A263G, A16051G, A16254G
J388	U2a	A73G, A263G,A614G, T619G, A16051G, G16129A, A16206C, T16325C, A16553C
J212	U2a	A73G, C194T, A263G,C524CAC, A562G, A614G, A16051G, A16206C
J625	U2a	A73G, A263G,A16051G, T16154C, A16206C, A16230G, T16311C
J84	U2a	A73G, A263G,G709A, A750G, A16051G, T16154C
J912	U2b	A73G, T146C, A234G, A263G,A614G, A750G, A16051G, T16086C, C16291T, A16305T, C16353T, T16533C
J950	U2b	A73G, T146C, A234G, A263G,C524CAC, A16051G, T16086C, C16259A, C16267T, C16291T, A16326G, C16353T
J256	U2b	A73G, T146C, A234G, A263G,C524CAC, A16051G, T16086C, C16259A, C16291T, A16326G, C16353T

J570	U2b	A73G, T146C, A234G, A263G,C524CACAC, A599C, A614G, T655G, A16051G, T16086C, C16259A, C16267T, C16291T, A16326G, C16353T
J387	U2b	A73G, T146C, T152C, A263G,A16051G, A16318G
J205	U2b	G47A, T51C, T57C, A73G, T146C, A263G, A750G, A16051G, T16092C, C16168T
J621	U2b	A73G, T146C, A234G, A263G,T655G, T681A, A16051G, C16239T, C16286T, T16288C, C16353T
J942	U2b	A73G, T146C, T152C, A234G, A263G,T589A, G15930A, A16051G, T16209C, C16239T, T16352C, C16353T
J949	U2c	A73G, T152C, A263G,A16051G, G16129A, C16179T, C16234T
J657	U2e	A73G, T152C, T217C, A263G,C340T, A508G, A15907G, A16051G, T16126C, G16129C
J248	U2e	A73G, T152C, T217C, A263G, A15907G, A16051G, G16129C
J27	U2e	A73G, T152C, T217C, A263G, A15907G, A16051G, T16093C, G16129C
J395	U2e	A73G, T152C, T217C, A263G,T489C, A508G, A750G, A15907G, A16051G, G16129C
J561	U2e	A15907G, A16051G, T16092C, G16129C, C16168T
J628	U3a	A16302G, A16343G, G16390A
J224	U4a	A73G, G124T, T152C, T195C, T236C, C16134T, T16356C
J222	U4a	A73G, T195C, G247A, A263G,G499A, C524CAC, T16356C
J938	U4a	T195C, A263G,A750G, T16356C
J919	U4a	A73G, A263G, A647T
J651	U4a	A73G, T195C, A263G, T16243C
J778	U5a	A73G, A263G,G709T, C16192T, C16256T, C16270T, A16399G

J245	U7	A73G, C151T, T152C, A263G, T589A, A614G, T619G, A16207G, A16318C
J225	U7	A73G, T152C, A263G, A614G, T16093C, A16318T
J701	U7	A16309G, A16318T
J647	U7	T65d, G66C, A73G, T152C, A263G, A16309G, A16318T
J648	U7	T65d, G66C, A73G, T152C, A263G, A16309G, A16318T
J703	U7	T65d, G66C, A73G, T152C, A263G, T589A, T655G, T681A, A16309G, A16318T
J646	U7	T65d, G66C, A73G, T152C, A263G, A16309G, A16318T
J180	U7a	A73G, C151T, T152C, A263G, A16309G, A16318C
J909	U7a	A73G, C151T, T152C, A263G, A750G, A16309G, A16318T
J193	U7a	A73G, C151T, T152C, A263G, A270G, G709C, C16167T, A16309G, A16318T, G16474GG, C16520CC, A16564C
J434	U7a	A16207G, A16309G, A16318C
J937	U7a	A73G, C151T, T152C, A263G, A750G, A16207G, A16318T
J564	U7a	A73G, C151T, T152C, A263G, T16140C, A16207G, A16309G, A16318T, T16362C
J948	U7a	C43G, A73G, G124T, G16129A, A16207G, A16318T
J335	W	A73G, G143A, A189G, C194T, T195C, T204C, G207A, A263G, A562G
J181	W1	A73G, T119C, A189G, T195C, T204C, G207A, A263G, C16223T, C16292T, C16295T
J653	W3a	A73G, A189G, C194T, T195C, T199C, T204C, G207A, A263G, T482C, G709A, A750G, T16092C, C16223T, C16292T, T16325C
J192	W4a	A73G, G143A, A189G, T192C, C194T, T195C, T196C, T199C, T204C, G207A, A263G, T589C, T655G, G709A, C16223T, C16292T

J924	W4a	A73G, G143A, A189G, T192C, T195C, T196C, T199C, T204C, G207A, A263G, A599C, T681A, G709A, A750G, C16223T, C16292T
J452	W6	A73G, G143A, A189G, C194T, T195C, T204C, G207A, A263G, A562G, T16189C, C16192T, C16223T, C16292T, T16311C, T16325C, C16355T
J12	W6	A73G, G143A, A189G, C194T, T195C, T204C, G207A, A263G, T16189C, C16192T, C16223T, C16292T, T16311C, T16325C, C16355T

Table 5. List of mtDNA mutations observed in each individual along with their corresponding haplogroup assignments. Haplogroups were determined using observed mutation motifs and phylogenetic classification.