

In this lab students will receive their mitochondrial DNA sequence, which was sequenced off site after the PCR amplification. Students will compare it to many other sequences, an analysis that will allow them to determine their maternal lineage based on human migration patterns. Students will annotate their sequence and re-visit the programs used in the Molecular Clocks lab to create phylogenetic trees with their own sequence.

Concepts: understanding the dideoxy sequencing method; understanding human migration patterns and haplogroups; interpreting data obtained from BLAST; interpreting a phylogenetic tree.

Skills: using Chromas to clean up a DNA sequence; using BLAST to search for a haplogroup; annotating a sequence; aligning sequences in ClustalX; drawing a phylogenetic tree.