


“Let us go there, and confuse their language”
 Paleo-genetics of Modern Human Continental Groups

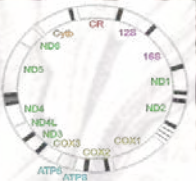
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Mitochondrial DNA (mtDNA)
 “A small, circular molecule”

- 1. Maternally-inherited, non-recombining**
 => Traces **maternal** lineages in evolution
 => **Most Recent Common Ancestor (MRCA)** can be identified
- 2. High rate of DNA evolution**
 => Lots of variation **within & among** species
 => Great for **population & evolutionary** studies



Pairwise genetic distances among Great Apes
 (# Δ out of 15,447bp [below]; % Δ [above])
 (after SMC Flynn & SM Carr 2007 BMC Genomics 8,339)

	Gorilla NCBI	Gorilla SMCF	Pan NCBI	Pan SMCF	Neandertal	San2 (L1)	Fr2 (A2)	SMC (U)
Gorilla NCBI	0	0.79	9.97	10.01	10.31	10.36	10.40	10.42
Gorilla SMCF	122	0	10.02	10.09	10.35	10.42	10.46	10.49
Pan NCBI	1540	1548	0	0.84	8.19	8.42	8.31	8.37
Pan SMCF	1547	1559	130	0	8.35	8.61	8.49	8.55
Neandertal	1592	1599	1265	1290	0	1.18	1.12	1.18
San2 (L1)	1601	1610	1301	1330	183	0	0.54	0.61
Fr2 (A2)	1606	1616	1284	1312	173	84	0	0.26
SMC (U)	1610	1620	1293	1321	183	94	40	0

