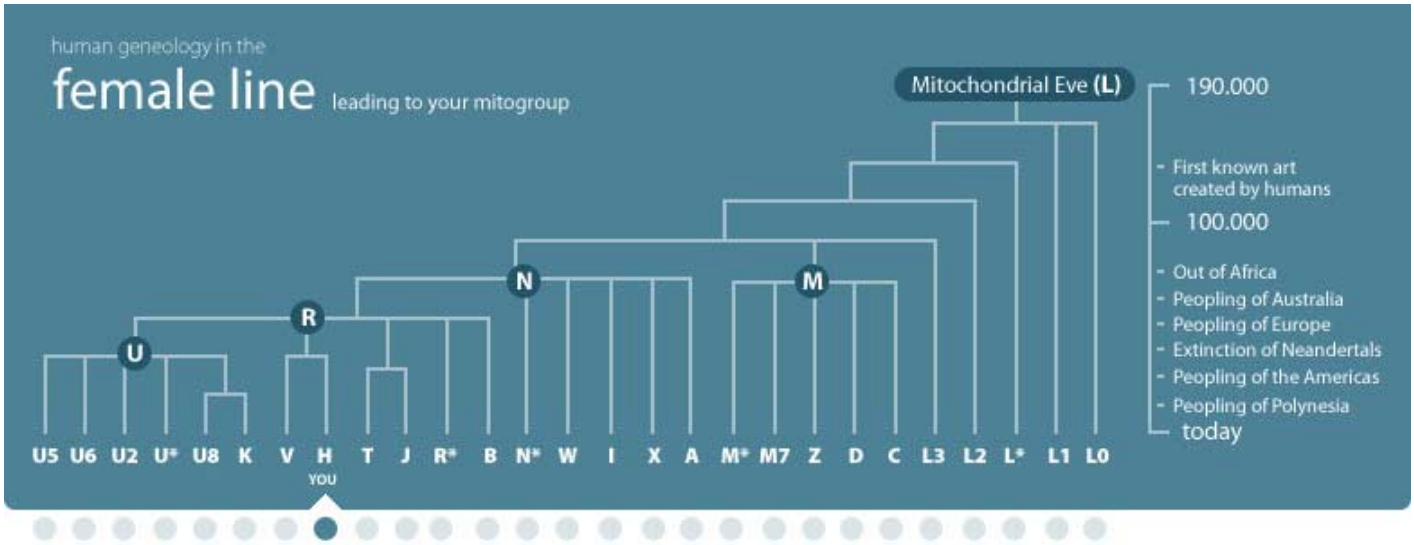

As the tree above shows, you belong to mitogroup H which is a part of the super-mitogroup R.

All members of mitogroup H can trace their mitochondrial DNA to one woman who is thought to have lived about 30 thousand years ago, probably somewhere in the Near East. This woman belonged to a group of hunter-gatherers that colonized Europe thousands of years before the agricultural revolution that occurred about 10 thousand years ago. This was part of a series of human migrations that are thought to be associated with the spread of the Upper Paleolithic (Stone Age) Aurignacian culture . Around 20 thousand years ago, cold temperatures during the last Ice Age led early Europeans to retreat to the warmer climates of the Iberian Peninsula, Italy and the Balkans. Beginning about 15 thousand years ago, after the ice sheets began to retreat, the descendants of these groups moved north again.

The legacy of the female ancestor of mitogroup H is quite astounding, as almost half of all contemporary European populations are members of mitogroup H and therefore are descendants of this woman in the direct female line. Moving eastward from Europe, the frequency of mitogroup H members decreases gradually to less than 20 percent in Central Asia, the Near East, India and Central Siberia, but becomes very low beyond Pakistan and India.

Notable members of mitogroup H:

1. Marie Antoinette (1755 - 1793)
2. Empress Alexandra Fyodorovna Romanov (1872 - 1918)
3. Prince Philip, Duke of Edinburgh (Empress Alexandra's grandnephew)
4. Susan Sarandon, actress (1946 -)
5. Sven II Estridsen, The Last Viking King (c.1019-1076)
6. Saint Luke the Evangelist (c.66 A.D.)

Mitochontrial DNA

Mitochondrial DNA is inherited only from mother to child. Ultimately, all humans can trace their mitochondrial DNA to a single female ancestor, named "Mitochondrial Eve", who lived in Africa some 190 thousand years ago. The image above represents the genealogical tree that links all humans to Mitochondrial Eve, which we trace ancestry only through the female line. The full genealogical tree can be broken down into subgroups of especially closely related mitochondrial DNA, called mitogroups. These mitogroups are like extended families within the full genealogical tree. People with mitochondrial DNA from the same mitogroup have a common ancestor in the female line that is much more recent than mitochondrial Eve. Each mitogroup therefore represents a particular female ancestor, who lived long ago and links the members of that mitogroup to Mitochondrial Eve.

In addition to the DNA contained in chromosomes in the nucleus, human cells also contain a small circular chain of DNA called mitochondrial DNA (mtDNA). This DNA is stored in the energy sources of the cell called mitochondria. While both men and women have mtDNA, this genetic material is passed down to the child solely from the mother. Unlike the DNA in autosomal chromosomes, of which only small pieces can be traced back to ancient ancestors, mtDNA is inherited from the mother in one piece. In the vast majority of cases, the mtDNA of a mother and her children will be exactly the

same. Very rarely, the mtDNA of a mother and her child will differ, usually at only a single point - the result of a single mutation.

If no mutations had ever occurred in mtDNA, then all humans would carry identical mtDNA. In reality, the gradual accumulation of single mutations in mtDNA throughout human history makes mtDNA a very useful tool to trace a person's ancestry through the female line. Your mtDNA will typically be identical to that of your ancestors for the first 10-15 generations, but the further you go back to more distant ancestors in your female line, the more differences you will find between your mtDNA and your ancestors' mtDNA.

Due to its peculiar mode of inheritance through the mother, mtDNA can be used to determine the genealogical relationship between two or more individuals living today. If two individuals share a very recent ancestor in their female lines, they will tend to have either identical or very similar mtDNA. In contrast, two individuals whose most recent common ancestor in their female lines lived tens of thousands of years ago will tend to have very different mtDNA. Basically, the more differences between two individuals mtDNA means that more time has passed since their female lines branched off from a common ancestor.

Advanced Results

We examined almost 200 genetic variants from your mitochondrial DNA to make this classification. Those with a special interest in mitochondrial DNA may be interested to see their mitochondrial DNA motif.

This motif represents how you differ from the first human mitochondrial DNA that was completely sequenced (the so-called Cambridge Reference Sequence). The motif is composed of each position where you differ from the reference sequence along with the DNA nucleotide you carry at that position.

Your mtDNA sequence compared to the Cambridge Reference Sequence:

750G 1438G 3992T 4024G 4769G 5004C 8269A 10044G 14582G 14766C