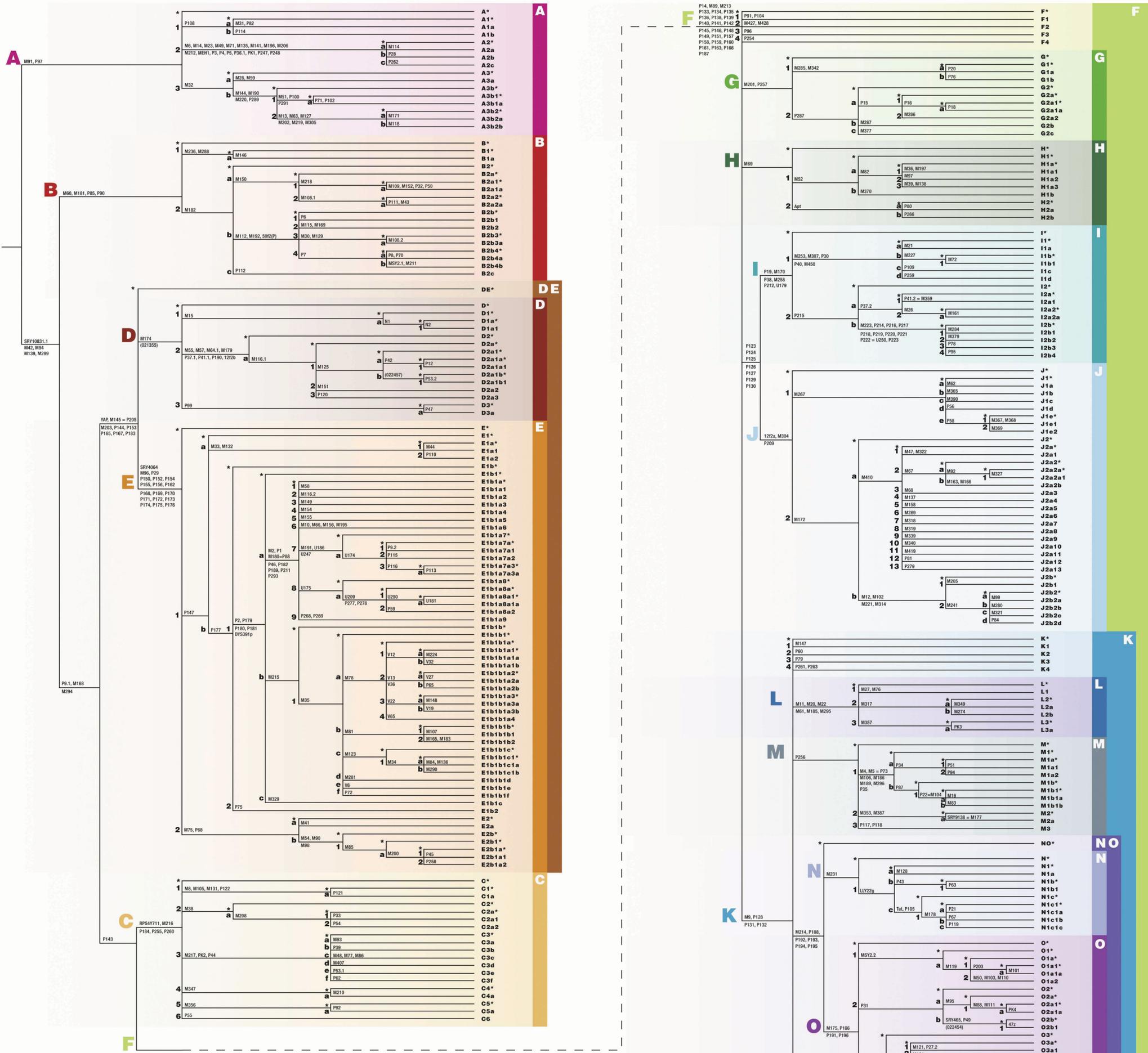
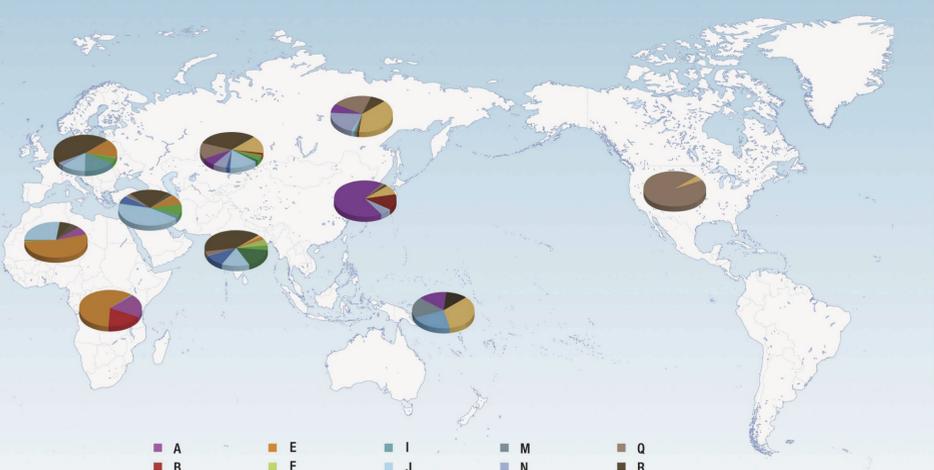


# Y-Chromosome Phylogenetic Tree



## What is a haplogroup?

The haplogroups are the major branches on the Y chromosome tree, defined by single nucleotide polymorphisms (SNPs), which have accumulated along different lineages as Y chromosomes are passed from father to son over many generations. All haplogroups ultimately descend from a single Y chromosome carried by a male that lived in the distant past. The topology of the Y chromosome tree can be reconstructed by typing mutations in different human populations – as more SNPs are discovered (e.g., M254), the structure of the tree changes. Originally, the Y Chromosome Consortium (YCC) arbitrarily defined 18 haplogroups (A - R), which represent the major divisions of human diversity based on Y chromosome SNPs. Currently, there are 20 haplogroups (A - T). In turn, each of these major haplogroups has numbered subgroups, or subclades, that are named with alternating letters and numbers.



## Major Haplogroup Frequencies.

The frequencies of 20 major NRY haplogroups are shown for each of 10 geographic regions. Each haplogroup is color-coded according to the tree figure (also shown on map legend). The frequencies of each haplogroup are based on the following samples sizes for each region: sub-Saharan Africa = 229; North Africa = 131; the Middle East = 180; Europe = 328; Central Asia = 264; South Asia = 195; North Asia = 496; East Asia = 461; the Pacific = 279; and the Americas = 227. When haplogroup frequencies are close to zero, the corresponding pie slice is not readily visible.

