

Low level of HIV-1 evolution after transmission from mother to child.

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Running title: HIV-1 evolution after mother-to-child transmission.

Supplementary information: supplementary figure 1, supplementary table 1.

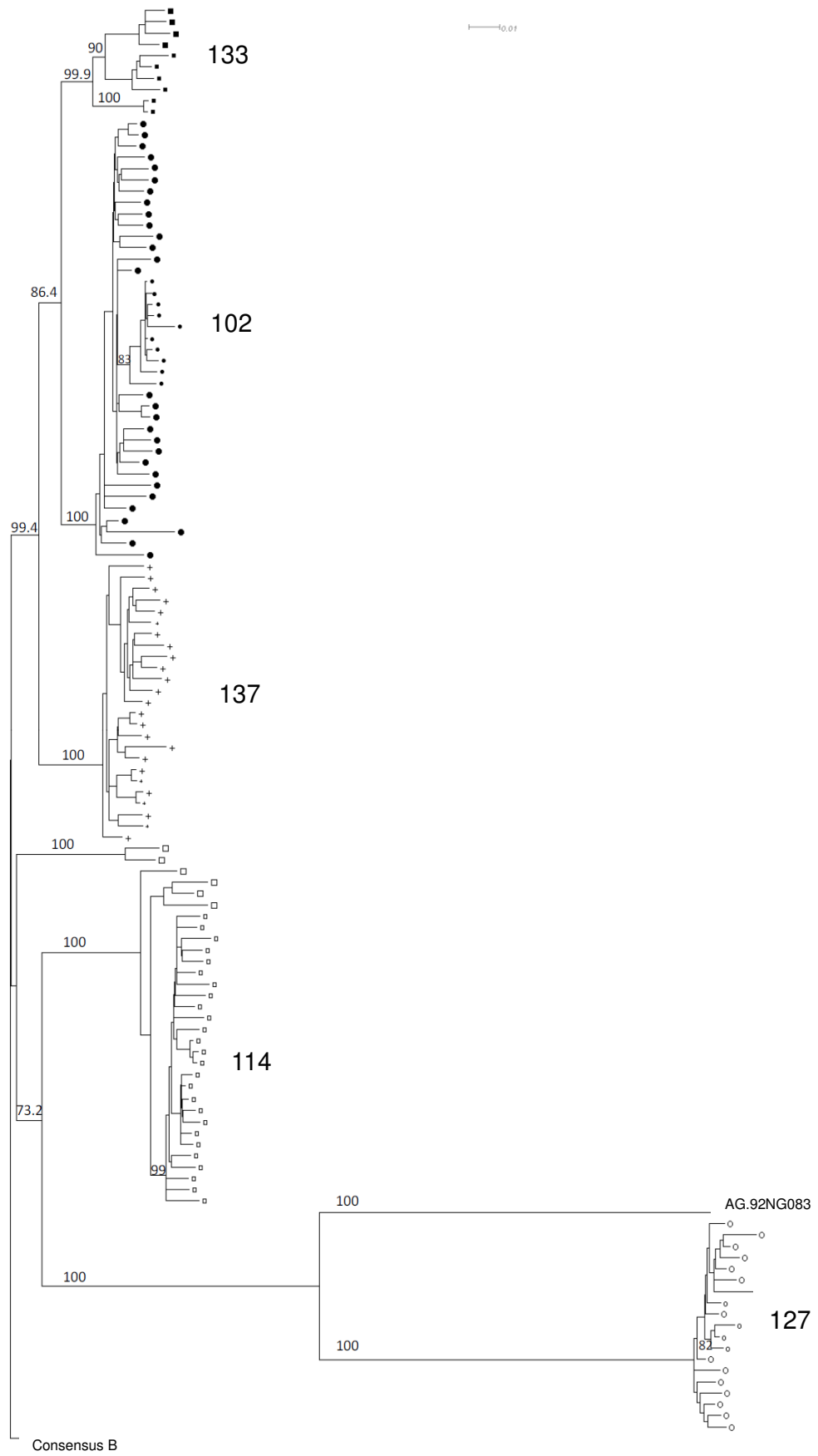
Legend to figure.

Supplementary Figure 1. Neighbor joining phylogenetic tree of *env* sequences isolated from mothers and children.

Large symbols represent viral sequences obtained from mothers; small symbols represent viral sequences isolated from children.

● pair 102, ◻ pair 114, ○ pair 127, ■ pair 133, + pair 137.

Numbers represent bootstrap values in percentages.



Supplementary table 1. The position and location within HLA-restricted CTL epitopes of forward mutations and reversion of transmitted mutations in Nef, Gag and Env in viral variants obtained from the children.

Mother-child couple	HIV-1 protein	Mutation	Type of mutation	Number of sequences	CTL epitope	HLA allele	
102	Nef	M171T/V	Forward, anchor	3 / 9 (2xT, 1xV)	G170 - V178	A*0201	shared, anchor
	Env	G17A	Forward	9 / 10	H12 - L20	A*0201	shared
	V206I	Forward	9 / 10			outside	
	C759F/L	Forward	10 / 10 (8xF, 2xL)	R756 - H764	B*3701	shared	
	A774T	Reversion	10 / 10	L769 - V777	A*0201	shared	
				I772 - L780	A*0206	child	
					B*0702	shared	
	A816V	Forward	8 / 10	S808 - V817	A*0201	shared	
				A816 - V824	A*0206	child	
114	Nef	L199M/K	Forward	6 / 9 (5xM, 1xK)	M195 - Y203	B*3501	shared
					A196 - Y204	B*3501	shared

114	Gag	D14Y	Forward	4 / 15	L13 - L21	B*3501	shared	
					G11 - I19	B*4501	child	
		E312D	Forward	15 / 15			outside	
			S310T	Forward	4 / 11			outside
	Env	N33K	Reversion	10 / 10	A30 - V38	B*5101	mother	
					A31 - Y39	B*4501	child	
		N223D	Forward	7 / 10			outside	
		I287V	Reversion, anchor	9 / 10	L282 - R290	A*6601	mother	
					N279 - V287	B*5101	mother	
					E286 - F294	B*3501	shared, anchor	
		N341D	Reversion	8 / 10	D341 - I349	A*2301	shared	
							child	
		D653E	Reversion	8 / 10	T650 - L658	B*5101	mother	
		I/T664L	Reversion	7 / 10	E657 - I665	A*2301	shared	
						child		
			I658 - Y666	B*3501	shared			
I/F863V	Forward, anchor	7 / 10	A862 - I870	A*2301	shared, anchor			
					child, anchor			
			V855 - I863	B*3501	shared, anchor			

127	Nef	S8R	Reversion	2 / 5	S8 - V16	B*1516	shared	
		E62D	Forward	4 / 5	Q61 - F69	B*4403	child	
		Y103H	Forward	5 / 5	L98 - K105	A*7401	shared	
		K105Q	Reversion, anchor	3 / 5	L98 - K105	A*7401	shared, anchor	
					I102 - I110	A*2301	mother	
			D177A	Forward	2 / 5			outside
	Gag	K43R	Reversion	9 / 9				outside
		Y79F	Forward, anchor	9 / 9	G71 - Y79	A*0101		child, anchor
					G71 - Y79	B*1516		shared
					L78 - L85	B*4403		child
	Env	D187N	Forward, anchor	2 / 4	P185 - Y200	A*0101		child, anchor
					P185 - Y200	B*4403		child
		Y334H	Reversion, anchor	3 / 4	I326 - Y334	B*4403		child, anchor
		K/V392A	Forward	3 / 4	T390 - V398	B*1516		shared
E512G		Forward	3 / 4				outside	
K593R		Forward	2 / 4	V585 - K593	A*7401		shared	
V848I		Reversion, anchor	3 / 4	R840 - I848	A*2301		mother, anchor	
133	Nef	S6R	Reversion	2 / 5			outside	
		R20Q	Forward	2 / 5			outside	

133	Nef	Y40H	Reversion	5 / 5			outside	
		D64E	Reversion	5 / 5			outside	
		K72R	Reversion	5 / 5	A*0301	P70 - R78	mother	
					B*0702	F69 - L77	mother	
			R189H	Forward	5 / 5	A*0201	V181 - L190	child
	Gag	Q28K	Reversion, anchor	6 / 6	A*0301	R20 - K28	mother, anchor	
					B*2705	L21 - Y29	child	
		K30R	Forward	6 / 6			outside	
		E55K	Forward	6 / 6			outside	
		M61I	Forward, anchor	6 / 6	A*0201	I60 - L 68	child, anchor	
		G62E	Forward	6 / 6	A*0201	I60 - L 68	child	
		A67S	Reversion	5 / 6	A*0201	I60 - L 68	child	
		S173A	Forward	5 / 6			outside	
		R264K	Forward, anchor	6 / 6	B*2705	K263 - K272	child, anchor	
		L268M	Forward	6 / 6	B*2705	K263 - K272	child	
		S373P	Forward	3 / 6			outside	
R379K		Forward	2 / 6	B*4402	T374 - F382	shared		
				B*2705	Q378 - R388	child		

133	Env	M19V	Forward	3 / 4	A*0201	H12 - L20	child
		Y27C	Reversion	4 / 4	A*0301	L24 - K32	mother
		V83I	Forward	4 / 4			outside
		K86A/T	Forward	4 / 4	B*4402	V84 - F92	shared
				(3xA, 1xT)			
		K89T	Reversion	4 / 4	A*0301	V84 - F92	mother
					B*4402	V84 - F92	shared
		D132E	Forward	4 / 4			outside
		E148G	Forward	4 / 4			outside
		Q167K	Forward	4 / 4	A*0101	I162 - Y170	shared
					B*2705	I162 - Y170	child
		D169E	Reversion	4 / 4	A*0101	I162 - Y170	shared
					B*2705	I162 - Y170	child
					B*0702	K165 - F173	mother
		I179V	Reversion, anchor	4 / 4	A*0201	A171 - V179	child, anchor
		R182G	Forward	4 / 4			outside
		S185N	Reversion	4 / 4			outside
		N188 - S194	Insert	4 / 4			insert

133	Env	T233N	Reversion	4 / 4	A*0301	I229 - F237	mother
					B*4402	I229 - F237	shared
		K235Q	Forward	4 / 4	B*4402	I229 - F237	shared
		N283D	Reversion	4 / 4			outside
		L336I	Reversion	3 / 4			outside
		A374V	Reversion	4 / 4	B*0702	D370 - F378	mother
		T377S	Reversion	4 / 4	A*0301	H376 - F384	mother
					B*0702	D370 - F378	mother
		S395 - N400	Insert	4 / 4			insert
		D405G	Reversion	3 / 4			outside
		T406I	Forward	3 / 4			outside
		N415S	Forward	3 / 4			outside
		V427I	Reversion, anchor	4 / 4	A*0201	I419 - V427	child, anchor
					B*2705	C422 - M430	child
		T464N	Reversion	4 / 4			outside
		L548Q	Reversion	4 / 4	A*0201	T541 - L549	child
		L726P	Forward	3 / 4			outside
		E744G	Forward	4 / 4	B*2705	E744 - R752	child

133	Env	T752P	Forward	4 / 4	B*2705	E744 - R752	child
					A*0201	R752 - L760	child
		A754V	Reversion	4 / 4	A*0201	R752 - L760	child
		N755D	Reversion	4 / 4	A*0201	R752 - L760	child
		I763V	Forward, anchor	4 / 4	A*0201	R752 - L760	child
					B*4402	I/V764 - F771	shared
		L782I	Reversion	4 / 4	A*0301	R775 - R785	mother
					B*0702	I/L782 - L790	mother
					A*0201	L779 - V787	child
					B*2705	H774 - I/L782	child
		E796G	Forward	3 / 4	A*0101	R792 - Y800	shared
					A*0201	L789 - V797	child
					B*2705	G791 - Y800	child
		N803S	Forward	3 / 4	A*0201	V797 - L805	child
		F845L	Reversion	4 / 4	A*0301	L845 - R853	mother
					B*2705	C842 - R850	child
L846I	Forward	4 / 4	B*2705	C842 - R850	child		
R850V	Forward, anchor	4 / 4	B*2705	C842 - R850	child, anchor		

133	Env	F856L	Reversion	4 / 4	B*0702	I848 - L/F856	mother
					B*2705	R850 - R858	child
					B*2705	I852 - L860	child
137	Nef	T101I	Reversion	3 / 5			outside
		K105R	Forward	2 / 5			outside
		H192R	Forward, anchor	3 / 4	B*0801	A190 - L198	child, anchor
	Gag	S126N	Forward	6 / 6			outside
		K286R	Reversion	6 / 6			outside
	Env	L20W	Forward, anchor	2 / 3	A*0201	H12 - L27	shared, anchor
		V71A	Forward	2 / 3			outside
		N204T	Reversion	3 / 3			outside
		N210S	Reversion	2 / 3	A*0201	R206 - V215	mother shared
		V223I	Forward	2 / 3			outside
F330L	Forward	2 / 3	A*0201	R324 - I333	shared		