Universidade do Minho
Escola de Ciências

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Unravelling the Maternal Ancestry of European Continent

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Unravelling the Maternal Ancestry of European Continent

Tese de Mestrado
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Trabalho efetuado sob a orientação de
Professor Doutor Pedro Alexandre Dias Soares

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When I first started this project, I would never have guessed how much this page would mean to me.

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Resumo

Os *Homo sapiens* colonizaram a Europa pela primeira vez há pelo menos 45000 anos. Apesar destes pioneiros terem provavelmente sido extintos, há cerca de 40000 anos havia populações na Europa portadoras de linhagens de ADN mitocondrial (mtDNA) pertencentes ao haplogrupo U ancestrais às linhagens dos Europeus atuais, sob a forma das subclades U2, U5 e U8.

Neste trabalho, foi feita uma análise filogeográfica detalhada usando 6642 sequências de mtDNA de humanos anatomicamente modernos e 785 de humanos ancestrais (recolhidas de restos mortais pré-históricos) pertencentes ao haplogrupo U da Europa, Sudoeste da Ásia e Sul da Ásia. Foi empregue uma reconstrução filogenética detalhada, usando um relógio molecular de mtDNA bem definido para datação de clades e eventos, e uma metodologia de análise de fundador a par com uma análise filogeográfica de linhagens ancestrais para proceder à reconstrução da história do haplogrupo U na Europa.

O haplogrupo U sofreu três grandes alterações demográficas na Europa: a recolonização em finais do Período Glacial e Pós-Glacial, sucedendo a última Idade do Gelo, há aproximadamente 20000 anos, da Ibéria (U5b), Europa de Leste (U4) e Sudoeste da Ásia (U1, K1 e K2); a expansão, do Sudoeste da Europa, de várias subclades do haplogrupo U (incluindo U7, U3, U1 e K) no período Neolítico há cerca de 8000 anos; a re-expansão de subclades na Europa (maioritariamente dentro do U5), tanto de leste para oeste como no sentido inverso, no Neolítico e na Idade do Bronze. Ainda que a migração da Idade do Bronze tenha sido maioritariamente mediada por homens, os nossos dados sugerem também o envolvimento de mulheres neste movimento, nomeadamente do haplogrupo U4 com uma origem provavel na área da Estepe Euroasiática.

A presença do haplogrupo U desde praticamente a primeira chegada de humanos modernos à Europa até ao presente – sendo a única linhagem com tal persistência – permite que a filogeografia desta clade nos ajude a traçar os episódios de dispersões ao longo de toda a história de ocupação por *Homo sapiens* no continente.

Palavras-chave: arqueogenética, filogeografia, mtDNA, análise fundadora, haplogrupo U

Abstract

Homo sapiens settled Europe for the first time at least 45,000 years ago. Although the earliest settlers likely went extinct, by ~40,000 years ago there were people in Europe who were very likely carrying mitochondrial DNA (mtDNA) lineages belonging to haplogroup U that were ancestral to some of those in extant Europeans, in the form of subclades U2, U5 and U8.

Here a detailed phylogeographic analysis was performed using 6642 modern human mtDNA sequences and 785 ancient human mtDNA sequences (recovered from prehistoric and historical human remains) belonging to haplogroup U from Europe, Southwest Asia and South Asia. We employed a detailed phylogenetic reconstruction, a well-defined molecular mtDNA clock for dating clades and events and a founder analysis methodology alongside a phylogeographic analysis of ancient lineages in order to reconstruct the history of haplogroup U in Europe.

Haplogroup U underwent three main demographic changes in Europe: the Late Glacial and postglacial recolonization of Europe, following the peak of the last Ice Age, ~20,000 years ago, from Iberia (U5b), Eastern Europe (U4) and Southwest Asia (U1, K1 and K2) ; the expansion from Southwest Europe of several subclades of haplogroup U (including U7, U3, U1; K clades) in the Neolithic period about 8,000 years ago; the re-expansion of subclades within Europe (mostly within U5), both east–west and west–east, in the Neolithic and Bronze Age. While the Bronze Age migration was mostly male-mediated, our data suggests that females were involved in this movement, namely from haplogroup U4 that has a probable origin in the Steppe area.

The presence of haplogroup U from almost the first arrivals of modern humans in Europe to the present day – it is, in fact, the only major lineage of such – allows the phylogeography of this clade to help us chronicle dispersal episodes spanning *Homo sapiens*' entire history of occupation of the continent.

Keywords: Archaeogenetics, phylogeography, mtDNA, founder analysis, haplogroup U

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List of abbreviations

Anatomically Modern Humans	AMH
Ancient DNA	aDNA
Before Christ	BC
Circa	ca.
Extensible Markup Language	XML
Linearbandkeramik	LBK
Last Glacial Maximum	LGM
Maximum Likelihood	ML
Million years ago	Mya
Mitochondrial DNA	mtDNA
Polymerase Chain Reaction	PCR
Principal Component Analysis	PCA
Reactive Oxygen Species	ROS
Revised Cambridge Reference Sequence	rCRS
Single Nucleotide Polymorphisms	SNPs
Thousand years ago	kya

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Chapter 1: Introduction

1. Introduction

Historical periods of human evolution

Human origins and evolution have always been subjects of interest. There is not only a curiosity to know when *Homo sapiens* first appeared but also where and how. For centuries, the study of the human past depended mainly on material remains found at archaeological sites and cultural knowledge on the human populations, but since the formulation of the Theory of Evolution and with the birth of the field of Genetics, among other scientific fields, Archaeology has found new allies in these objectives. Hence, the combination of different study areas resulted in new subjects such as Archaeogenetics - the application of genetic techniques to the study of the human past (Soares *et al.*, 2010) – which have become notably important in solving the mysteries of human history.

Geological periods are estimated from evidence of specific events in the history of planet Earth, mainly fossils and geological phenomena. Likewise, historical periods are based on the first appearance of certain features in human evolution and, for a long time, all knowledge about the evolution of humanity depended on evidence like fossils and objects or structures built by men. Historical periods are divided into Stone Age, Bronze Age, and Iron Age, and the Stone Age itself is divided into Palaeolithic, Mesolithic and Neolithic (Peter Rowley-Conwy, 2007).

Paleolithic

The Paleolithic, or Old Stone Age, started 2,6 million years ago with the first generalized use of technology – stone tools –by either the later australopithecines or the earliest forms of the genus *Homo* (Toth & Schick, 2015). The beginning of the Paleolithic was the age of human evolution with the emergence of various species of hominins. In this period there was an increase in brain and body size (Gabora & Kaufman, 2012; Klein, 1995). According to the fossil record, the first modern humans - *Homo sapiens* – appeared around 200.000 years ago in Sub-Saharan Africa (Rito *et al.*, 2013).

First modernity features appeared over 100.000 years ago in the coast of Southern Africa but were carried by the modern human groups that left Africa about 60.000 years ago (Rito *et al.*, 2019). There are many different definitions of modern human behaviour, but symbolic behaviour and long-distance exchange networks are imperative (Soares *et al.*, 2010). The contrast between humans and animals only sharpened between 60 to 30 kya with the onset of the modern behaviour that arose from complex ideas and creativity and gave start to ritual and religion, art (e.g. evidence of dance), and

technology (Gabora & Kaufman, 2012). During the Paleolithic, humans were hunter-gatherers and, adding to making stone tools, they controlled fire (Gabora & Kaufman, 2012; Kelly, 1992). They typically lived in small groups and migrated constantly – nomadic – or between temporary settlements – semi-nomadic - according to food availability (Kelly, 1992).

Mesolithic

The Mesolithic was a transitional stage to agricultural life prior to reaching the Neolithic. This period occurred after the Last Glacial period around 20,000 years ago (Pala *et al.*, 2012) and the Neolithic revolution (Childe, 1979; T. Douglas Price, 2009) and it is characterized by rising sea levels and a warmer global climate (T. D. Price & Peterson, 1987). This shift in the environment and the population growth were once considered to force the advances in agriculture but it is now viewed that the changes in the social, economic and ideological aspects of the human populations had a much bigger part in this development (Cummings, 2014; T. Douglas Price, 2009; Soares *et al.*, 2010). Despite considered characteristics of the Neolithic, sedentary communities existed in some parts of Europe during the Mesolithic as well (T. D. Price & Peterson, 1987; T. Douglas Price, 2009), e.g., in Scandinavia (Albrethsen & Brinch Petersen, 1976) and in Ireland (Woodman, 1986). The crafting of bladelet tools is also associated with this specific time period (Cummings, 2014; Soares *et al.*, 2010). The Mesolithic occurred in different speeds in different locations and it can be mapped with very rough approximations for individual regions - Neolithic life was achieved in Mesopotamia *circa* 10.000 BC, in Greece *ca.* 7.000 BC, in Britain *ca.* 3.000 BC (T. Douglas Price, 2009).

Neolithic

The first Neolithic cultures rose between 10.000 - 9.000 BC in the Fertile Crescent (Kingwell-Banham, Petrie, & Fuller, 2015; T. Douglas Price, 2009) and were characterized by the adoption of agriculture, the development of ceramic pottery, the domestication of plants – wheat , barley, pulses, flax - and animals – cattle pigs, sheep and goats - and more complex and larger settlements (Lazaridis *et al.*, 2016; T. Douglas Price, 2009; Soares *et al.*, 2010). There was an increased need to develop tools to be used in agriculture, and so ground stone and polished stone artefacts became much more widespread, including tools for grinding, cutting or chopping (T. Douglas Price, 2009). Adding to the agricultural advances, construction also evolved and the first large-scale buildings such as the

monumental tombs known as megaliths (T. Douglas Price, 2009). There is also evidence for established trade in the Neolithic with newly settled people importing exotic goods from many hundreds of miles (Cummings, 2014; T. Douglas Price, 2009).

This culture spread from the Near East through Anatolia and into Europe (Soares *et al.*, 2010) and several theories about this dissemination have been proposed (Pereira *et al.*, 2017; T. Douglas Price, 2009). One of the most popular is the 'Wave of Advance' formulated by Ammerman and Cavalli-Sforza in 1973, based on Clark (1965), on radiocarbon dating , archaeologic information and the distribution of genetic polymorphisms (Ammerman & Cavalli-Sforza, 1971; Cummings, 2014; T. Douglas Price, 2009). This model for the origin of European Neolithic concludes that demic diffusion – not the idea of farming *per se* but the migration of the farmers themselves (Ammerman & Cavalli-Sforza, 1971; Pala, Soares, Chaubey, & Richards, 2015) – is the most probable explanation for the transition to agriculture (Meiklejohn, 1985; T. Douglas Price, 2009). Although being the groundwork for discussions on the expansion of the Neolithic for many years, recent information obtained with new study areas (archaeogenetics, p.eg.) calls for new theories (T. Douglas Price, 2009). For example, Pereira *et al.* (2017) point to contradictions between the studies of contemporary genetic variation and ancient DNA (aDNA). Based on Gamble's division of Europe in a 'biotidal' zone in North Europe and a 'refugium' zone that includes Iberia, France, Italy, the Balkans and the east European plain (Gamble, 2009), they propose a more complex process of agriculture dissemination. In their work they found that Mediterranean Europe lineages in the Mesolithic are closer to Near Eastern lineages in similarity than to the rest of Europe and conclude that the Mediterranean Europe lineage might be a result of Late Glacial expansions from a Near Eastern refuge (Pereira *et al.*, 2017).

Whether hunter-gatherers became farmers or where replaced by farmers is still in discussion, however, in some parts of the world humans did not adopt agriculture lifestyles altogether (Cummings, 2014). In these regions, several alternative subsistence methods were pursued (Kelly, 1992), mainly to continue with hunter-gatherer life indefinitely or to adopt a nomadic herding lifestyle (Cummings, 2014; Kelly, 1992; Svizzero & Tisdell, 2015). Nomadic herding was especially successful in the Steppe, an east-west strip of grassland that runs from Ukraine to Mongolia (Svizzero & Tisdell, 2015).

Copper Age

Between 6.3 and 4.3 kya , in the Copper Age (or Eneolithic), the climate turned cooler and drier resulting in changes in economy and society (Soares *et al.*, 2010). This period is characterized by the development of smelting, which is the process of extracting metal from ore that allows the hammering or casting of metal into desired shapes (Bourgarit, 2007; Tylecote, 1977). The first metal to be smelted was copper in Southwest Asia. Being a rather soft metal, copper was not a great improvement over stone for the crafting of tools and weapons, but was instead used mainly for aesthetics (B. W. Roberts, Thornton, & Pigott, 2009). However, eventually copper was blended with tin, and a much harder metal was obtained: bronze (Tylecote, 1977).

Bronze Age

The Bronze Age followed the Neolithic when bronze became a much-used material for practical objects like tools and weapons (Soares *et al.*, 2010). This period started in 4000 BC when tin-bronze first appeared in Southwest Asia and it took roughly a thousand years to cover the Eurasia from Britain to China (B. W. Roberts *et al.*, 2009). The adaptation of metallurgy was accompanied by new ideas about property and urban societies expanded (Fowler, Harding, Hofmann, & Kristiansen, 2014). In fact, during the Bronze Age there is a transformation in society and expression of status and power becomes important while metals are produces in large quantities (A. F. Harding, 2000). Through the necessity to trade different products of interest (Fowler *et al.*, 2014), the networks formed also promoted the spread of culture and probably the major language families (Soares *et al.*, 2010).

Iron Age

The Iron Age began in Southwest Asia *ca.* 2.000 BC (Tylecote, 1977) once smelting had advanced sufficiently to produce the higher temperatures needed to smelt iron ore (B. W. Roberts *et al.*, 2009; Tylecote, 1977). Since then, it took approximately five centuries to expand to all Europe (Tylecote, 1977). The transition to the Iron Age was critical not because of the properties of the metal itself (iron is not harder than bronze), but because iron is much more abundant than copper and tin (Barceló, Capuzzo, & Bogdanović, 2014). This allowed the first true mass-production of metal tools and weapons to happen (Tylecote, 1977), which in turn revolutionized both agriculture and warfare. In fact, Barceló and colleagues

suggest that the introduction of iron not only represented a change in technology, but also resulted in a change in social and economic strategies (Barceló *et al.*, 2014). The rise of Iron Age historical towns and the increase in number of fortified sites are evidence of social tension (Kristiansen, 1998) and Brun (1991) theorizes that the origin and expansion of iron metallurgy involved three factors: the multiplication of larger scale conflicts, the dismantling of ancient trade networks and the rise of new commercial routes between Mediterranean cities, namely Greek and Phoenician, and central European communities (Barceló *et al.*, 2014).

Human history in Europe

The presence of hominins in Europe seems to date back to 1.1 Mya (Pala, Chaubey, Soares, & Richards, 2014; Soares *et al.*, 2010). The continent was first occupied by *Homo neanderthalensis* - Neanderthals - a cold adapted species, and it was only around 45.000 years ago that AMH arrived in Europe (Gabora & Kaufman, 2012; Pala *et al.*, 2014). According to Soares and colleagues in their work published in 2010, the history of the settlement of modern humans can be divided into five important episodes: the out of Africa colonization during the Upper Palaeolithic; the re-colonization from Southern refugia after the Last Glacial Maximum; the postglacial re-colonization of deserted areas by Mesolithic groups at the end of the Younger Dryas; dispersals of Near Easterners during the Neolithic and the migrations that accompanied the economic exchange networks established from the Copper Age onwards (Soares *et al.*, 2010). However further research revealed that an important migration occurred at the beginning of the Bronze Age. This massive migration started in the Steppe region where pastoralist men expanded throughout Europe (Fowler *et al.*, 2014; Pala, Soares, & Richards, 2019).

The three phases of Archaeogenetics

Phase 1

Historical knowledge has been, for a long time, obtained mainly by Archaeology and the interpretation taken from its findings. Many events, mostly in the prehistoric period before the invention of writing, are still a mystery. There has long been a need to find techniques from other study fields to work along Archaeology to obtain these answers. Archaeogenetics, the use of genetics to determine aspects of human prehistory (Soares *et al.*, 2009), is one of that fields. It began with the work of Cavalli-Sforza and colleagues in the 1960's, who studied inherited traits such as human blood groups,

lactase persistence or the relation between these traits and linguistic and ethnic groupings, among others (Pala *et al.*, 2014, 2015, 2019).

Pala and colleagues describe three different phases of archaeogenetics, the first one being the study of distributions of classical markers such as the ones by Cavalli-Sforza *et al.* mentioned above (Pala *et al.*, 2019) by means of principal component analysis (PCA) to evaluate the distribution of genetic variation in space (Pala *et al.*, 2014, 2019; D. F. Roberts, Ammerman, & Cavalli-Sforza, 1986). Further scientific advances were the polymerase chain reaction (PCR) and the Sanger DNA sequencing, introducing a second phase to the field of archaeogenetics, where the actual DNA sequences are known (against the first phase that was based on phenotypic traits) (Pala *et al.*, 2019).

Phase 2 - Phylogeography

In the second phase of archaeogenetics described by Pala and colleagues, an approach to genetic analysis emerged based on using a phylogenetic estimate of the genealogy of a marker system and examining the geographical variation of its lineages (Pala *et al.*, 2019). This approach, first tested by Wilson and colleagues, is called phylogeography and compares markers like mtDNA or other non-recombining stretches of DNA to other known sequences of different genomes to establish an evolutionary/phylogenetic connection between them and their location in time and space (Pala *et al.*, 2015; WILSON *et al.*, 1985).

Pala and colleagues also described the variables that phylogeography uses: genealogy (based on a character-based phylogenetic reconstruction: parsimony, maximum likelihood, Bayesian inference), the geographic distribution of the lineages in the tree, and the time depth of various clusters, based on a molecular clock of the analysed system (Pala *et al.*, 2015).

PCR and the Sanger method allow the sequencing of short fragments of DNA and, more importantly, from very small quantities of fragmented DNA like, for example, in its extreme, ancient DNA (aDNA) recovered from human remains. However, the sensitivity of PCR resulted in the amplification of contaminating DNA as well as aDNA, which made this method unfeasible.

Phase 3 - Next-generation sequencing (NGS)

The emergence of NGS in the last decade represents the third and last phase of archaeogenetics, which allowed the sequencing of thousands of samples obtained from human remains (palaeogenetics). By analysing the large number of genetic sequence data currently available obtained from the small amounts of aDNA from specimens that were not ideally preserved for genetic analysis (such as archaeological remains) it is possible to compare genetic makeup of humans through time.

Mitochondrial DNA

Mitochondria

Mitochondria are organelles present in most eukaryotic cells responsible for the production of metabolic energy through oxidative phosphorylation. The respiratory chain was first described in 1925 by David Keilin (Keilin, 1925) and is why they are known as the "powerhouse of the cell" (Siekevitz, 1957). Mitochondria contain several compartments that are involved in different tasks. The outer membrane is separated from the inner membrane by an intermembrane space. The inner membrane dynamically folds into the interior of the organelle, called the matrix. Tasks other than oxidative phosphorylation include signalling, synthesizing steroids and lipids, apoptosis and autophagy, storage of calcium ions, and controlling the cell cycle and cell growth. Depending on the environment , mitochondria can also detoxify ammonia, a waste product in liver cells (Detmer & Chan, 2007; McBride, Neuspiel, & Wasiak, 2006; Yi, Weaver, & Hajnóczky, 2004). Mutations in genes that regulate any of these functions can result in serious mitochondrial diseases, such as myopathies and metabolic disorders (A. E. Harding *et al.*, 1990; Jitrapakdee, Wutthisathapornchai, Wallace, & MacDonald, 2010; Nunnari & Suomalainen, 2012).

There are two different accepted theories for the origin of mitochondria. The autogenous theory suggests that a prokaryotic cell ancestor suffered infolding of the plasma membrane that resulted in the compartmentalization of the different organelles, and that in the specific case of the mitochondria and of chloroplasts some DNA was entrapped in the compartments (Taylor, 1975). The endosymbiotic theory considers the mitochondria as originally free-living prokaryotes that were integrated in a host cell that beneficiated from their oxidative mechanisms (Sagan, 1967). This is the most widely accepted theory, since mitochondria, apart from showing independent growth and division, have a double membrane and their own genome (Embley & Martin, 2006).

This organelle is normally shaped like a rod but quite flexible and can form a highly dynamic network by fusions and fissions between several mitochondria (Karbowski & Youle, 2003). Structure, size

and number of mitochondria within a cell vary depending on the organism, tissue and/or cell type (Alberts, B., Bray, D., Lewis, J., Raff, M., Roberts, 1994).

Mitochondrial Genome

As mentioned above, mitochondria have their own genome, mitochondrial DNA (mtDNA), which is circular and has its own genetic code. mtDNA is not bound to histones and has no introns or repeats in its sequence (Embley & Martin, 2006). It is an extremely compact double-stranded circular DNA molecule of 16569 base pairs that encode 37 genes, 28 in the H-strand ('heavy' strand, rich in guanine) and 9 in the L-strand ('light' strand, rich in cytosine). Two genes code for rRNA, 13 code for respiratory complexes subunits and 22 code for tRNA (Andrews *et al.*, 1999). A scheme representing the human mitochondrial genome is shown in Figure 1.

The mutation rate is faster in the mitochondria when compared with the nuclear genome. This can be explained due to the lack of histones, the exposure of reactive oxygen species (ROS) and by the lack of DNA repair mechanisms that exist in the nucleus. There is also a 1.1 kb control region between positions 576 and 16024 where the mutation rate is up to ten times higher than in the coding region. This control region contains transcription and regulation factors, the origin of replication for the H-strand, O_H, and two hypervariable sections, HVS-I and HVS-II. These sections were fundamental in the early steps of archaeogenetics (Holt & Reyes, 2012; Howell, Elson, Howell, & Turnbull, 2007; Lynch, 2010).

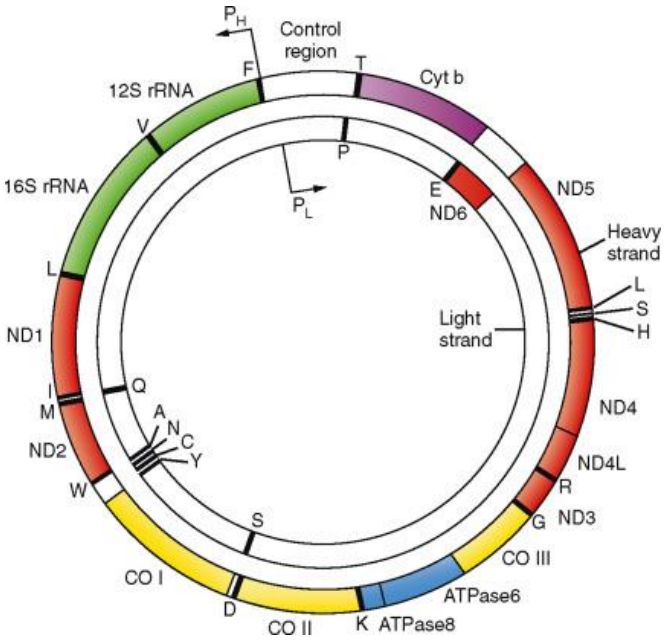

Figure 1 - **Structure of the human mitochondrial genome**. Both strands (heavy and light) of the mtDNA are shown. The genes encoding the two rRNA are shown in green. The 22 genes for tRNA are shown in black and signalled with the single letter code for the amino acids. In yellow, purple, red and blue are the genes for the different subunits of the oxidative phosphorylation complexes (Goodman, 2007).

Genetic Population Studies

There are several advantages for the use of mtDNA in human population studies. As already mentioned, most cells contain only one copy of DNA in the nucleus but several mitochondria, each one with up to thousands of mtDNA copies (Chinnery & Hudson, 2013; Robin & Wong, 1988; Ye, Lu, Ma, Keinan, & Gu, 2014). Because mtDNA is not bound by histones and due to the exposure to ROS during the oxidative phosphorylation it also has a much faster mutation rate than nuclear DNA. The accumulation of mutations at the mitochondrial rate allows us to organize mtDNA variation into related clades, or haplogroups and the fast mutation rate allows that enough mutations accumulate in the time period of human evolution. These features are crucial when dealing with ancient DNA (aDNA) studies, because ancient samples are usually degraded and in a very low concentration of genetic material. The high copy number relatively to the nuclear genome also increases the per-locus chance of being recovered (Paabo, 1989; Pala *et al.*, 2019; M. B. Richards, Soares, & Torroni, 2016; Robin & Wong, 1988).

mtDNA is an haploid marker, as only single copy is transmitted between generations, from mother to offspring, a pattern known as maternal inheritance. The sperm's mitochondria are marked with ubiquitin and are destroyed when inside the egg (Sutovsky *et al.*, 1999). This way, nuclear DNA is inherited from both parents but mtDNA is only provided by the mother. The Y chromosome is another haploid marker, representing the male line. When studying a population genetic makeup, it is necessary to take into account that mtDNA only represents the female history and Y chromosome only the male one.

Because of the uniparental inheritance, even though mitochondria possess all machinery involved in the process, there is no mtDNA recombination (Jobling, M., Hollox, E., Kivisild, T. & Tyler-Smith, 2015). This means that the structure is preserved throughout several generations, providing much more direct information about ancestral lineages than autosomal DNA. This way, the whole mtDNA represent an haplotype and the relationships between mtDNA from different individuals can be represented as a tree, whose patterns can be used to infer evolutionary history of populations (Rubinoff & Holland, 2005), which is the basis of phylogeography.

Haplogroups

Being non-recombinant, uniparental genetic material accumulates mutations as it is passed along generations and these mutations are used as markers to distinguish different lineages. The proximity of

lineages from different individuals or populations on a phylogenetic tree is established according to the degree of similarity of these sequences in terms of shared mutations. In combination with molecular-clock estimates of the coalescence times of the lineages it is possible to date and locate the emergence of different clades.

Haplogroups are designated in alphabetical order as they are discovered, in capital letters. Their derived subclades are named by intercalating lower-case letters with numbers (for example, U5b1c is a subclade of U5b1). Sometimes a haplogroup designated by a letter is discovered to be in fact an offshoot of another haplogroup as it happened with haplogroup K is a subclade of U8b (Behar *et al.*, 2012).

Therefore, by organizing different haplogroups in a phylogenetic tree and estimating their coalescent times with the time-dependent molecular clock, is possible to date the origin of different populations, for example, the first population/haplogroups to arrive in Europe.

Unravelling the maternal ancestry of the European Continent

There once was considered that the transition from *Homo erectus* to *Homo sapiens* took place in several areas outside Africa but with the aid of fossil evidence and of genetic analysis this multiregional hypothesis was discredited in favour of a single origin in Africa, although it is now known that probable admixture occurred by modern humans and other hominins outside Africa. All mtDNA in the human gene pool descends from one common matrilineal ancestor who lived 200.000 years ago in Sub-Saharan and, therefore, that AMH originated in the African continent as this is supported also by Y chromosome and genomic data (Behar *et al.*, 2008).

Sequencing complete mtDNA genomes has increased the resolution of the worldwide mtDNA tree and improved phylogeographic analysis in general. This newly improved tree confirmed that all human mtDNA coalesces in Africa and that all lineages outside Africa descend from two branches that originated from haplogroup L3 in this continent, haplogroups M and N (Oppenheimer, 2012; Soares *et al.*, 2009). Figure 2 depicts this event and following dispersals.

Several papers have been published since the correction of the effect of the purifying selection on the molecular clock by Soares and colleagues in 2009. This correction has changed the coalescence times of some haplogroups, and there is a need to test models of dispersal that had been made until then. Their revised chronology dates the first appearance of L3 at around 70 kya and haplogroups M, N and R – the three major haplogroups that dispersed out of Africa – at between 50-70 kya, anticipating

the prediction based on the date of the earliest fossils found *ca.* 50 kya. There are no other clades older than L3 outside Africa, so the out-of-Africa event could be as early as the coalescence time of this haplogroup according to their calculations (Soares *et al.*, 2009).

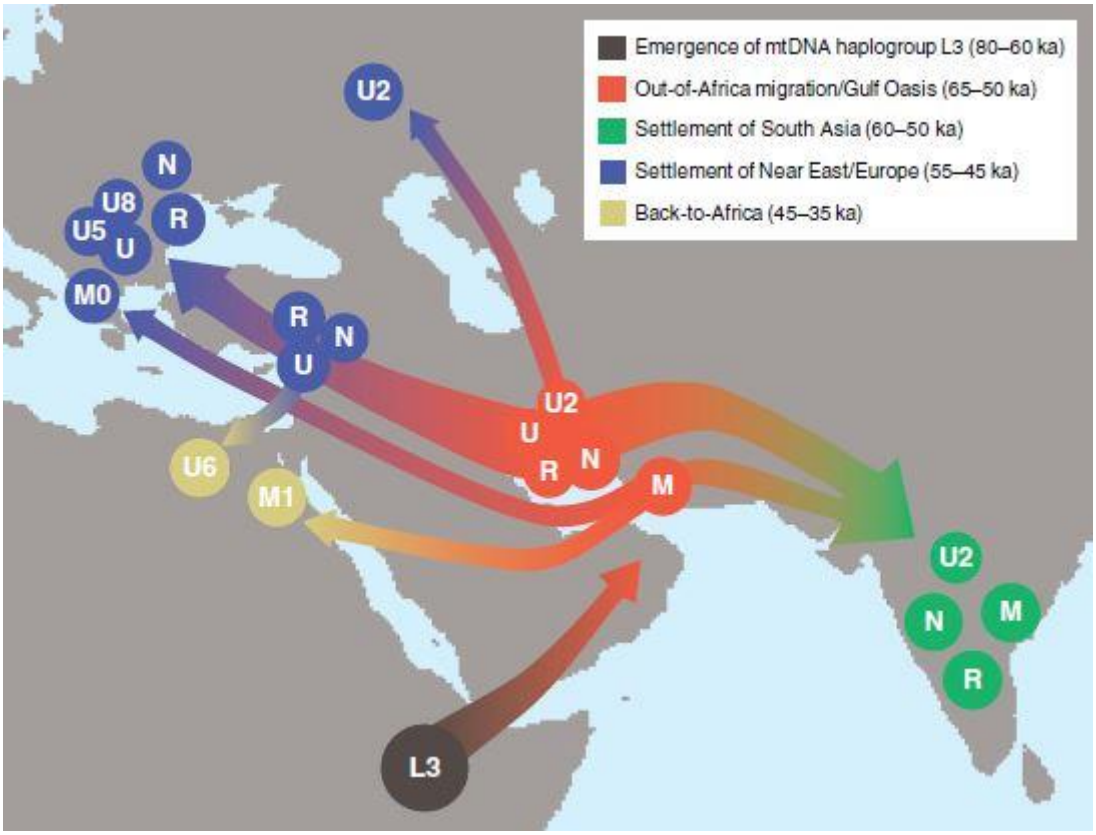

Figure 2 - **The out-of-Africa event and subsequent migrations from an mtDNA perspective**. The dispersals illustrated are based on modern and ancient mtDNA evidence. The migration of haplogroup L3 represents the out-of-Africa exit. The appearance of haplogroups M and N are represented near the Gulf Oasis from where R and U dispersed to Eurasia (M. B. Richards *et al.*, 2016).

Haplogroup M is very rare in modern European populations, however, a 2016 study found three hunter-gatherer individuals from current day France and Belgium, dating from between 28 and 25 kya carrying this haplogroup – suggesting a possible climate-influenced genetic bottleneck event that led to its disappearance in Europe (Posth *et al.*, 2016). Most M branches are found in India and Southeast Asia and some have spread to East Asia, the Pacific and the American continents (Soares *et al.*, 2009). However, Posth and colleagues re-calculated the coalescence times of M and N, and discovered a new branch, M0. They propose a scenario where M0 and M1 (a single branch found in North and East Africa and around the Mediterranean) derived from ancestor branches that dispersed in parallel to Western Asia, and that during the Upper Palaeolithic M0 proceeded to disperse alongside haplogroup U5 into Europe while M1 dispersed together with U6 into North Africa (Posth *et al.*, 2016; M. B. Richards *et al.*, 2016).

Most modern European populations have a genome composed by a combination of three different ancestral sources. One source traces to the Mesolithic forager/hunter-gatherer populations of Europe,

other from the first farmers from the Near East, and another from nomadic pastoralists of the early Bronze Age Steppe. The source from the Mesolithic foragers is rare outside Europe and so seeming to be indigenous. It is more frequent in northern Europe and it is the predominant component in Finns and, more specifically, the Saami - the nomadic herders who most likely descended from north European foraging population. The first farmers' component is most common around the Mediterranean and Arabia, and the third component is most common in the Caucasus region, Iran and Pakistan, also being found in the Near East. This scenario is based on hundreds of genome-wide profiles and supported by genomic-level dating analysis of the male-inherited Y chromosome (Pala *et al.*, 2014, 2019; M. B. Richards *et al.*, 2016).

At present times, most European lineages are, composed of haplogroups H, V, T, K, U3, U4, U5, I, W and X. These last haplogroups – I, W and X – derived from major haplogroup N. Haplogroup N is also the origin branch of haplogroup R, which in turn originated haplogroup U from what most of the Palaeolithic European lineages belong to (Pala *et al.*, 2014; M. B. Richards *et al.*, 2016). N1a is also a sub-branch from haplogroup N and was carried by 19,6% of individuals associated with Linearbandkeramik (LBK) culture - or Linear Pottery - connected with Neolithic central European farmers according to Haak and colleagues. However, N1a was not found in the remains of adjacent Mesolithic hunter-gatherer populations nor is it found in such numbers in modern Europeans (0,2%) (Haak *et al.*, 2010, 2005), challenging the notion that most of today's European genetic diversity is owed to farmers from the Near East (Soares *et al.*, 2009).

Haplogroup I, the most frequent subclade within N1, is more frequent in Europe but most diversity is found in the Gulf region, Anatolia and Southeast Europe. This indicates that it probably originated in the Near Eastern (Fernandes *et al.*, 2012). Its subclade I1a was detected in 9% of a southern population in Portugal (Marques *et al.*, 2015), which Santos and colleagues consider characteristic of Mediterranean Iberia (Santos *et al.*, 2014).

Haplogroup W is a subclade of N2 and is present in more than 10% in some Eastern European regions such as Finland. However, its diversity peaks in southeast Europe, northwest Africa and the Arabian Peninsula. Nevertheless, its Near Eastern lineages are nested among European clades, so it is probable that originated in Europe (Fernandes *et al.*, 2012).

Haplogroup X is subdivided into X1, with overall lower frequency and restricted to North and East Africa and the Near East, and X2, which is found in Europe, Western and Central Asia, Siberia, the Near East, and interestingly, in North America (Reidla *et al.*, 2003). The latter has been found in LBK, Alföld

Linear Pottery culture and in Iberian Chalcolithic remains (three individuals). Two subclades of X2, X2b3 and X2c2a, are considered unique to Sardinia, and the latter is implied to have originated in Iberia (Günther *et al.*, 2015; Lipson *et al.*, 2017).

Haplogroup R, already mentioned above, is a major N branch that includes most of the European mitochondrial diversity and includes haplogroups R0 (which includes the very diverse clade HV), JT, U and the very rare R1 (Gandini *et al.*, 2016). Haplogroup HV probably originated between Central and Western Asia (M. Richards *et al.*, 2000), and if we exclude haplogroup H, it is not very common in Europe (De Fanti *et al.*, 2015). However, due to a strong founder effect it represents 93,3% of Belmonte Jews' maternal ancestry (Nogueiro, Teixeira, Amorim, Gusmão, & Alvarez, 2015).

Haplogroup U is a branch of R and shows a wide dissemination across Europe and Asia much like H. It divides into four subclades, U1, U5, U6 and U2'3'4'7'8'9. The latter subdivides into U2, U3, U4'9, U7, U8 (which contains K) and U9 (Sahakyan *et al.*, 2017). U most likely originated in Southwest Asia about 55 kya shortly after the arrival of AMH from Africa with U2 and U8 diverging soon after (Fernandes *et al.*, 2012). These lineages were possibly taken to Europe with its earliest AMH settlers (Costa *et al.*, 2013; Soares *et al.*, 2010) and U5 likely emerged in Europe 37 kya forming, together with U4, the bulk of lineages associated with hunter-gatherers (Bramanti *et al.*, 2009; Haak *et al.*, 2010).

Haplogroup JT likely arose 58 kya, followed by the parting of J and T, 40 and 30 kya respectively, associated with the peopling of the Fertile Crescent (Pala *et al.*, 2012). Both J and T now extend across Eurasia and North Africa, making up to 20% of European mitochondrial diversity. Pereira *et al.* demonstrated that most of these lineages entered the Mediterranean after the LGM but only expanded to the rest of Europe with the Neolithic (Pereira *et al.*, 2017) as shown in Figure 3. Pala and colleagues have proposed in 2012 that the expansion of J and T haplogroups originated from a Near Eastern refuge. It is possible, however, that instead of occurring during the LGM, all these expansions occurred with the end of the Younger Dryas during the warming period after the LGM (Soares *et al.*, 2010).

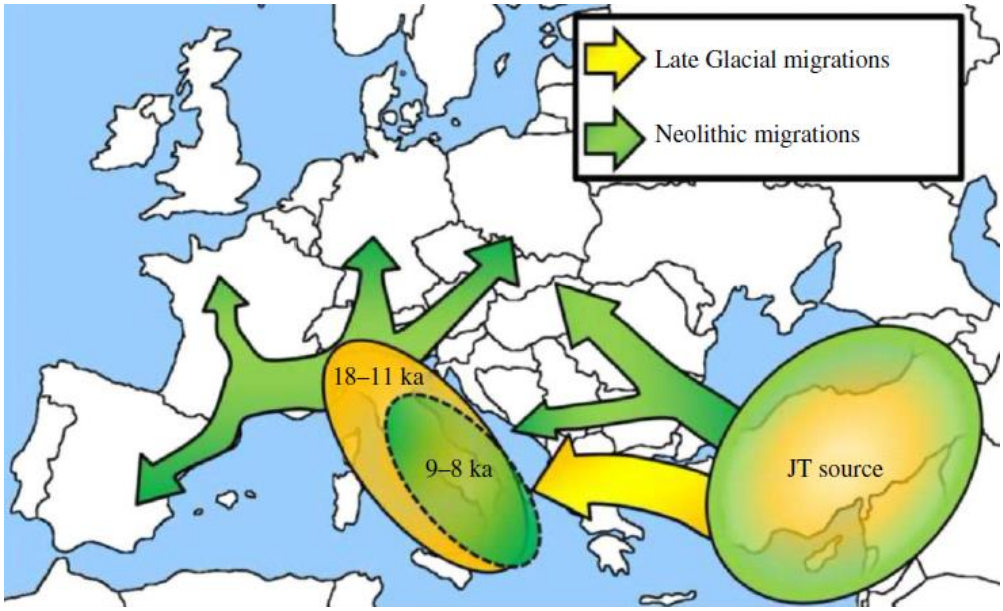

Figure 3 - **Late Glacial and Neolithic migrations from the Near East to Europe and following dispersals that occurred inside Europe.** Both lineages from the Near East and from indigenous Europeans are involved, supporting the arrival of the first farmers as the primary cause (Pereira *et al.*, 2017)

Founder analysis based on the control region of mtDNA contradicts the notion that most of European diversity is due to the Neolithic, supporting acculturation. Richards *et al.* proposed in 2016 that most of extant mtDNA lineages originated during the Palaeolithic and that their diversity is due to post-LGM expansion.

Haplogroup H is a very diverse haplogroup scattered across Europe, the Near East and Central Asia at a frequency of 40%, being the most frequent haplogroup in Europe (Roostalu *et al.*, 2007). H was the subject of the first major study of ancient mtDNA variation presented in 2013 by Brotherton and colleagues. In addition to being the most common modern haplogroup in Europe, it is not affected by short control-region variation. It dates to the LGM and it is believed to have originated alongside its sister clades in Southwest Asia. This haplogroup's dispersal pattern suggests that it spread into Europe from the Near East during the Neolithic.

Chapter 2: Aims

2. Aims

Today's mtDNA databases include data from all over the world and, with increased computer processing power, the large datasets of complete mtDNA sequences collected so far can be used to build European maternal lineage trees. There is a lot of information to process and many models to test, and this project will be focused on the haplogroup dispersals that led specifically to the first settlements of humans in Europe and the genetic trade that happened between European populations since then. In this project I will focus on the already mentioned haplogroup U, the only known mtDNA clade that was present in Palaeolithic hunter-gatherers and that can chronicle the whole story of modern humans in the European continent until the present day. We will follow a phylogeographic methodology in the analysis of the mtDNA sequences that are available for processing, both recent and ancient.

Chapter 3: Materials and Methods

3. Materials and Methods

Dataset

Combining published data from NCBI[1] and unpublished sequences obtained in collaboration with Professor Martin Richards's laboratories from the Universities of Huddersfield and of Leeds, a total of 6642 samples of European mtDNA from haplogroup U were gathered. A detailed description of the samples used is listed as Table 1 in the Supplementary File 1.

The sequence variation of the samples was analysed by use of the online software HaploGrep 2.0 (Kloss-Brandstätter *et al.*, 2011), which calculated not only the corresponding haplogroup but also produced the FASTA format of the sequence for each sample.

A compiled database of 785 aDNA U sequences was provided by the Archaeogenetics research team in the University of Huddersfield.

Phylogenetic Reconstruction

The mtDNA sequences of the samples were compared to the revised Cambridge Reference Sequence (rCRS) (Andrews *et al.*, 1999), and the variations they presented were marked as variants. All sequences were then run through the software Network 5, that links all samples in a network based on common variants, using the reduced-median algorithm (Bandelt, Forster, Sykes, & Richards, 1995). Two problems may arise in the network obtained, one derived from the fact that some variants occur much more frequently than average ('fast mutation sites'), and the other from variants already reported in literature as inconsistent such as indels, transpositions and polymorphisms. A list of the fast mutation sites published by Soares and colleagues was used as reference (Soares *et al.*, 2009). These problems significantly increase the number of reticulations (ambiguity) in the network making it harder to read. In Network 5 each variant is attributed a weight of 10 by default so, in order to decrease the reticulation, the weight of the fast mtDNA positions (146, 150, 152, 195, 16129, 16189, 16193,16311 and 16362) was manually changed to 7. All indels and polymorphisms 308-315, 310C, 3107N, 515-522, 16182C, 16183C, 16189, 16192C, 16518T and 16519C were removed from the sequences.

After this correction, the files produced were read with the software Network Publisher that drew the networks calculated previously. Both Network 5 and Network Publisher 1.1.0.7 are software from Fluxus Technology Ltd. Because the number of samples resulted in a very intricate tree, several smaller trees with less samples each were drawn as well so that simpler networks were made. The obtained trees

[1] https://www.ncbi.nlm.nih.gov/

were compared to a pre-constructed tree with complete mtDNA online from PhyloTree (van Oven & Kayser, 2009) and to the table mentioned before (Soares *et al.* 2009). Despite the previous data processing, the resulting networks were still very reticulated, and several parameters were considered when interpreting them, such as the average frequency of the mutations involved (based on a list published by Soares *et al.* (2019)), the diversity of clades involved and the number of samples that compose each node. The aim was to achieve a tree with no reticulations whatsoever, in order to convert it into an Excel format and subsequently to an XML format.

Age estimates

Molecular clocks are mathematical functions used to date the divergence between branches in a phylogenetic tree, assuming the mutation rate is constant, or at least correcting for any specific biases. Until 2009, several mutation rates were proposed, covering either the coding or non-coding regions but not whole mtDNA. Several estimates have been made for the mutation rates of mtDNA like, for example, the mutation rate estimate made by Forster *et al.* of 1.80×10-7 substitutions per nucleotide per year in the HVS-I in the control region of mitochondrial genome and the estimate of Mishmar and colleagues of 1.26×10-8 substitutions per nucleotide per year for the mitochondrial coding region (Forster, Harding, Torroni, & Bandelt, 1996; Mishmar *et al.*, 2003). However, these estimates assumed that the mutation rate is linear through time and were calculated from either the control region or the coding region but not from both which resulted in a not so precise estimate (Soares *et al.*, 2010). Kivisild *et al.* (2006) had showed that ancient branches in the phylogenetic tree presented a higher proportion of synonymous mutations than young branches, due to purifying selection. This meant that the timing of the more recent coalescent events had tended to be over-estimated (Pala *et al.*, 2015; Soares *et al.*, 2009).

In 2009, Soares and colleagues presented a recalibration of the molecular clock using both coding and non-coding regions – the first whole mitogenome clock rate - which resulted in mutation rate to 1.665×10-8 substitutions per nucleotide per year (Soares *et al.*, 2009) for an interspecific mutation rate. However, the new time-dependant clock included a correction factor for the effect described by Kivisild and colleagues that adjusted the mutation rate to different time periods (Kivisild *et al.*, 2006; Pala *et al.*, 2015).

We used the statistic rho (Macaulay, Soares, & Richards, 2019) to estimate age of clades using the Soares *et al.*' time dependent clock. Standard errors of the estimates were calculated using the formulation of Saillard and colleagues (Saillard, Forster, Lynnerup, Bandelt, & Nørby, 2000).

Founder Analysis

Founder analysis is an analytical method, based on phylogeographic principles, used for identification and dating of migrations into a new territory (Richards *et al.* 2000). Instead of considering a scenario where one large population splits in two, it assumes that the dispersal of modern humans around the world happened from main populations, considered sources that founded new ones, named sink populations (Pala *et al.*, 2019). This method consists of selecting founder sequence types in potential source populations and dating the lineage clusters that derived from them in the new settled region. The obtained data is organized in a phylogenetic tree and the sequences that are present both in the source and sink populations are identified. The genetic diversity (calculated as rho (Macaulay 2019)) of these common clades in the sink population is used to estimate the time of migrations from the source population(Pala *et al.*, 2014, 2019; M. Richards *et al.*, 2000).

A founder analysis software developed in-house was used to calculate the migration times, that estimated the general distribution of the founder clades. This software calculates the probability of a founder lineage having undergone a specific migration and the percentages of lineages that did so. The genetic diversity of the settlement zone (sink) is used to estimate the time of the migratory events (using the rho statistic (Macaulay *et al.* 2019). The software reads the tree in the xml format described above and a list of samples, stipulating which ones are part of the source or the sink, is provided.

Samples were separated as source, sink or undefined in 9 different tests that are presented in Table 2. Each model is based on geographic and historical criteria, *i.e.* on most probable migration patterns. The mutation rate was set to 2600 years/mutation according to the curve described by Soares *et al.* (2009), in a time range between 100 and 50000 years, with intervals of 100 years.

We also used the founder software to estimate the percentage of private diversity in different regions of Europe. After dividing the data into regions (Near East/Caucasus, Southeastern Europe, Iberia, Central Europe, British Islands, Northeastern Europe and North Africa, we used each of these regions as the sink against the others as source allowing us to calculate the private diversity in each region.

Table 2 - Migration models used in founder analysis. *9 tests were performed, each one with a different source-sink combination.*

	Migration Models																	
	1		2		3		4		5		6		7		8		9	
	Source	Sink	Source	Sink	Source	Sink	Source	Sink	Source	Sink	Source	Sink	Source	Sink	Source	Sink	Source	Sink
Europe Northweast		x				x		x							x			x
Europe West		x													x			
Europe NE		x				x		x							x		x	
Europe SE		x		x			x		x		x				x		x	
Sardinia							x		x		x			x	x		x	
Iberia		x								x		x			x			
Europe Basque												x			x			
Asia																	x	
Near East	x		x		x		x		x		x		x		x		x	
South Caucasus																		
North Caucasus	x		x		x		x		x		x		x		x		x	
Eastern Africa																		
Central Africa		x																
USA/SouthAmerica																		
North Africa																		
India																		
Others																		

Chapter 4: Results

4. Results

Origin of haplogroup U

Age estimates of haplogroup U indicate an age of 47.2 [39.1;55.5] thousands of years (ka) with the immediately derived clade (U2'3'4'7'8'9) presenting a slightly higher estimate of 49.4 [39;59.8]. Haplogroup U emerges directly from haplogroup R, that also has an origin directly form haplogroup N, one of the two Out-of-Africa clades (Soares *et al.*, 2012).

Considering a gravitational argumentation (Figure 4), haplogroup U most probably had an origin in the Arabia Peninsula or Near East in the populations that left Africa and colonized the globe. It is possible that it emerged before the migration East (that carried haplogroups M, N and R at least) through the Southern Coastal route as considering the presence of a very ancient U lineage in South Asia (haplogroup U2). It certainly was present before the colonization of Europe by its current existing populations as haplogroup U5 and possibly U8 were carried or developed in Europe. Another clade was present to the South and West, haplogroup U6, that most likely represent a back to Africa migration from the Near East. The remaining clades, haplogroups U1, U3, U4'9 and U7, show a probable origin in Southwest Asia (Pereira *et al.*, 2017; M. B. Richards *et al.*, 2016; M. Richards *et al.*, 2000).

Considering an argument based on private diversity Southwest Asia displays the second highest level of diversity of the considered regions (Figure 5). South Asia displays a higher level of private diversity; however South Asia can be almost dismissed as the origin location of haplogroup U as it only carries a single indigenous clade (haplogroup U2) that can actually be seen in Northeast Europe in ancient DNA (as discussed later). In fact, the high diversity displayed in the analysis is the reflection of indigenous U2 subclades in South Asia that were not involved in any other migration after their formation.

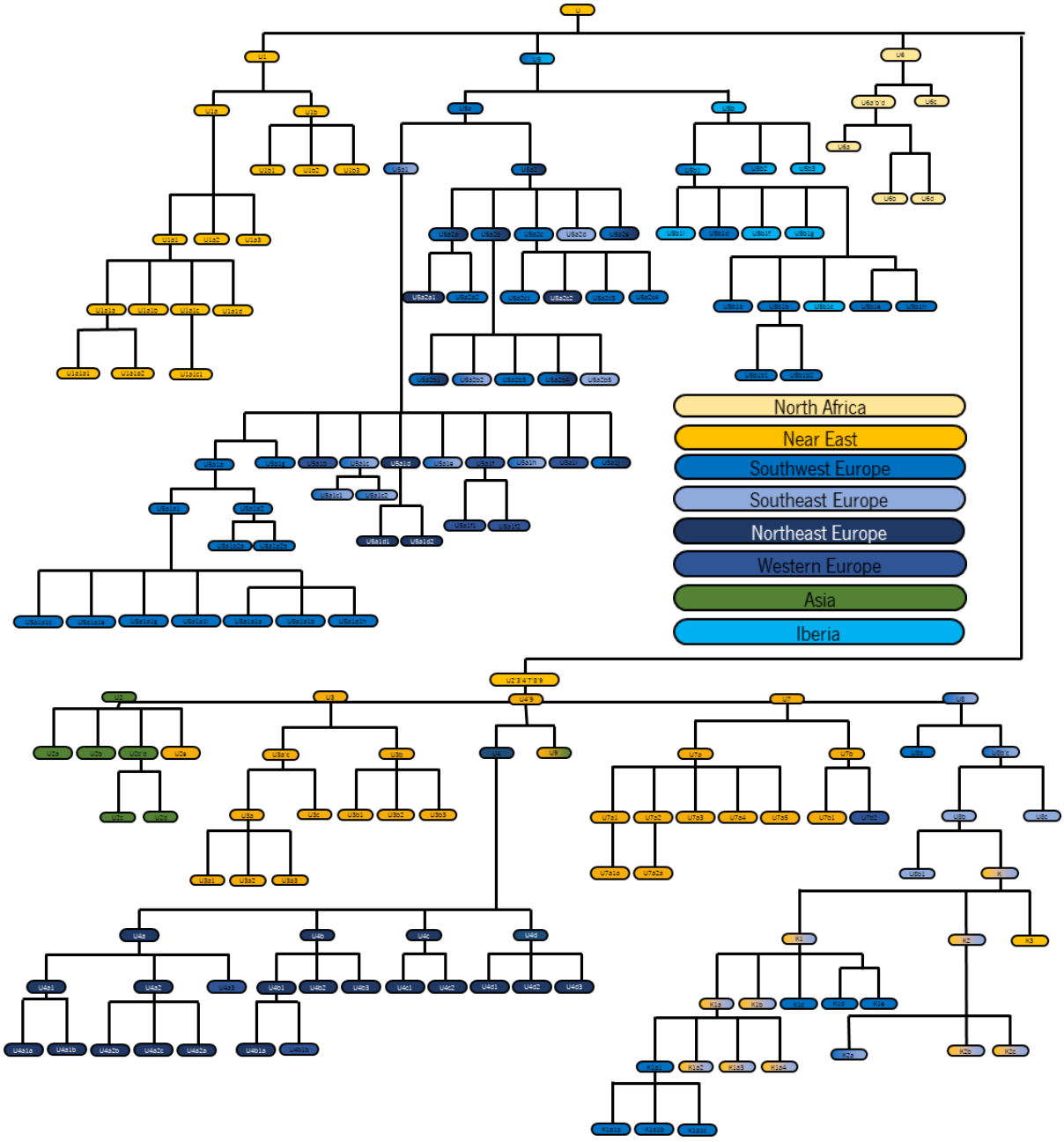

Figure 4 - **Haplogroup U mtDNA tree.** Each clade is coloured with the corresponding region where it is mostly present.

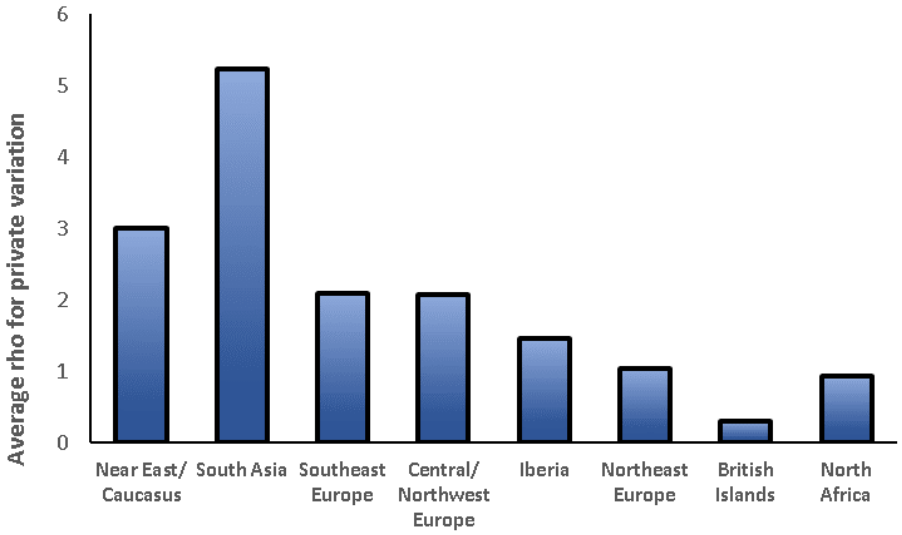

Figure 5 - Level of private variation by region for haplogroup U.

Because aDNA from more than 10 kya years is not available for Southwest Asia, there is no valuable information on its origin. Nevertheless, aDNA shows that the history and structure of haplogroup U was more complex in the past as seen by a Palaeolithic presence of two U2'3'4'7'8'9 in Southeast Europe (Figure 6) that disappeared until present day (similarly to a branch of M in Europe) (Soares *et al.*, 2010).

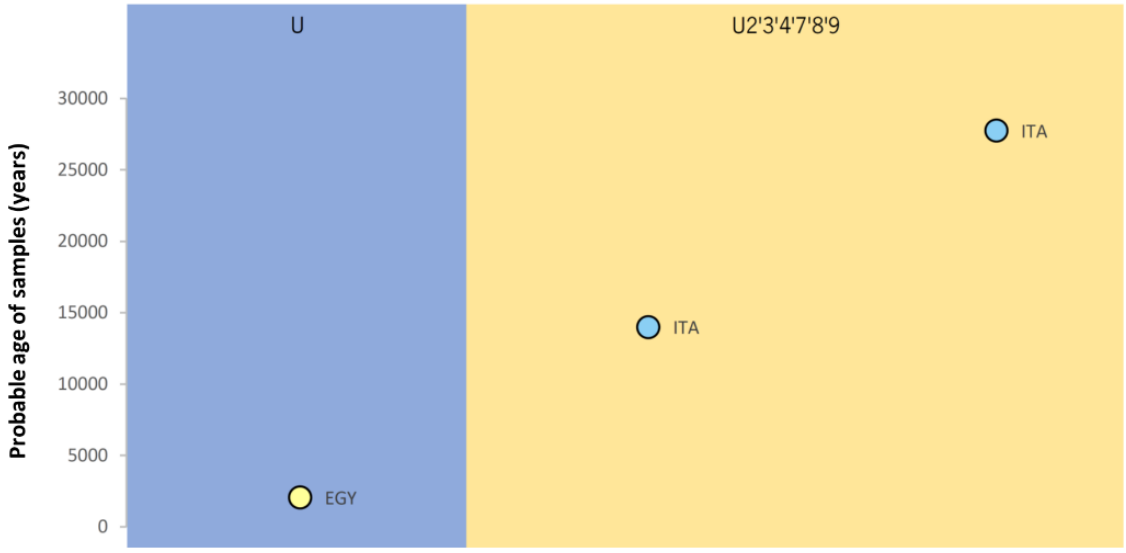

Figure 6 - **Date estimation of ancient samples within the most basal haplogroups.** Information regarding the country is labelled in each sample.

The major migration signal for the entire haplogroup U into Europe (Figure 7) seems to indicate peaks at the Neolithic period (using a *f1* and *f2* criteria) and in the late glacial/postglacial period (in the *f2* criterion).

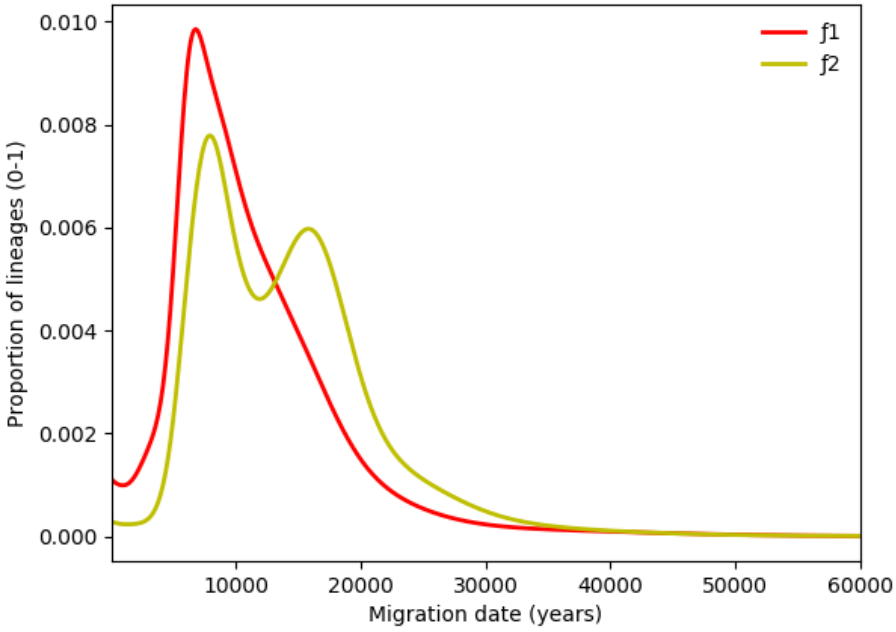

Figure 7 - **Probability of migration event from the Near East (source) to Europe (sink) across time.** Both criteria present peaks at around 10 kya.

In order to estimate probable proportions associated with major migration events we consider at 100 (recent historical events), 4000 (Bronze Age), 8000 (Neolithic), 12000 (postglacial) and 45 kya (first settlement) (Figure 8).

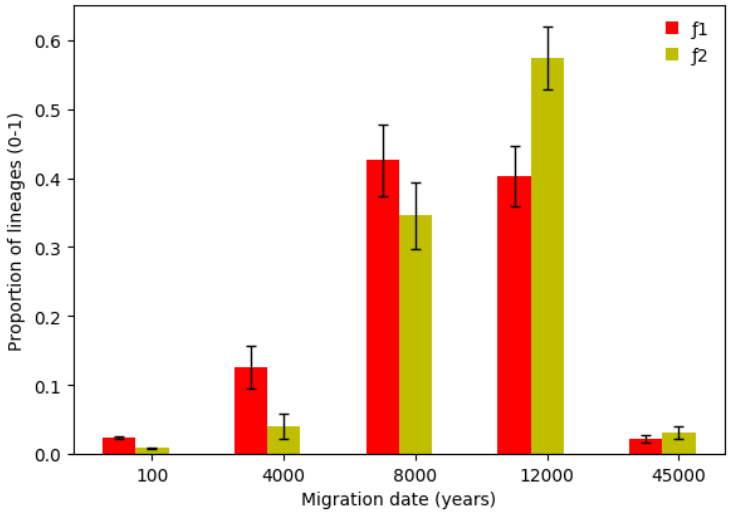

Figure 8 -Proportion of migrations associated to each of five migration events in European history.

The major migration events involving entrance of U lineages into Europe are the postglacial period followed by the Neolithic. These results need to be taken with caution as many clades are involved in a series of migrations and back migrations. In the next following sections, we will dissect the phylogeography of the different clades in order to obtain a detailed and clearer picture of the different events.

Phylogeography of haplogroup U1

Haplogroup U1, dating to 39.0 [26.7; 51.9] kya, shows a great level of diversity in Southwest Asia (including the Near East and the Caucasus) (Figure 9). That pattern is clearly visible in the tree structure of U1a and U1b, where basal samples from the Near East or the Caucasus are perfectly seen in all major subclades (Figure 4).

In general, U1 is a very rare haplogroup in Europe and its low diversity suggests it might be mostly

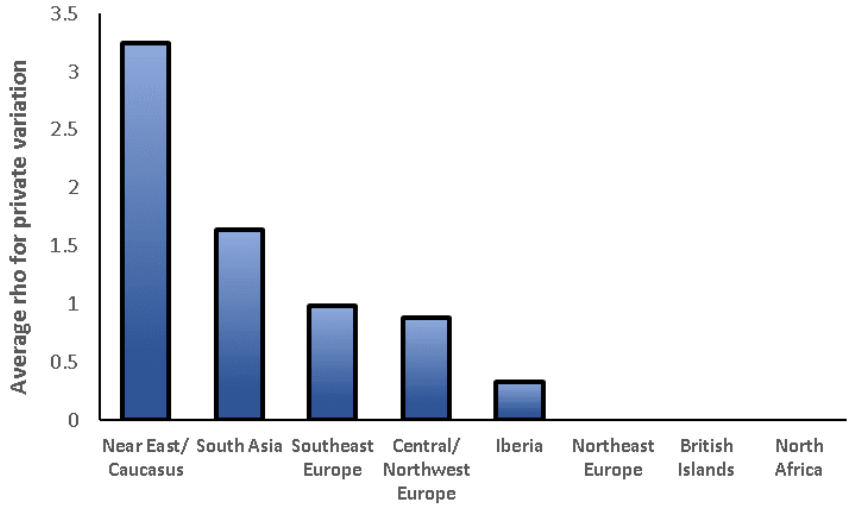

Figure 9 - Level of private variation by region for haplogroup U1.

related with recent gene flow. The exceptions are clades U1a1a and U1a1c, the two largest signals, that seem related with postglacial migrations in the founder analysis to Europe. U1a1c and U1a1a2 (the clade from U1a2a that represents most of the signal) are mostly common in Southeast Europe. When considering Southeast Europe as the source, most of the signal converts into recent gene flow, including for Central Northern Europe, Iberia and the British Islands. The clade U1a1c1c, dating to 13.2 [2.6;24.5] kya is shared between the Near East and Sardinia (in the form of U1a1c1c1 – 0.8 [0.093;1.4] kya) suggesting a migration in that time interval, probably associated with the Neolithic, given the clear Neolithic profile of Sardinians.

In terms of aDNA, the oldest available sample dates just above 5 kya in what is nowadays Bulgaria, in Southeast Europe, belonging to haplogroup U1a1a (Figure 10). It does not allow to attest the presence of haplogroup U1 in Europe before the Neolithic (as suggested by the founder analysis), however U1 is rare nowadays and it might have been rare in the past.

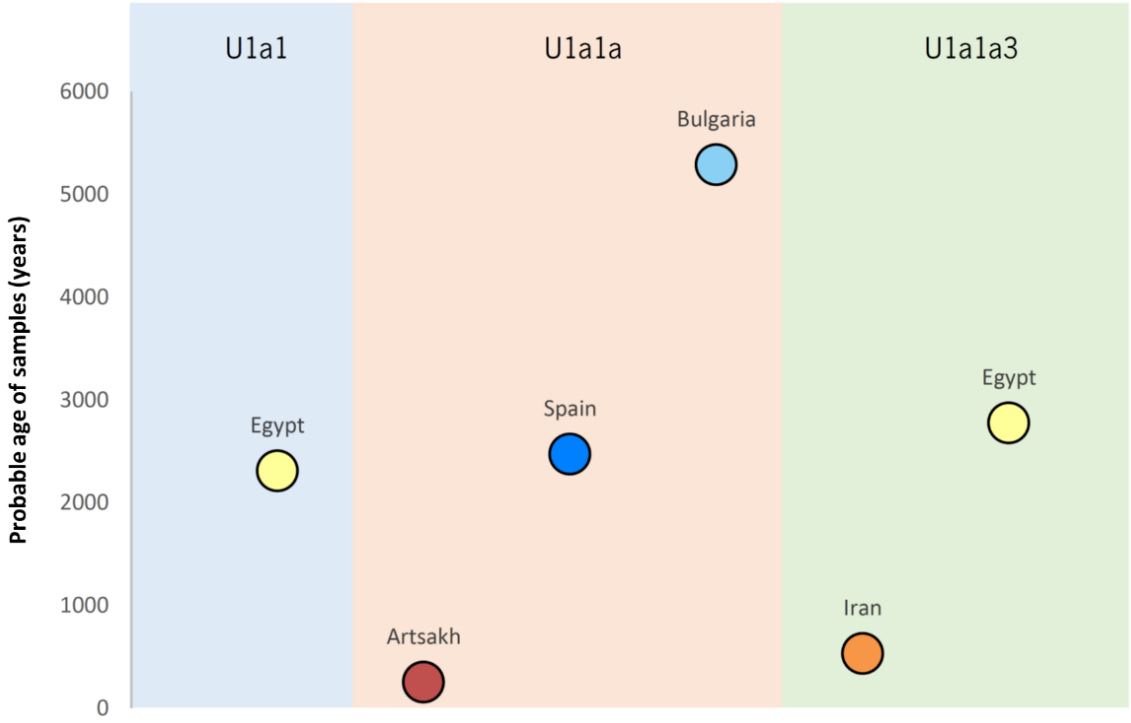

Figure 10 - **Date estimation of ancient samples within haplogroups U1a1, U1a1a and U1a1a3.** Information regarding the country is labelled in each sample.

Phylogeography of U5

Haplogroup U5 represents the largest indigenous clade in Europe, possibly evolving within the continent, directly from the root of U. It dates to 30.7 [22.7; 38.8] kya and it is by far the most detected branch in Mesolithic aDNA data from Europe.

U5 displays a complex history spanning 30 thousand years within the European continents. It splits in two clades U5a (21.7 [14.9; 28.7] kya) and U5b (25.0 [19.3; 30.8] kya). In terms of diversity, U5 seems to display a higher level in Southeast Europe (Figure 11). When splitting U5 into U5a and U5b, U5b maintains that diversity peak at Southeast Europe (Figure 13), while U5a shows its peak at Central Europe (Figure 12).

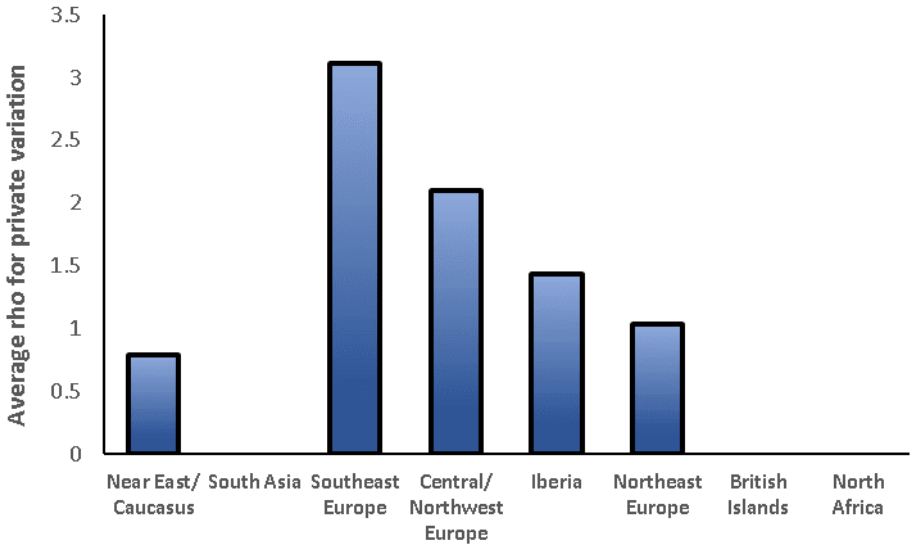

Figure 11 - Level of private variation by region for haplogroup U5.

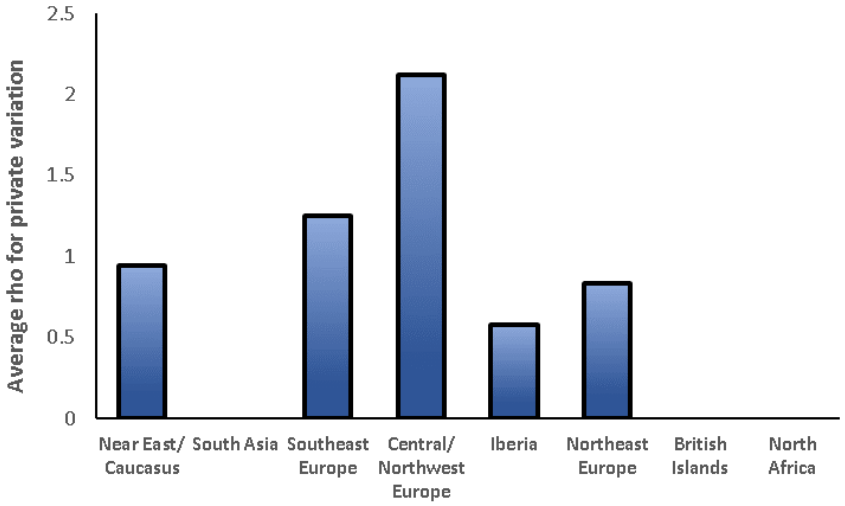

Figure 12 - Level of private variation by region for haplogroup U5a.

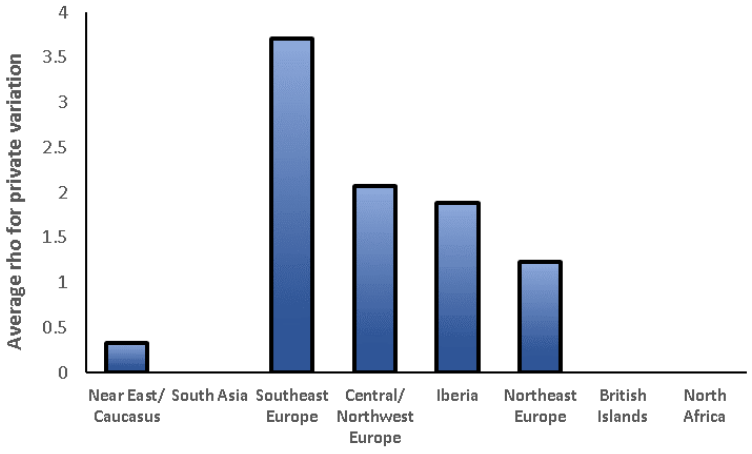

Figure 13 - Level of private variation by region for haplogroup U5b.

The earliest U5 sequences date above 30 kya and are actually pre-U5 sequences from Dolní Věstonice in the Czech Republic, Central Europe (Figure 14).

U5a1 (17.3 [12.5; 22.2] kya) displays a series of subclades, most of them displaying a distribution across Central Europe and Northeast Europe. U5a1c is the major subclade displaying a higher diversity in Southeast Europe. U5a1, considering the climatic history of Europe, cannot have a direct origin in Central Europe as this region was covered in ice 20 kya ago. It is quite possible that considering aDNA that some of the subclades might have had an origin in a Southeast Europe refugia. There are no massive star-like clades spreading across large areas. Some of its clades (U5a1f1a, U5a1a1, U5a1a1d, U5a1h) display a Bronze Age time of migration into the British Islands, contributing to its probable resettlement profile at this period associated with the Beaker culture (Olalde *et al.*, 2018). Only one subclade, U5a1b1a, could have reached Britain earlier.

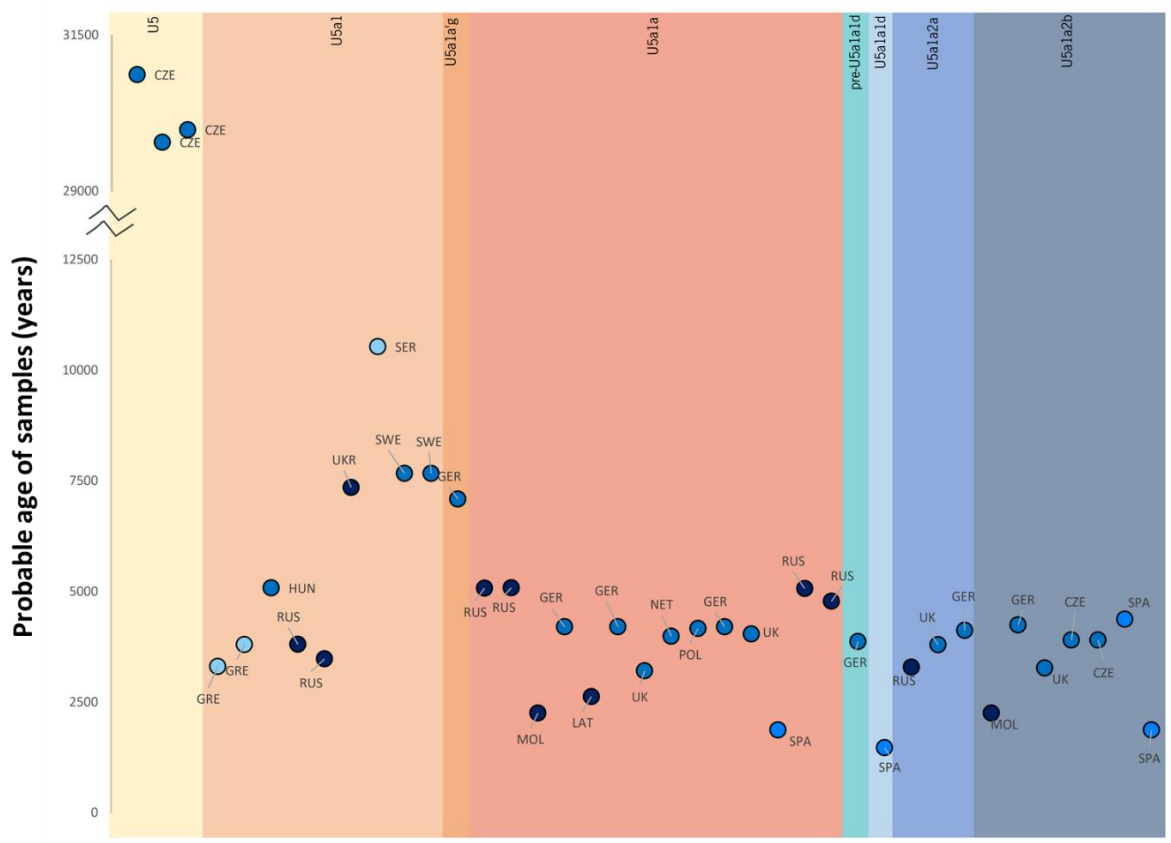

Figure 14 - **Date estimation of ancient samples of U5 clades including haplogroups between U5 and U5a1a2b.** Information regarding the country is labelled in each sample.

U5a2 also dates to a period right after the Ice Age (15.9 [11.5; 20.4] kya) (Figure 16). It has a similar pattern to U5a1, in the sense that it has mostly a Central European distribution and diversity and

its subclades were established following the Ice Age. In terms of diversity it has a more Northeastern diversity than U5a1. No relevant signal can be found in founder analyses to Britain, Iberia or Sardinia.

U5b, dating to 25.0 [19.3; 30.8] kya splits into three main clades, U5b1 (Figure 18), U5b2 (Figure 20) and U5b3 (Figure 22).

U5b1 (Figure 18) displays a complex history with several subclades displaying different histories. U5b1a, U5b1b, U5b1d, U5b1e and U5b1f seem to have originated in Central Europe. U5b1f probably entered Iberia about 6 kya ago. U5b1f has a probable origin in Iberia and moved into Central Europe below 10 kya ago. U5b1c has a similar pattern with limited number of settlers into Central Europe but providing a major founder into Sardinia in the Mesolithic in its first settlement. Overall U5b1 has clades and basal samples from both Central Europe and Iberia, indicating a probable expansion early after its emergence (20 kya) most likely in the resettlement of Europe following the Ice Age, making Iberia its most probable source location.

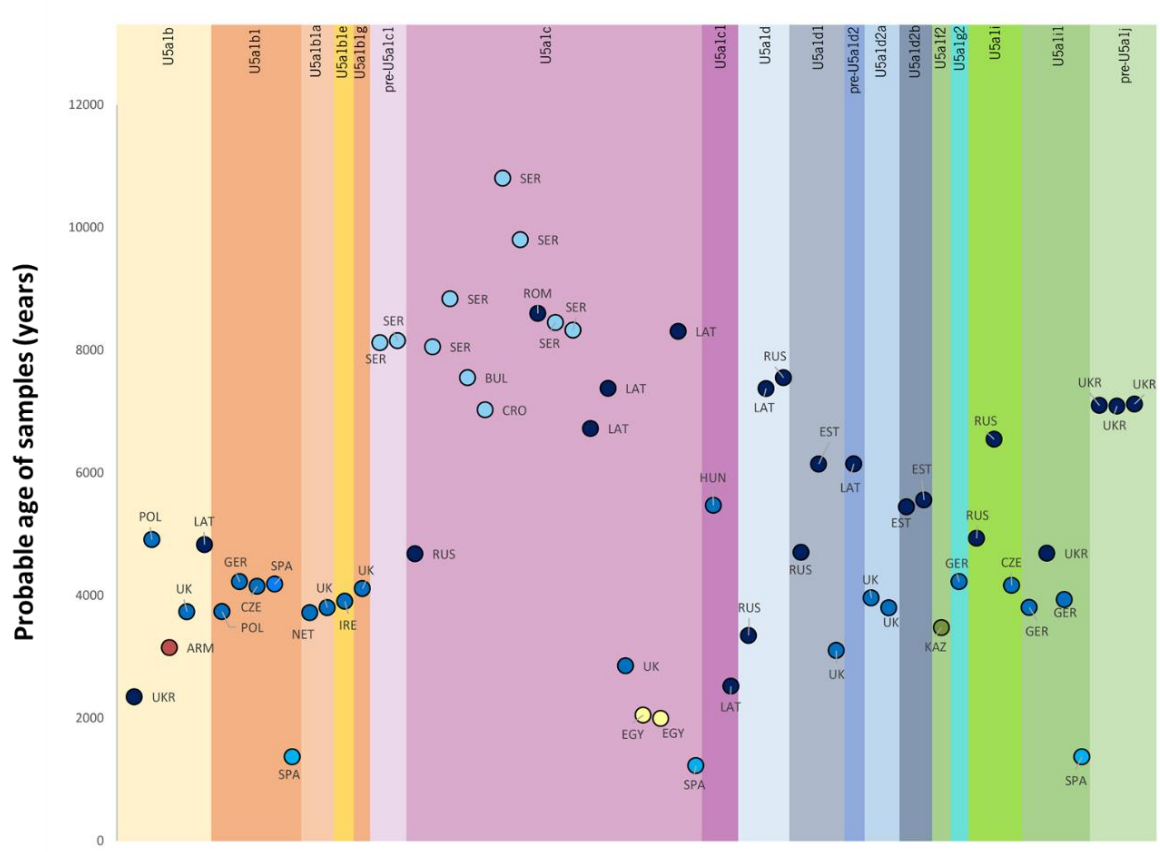

Figure 15 - **Date estimation of ancient samples of U5 clades including haplogroups between U5a1b and pre-U5a1j.** Information regarding the country is labelled in each sample.

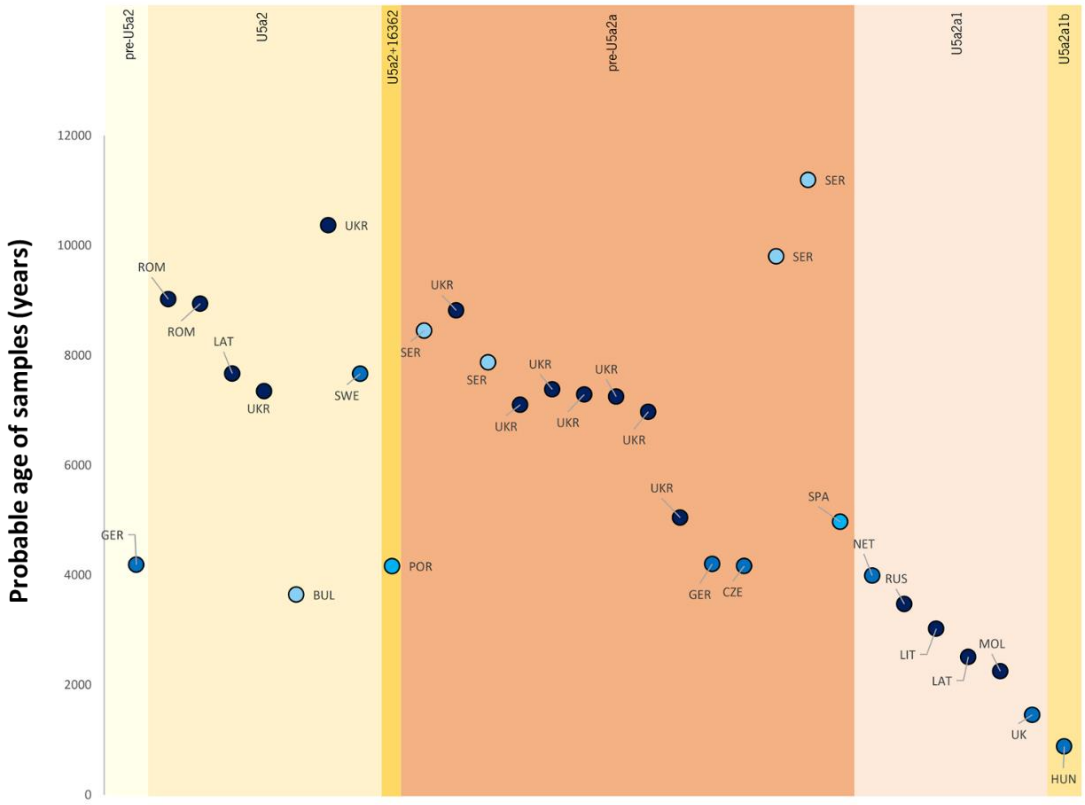

Figure 16 - **Date estimation of ancient samples of U5 clades including haplogroups between pre-U5a2 and pre-U5a2a1b.** Information regarding the country is labelled in each sample.

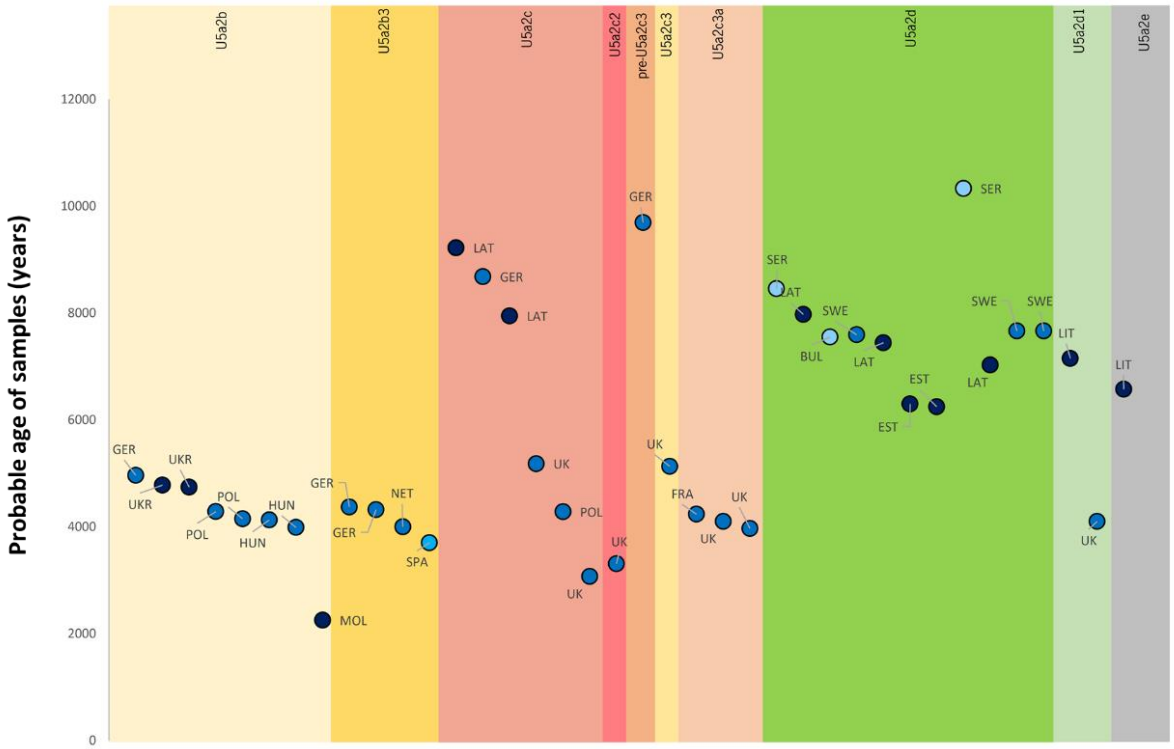

Figure 17 - **Date estimation of ancient samples of U5 clades including haplogroups between U5a2b and U5a2e.** Information regarding the country is labelled in each sample.

Figure 18 - **Date estimation of ancient samples of U5 clades including haplogroups between U5b and U5b1b1d.** Information regarding the country is labelled in each sample.

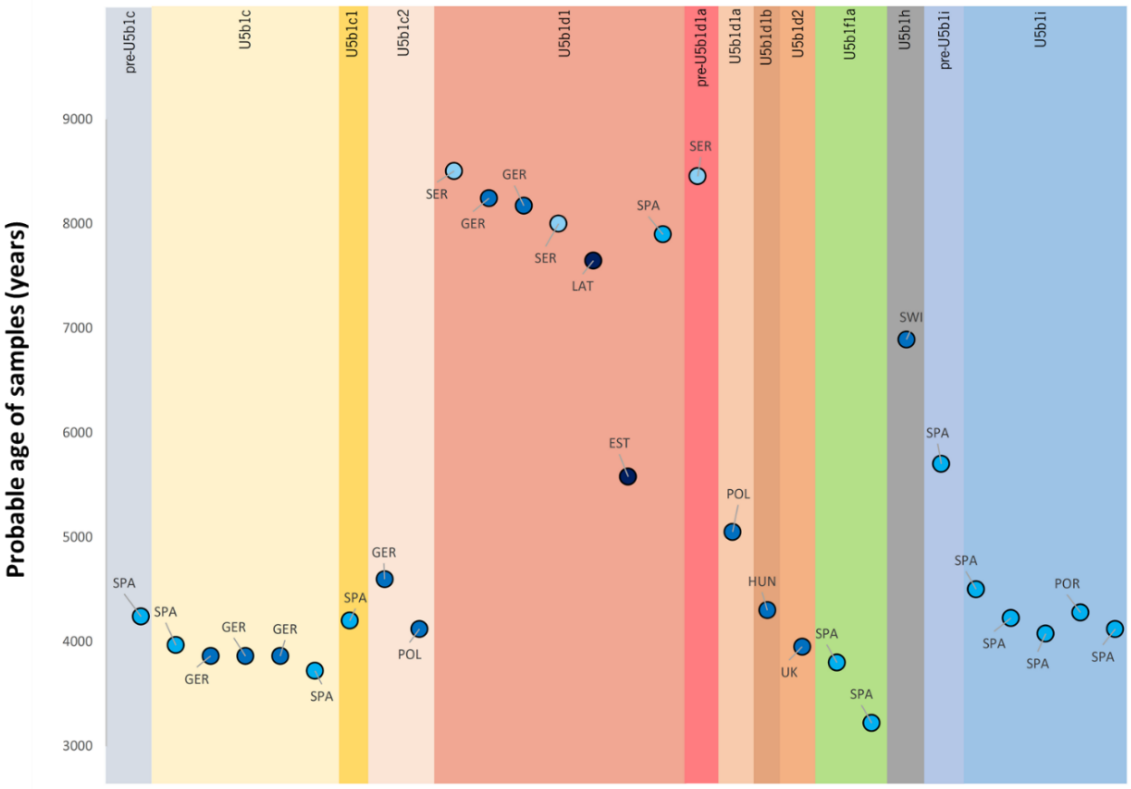

Figure 19 - **Date estimation of ancient samples of U5 clades including haplogroups between pre-U5b1c and U5b1i.** Information regarding the country is labelled in each sample.

U5b2 (23.9 [16.9; 31.0] kya) has in general a Central European distribution, although a nearly 20 kya-old aDNA sample from Iberia might suggest an origin in Iberia as U5b1 (Figure 20). A U5b2a aDNA sample dating to about 11 kya was also detected in Iberia. Considering this, it is possible that following an expansion from Iberia after the Ice Age, some subclades returned, including U5b2a1a and U5b2b at around 10 kya. Also, some U5b2 clades had a relevant frequency in the gene pool of the British Islands, namely U5b2b with an age estimate of 6 kya and U5b2c2b with an age estimate of 4 kya in the Island.

U5b3 (11.2 [7.3; 15.1] kya) is the youngest U5b subclade and it has the most Mediterranean distribution of all U5b clades (Figure 22). It contains several basal Iberian lineages and basal Central Mediterranean clades (U5b3a) indicating also an Iberian origin. Such result is supported by a larger Iberian diversity in aDNA although the older sample dates to 6 kya only. One of the subclades U5b3a (5.9 [2.7; 9.1] kya) represents a major Sardinian founder sequence. A founder age of U5b3 to Central/Northern Europe is about 9 kya.

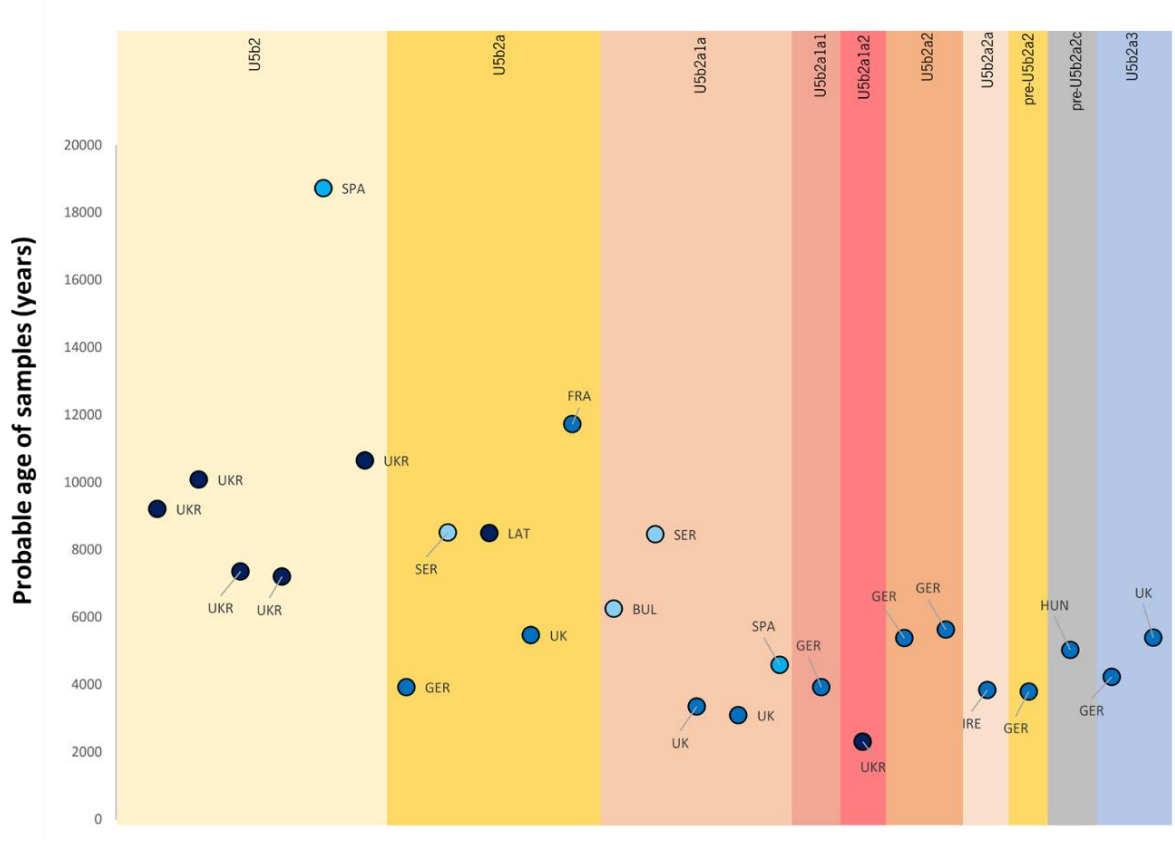

Figure 20 - **Date estimation of ancient samples of U5 clades including haplogroups between U5b2 and U5b2a3.** Information regarding the country is labelled in each sample.

Figure 21 - **Date estimation of ancient samples of U5 clades including haplogroups between U5b2b and U5b2b5.** Information regarding the country is labelled in each sample.

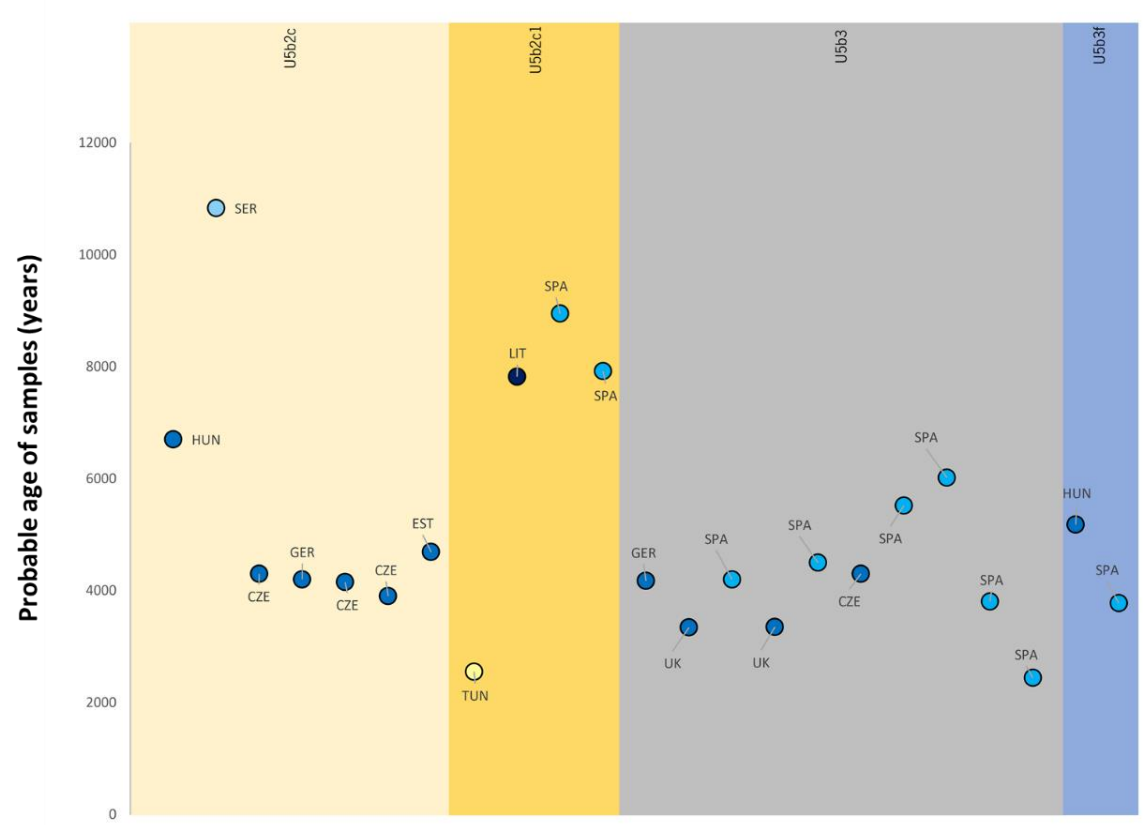

Figure 22 - **Date estimation of ancient samples of U5 clades including haplogroups between U5b2c and U5b3f.** Information regarding the country is labelled in each sample.

Phylogeography of haplogroup U6

Haplogroup U6, dating to 35.4 [24.6;46.6] kya most probably emerged in the Near East, although it almost disappeared from the area in the present. It is present across North Africa, representing a probable back to Africa migration following the Out-of-Africa migration. In terms of diversity, it is clear that the distribution of U6 is related with an expansion across the Mediterranean with the highest diversity in Southeast Europe, Iberia and North Africa (Figure 23). The phylogeography of U6 has been widely studied before.

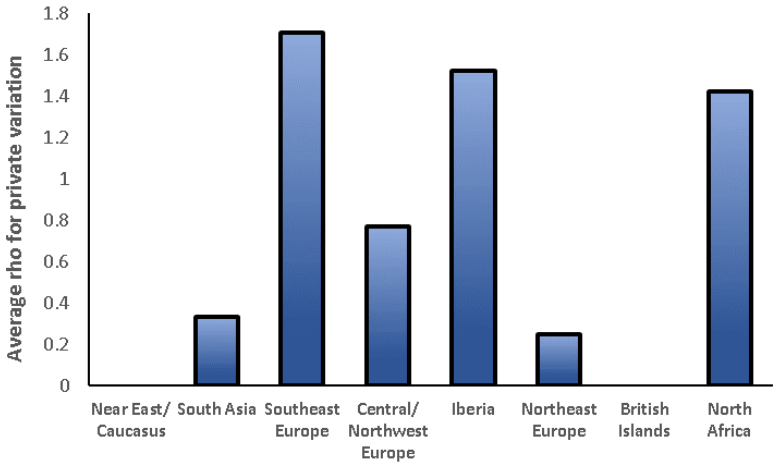

Figure 23 - Level of private variation by region for haplogroup U6.

It is important to note that in terms of aDNA, there is a very ancient early U6 sequence from Romania (Figure 24) dating to nearly 40 kya. While it has been used to suggest an European origin of U6, the proximity to the Near East and the present North Africa distribution nowadays allows to suggest a Near Eastern origin. Also, Europe is generally more characterized for aDNA than North Africa and U6 only appears in Europe in the last couple of millennia (Olalde *et al.*, 2019).

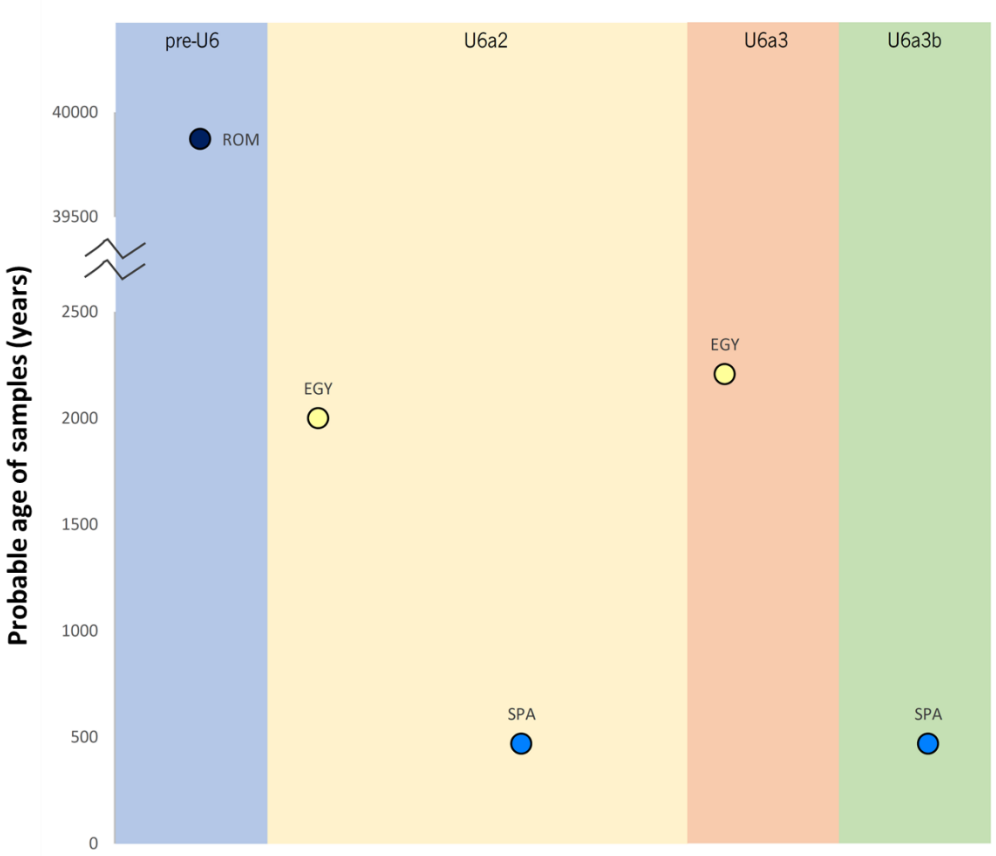

Figure 24 - **Date estimation of ancient samples within haplogroups pre-U6, U6a2, U6a3 and U6a3b.** Information regarding the country is labelled in each sample.

Phylogeography of haplogroup U2

The U2 clade is one of the oldest subclades within U (and U2'3'4'7'8'9) with age estimates of 63.9 [43,9;84.8] kya, a higher estimate than the ancestor clades. While generally it is assumed that haplogroup U2 has a South Asian origin with most of its clade displaying an Indian distribution (U2a, U2b, U2c, U2d) with only U2e displaying signal for a recent introduction into Europe, aDNA challenges that

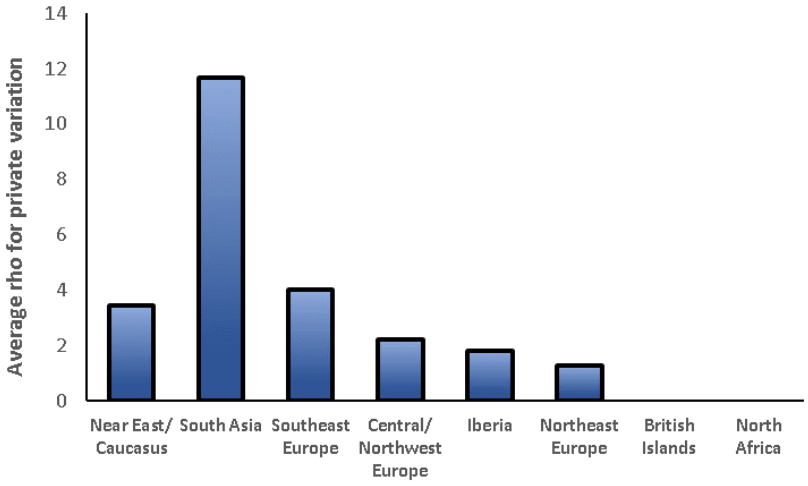

Figure 25 - Level of private variation by region for haplogroup U2.

view. One sample dating over 40 kya years basal to haplogroup U2 was detected in what is nowadays Russia (Figure 26). Other unidentified U2 clades were detected in Europe's aDNA samples dating just above 5 kya only. It is possible that U2 arose also in Southwest Asia and moved into South Asia and into Europe in the first settlement of each region (Figure 25).

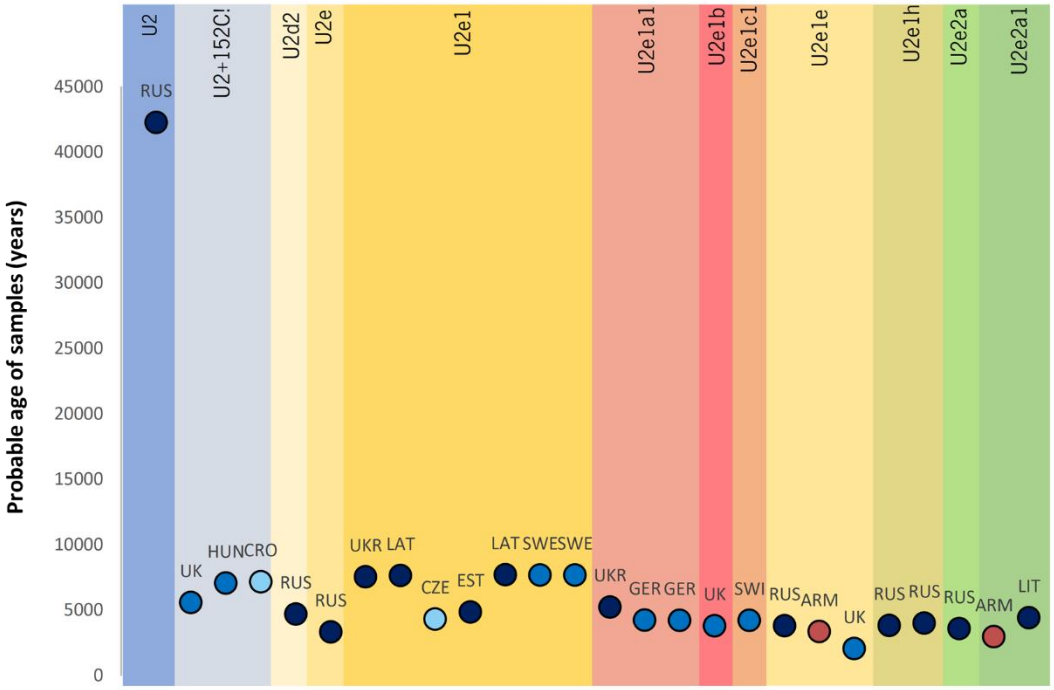

Figure 26 - **Date estimation of ancient samples of U2 clades.** Information regarding the country is labelled in each sample.

In terms of migration events into Europe, the major signals correspond to U2e1, U2e1a1, U2e1b1+15784C and U2e2+8473C.

U2e1 displays a signal for early Neolithic introduction with an estimate of 8.4 kya in the founder analysis into Europe, very similar estimates to the early U2e1 samples in Europe according to ancient DNA. U2e1a1 has a founder age of 6.6 kya in line with the aDNA dates. U2e1b1 founder has an age of less than 3 kya. The clade (U2e1b1+15784C) is linked with two Sardinian samples at 5.6 [0.6;10.7] kya. Its distribution from Ukraine/Russia to Iberia does not exclude being part of a Bronze Age expansion.

Finally, U2e2+8473C displays a curious pattern with a probable postglacial signal into Europe. U2e2a, the founder clades dates to 15.7 [7.2;24.7] kya (with a basal sample from India and aDNA samples from Russia), while the mostly European clade dates to 10.2 [6.1;14.6] kya. A founder age of 9.5 kya when considering an extended source, including Southeast Europe, suggests it might be Neolithic into Central/Northern Europe, where the clade is mostly restricted.

Phylogeography of haplogroup U3

Haplogroup U3, dating to 31.2 [21.4;41.4] kya shows a clear phylogeographic picture. Either in terms of diversity (Figure 27), of tree structure (Figure 4) or of aDNA (Figure 28), the point of origin of U3

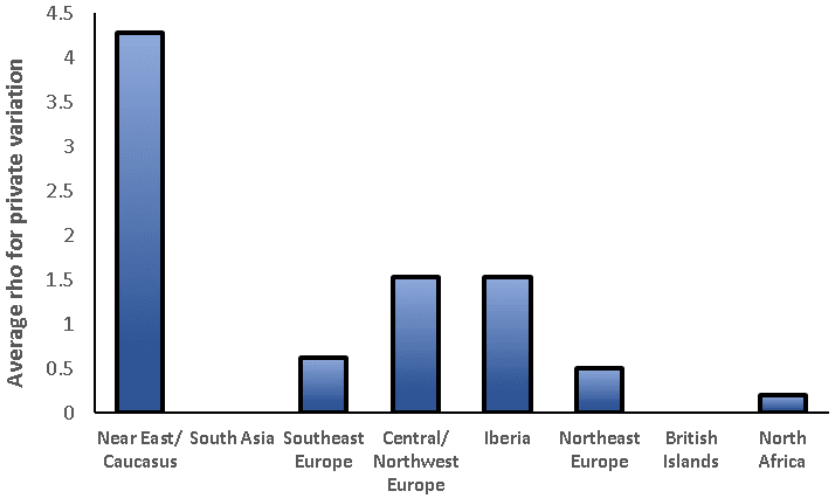

Figure 27 - Level of private variation by region for haplogroup U3.

is Southwest Asia.

The strongest signals in the data are Neolithic movements focused on U3a1, U3b1 and U3b2a1. U3a1 only appears in the European aDNA profile after 6 kya in line with this evidence.

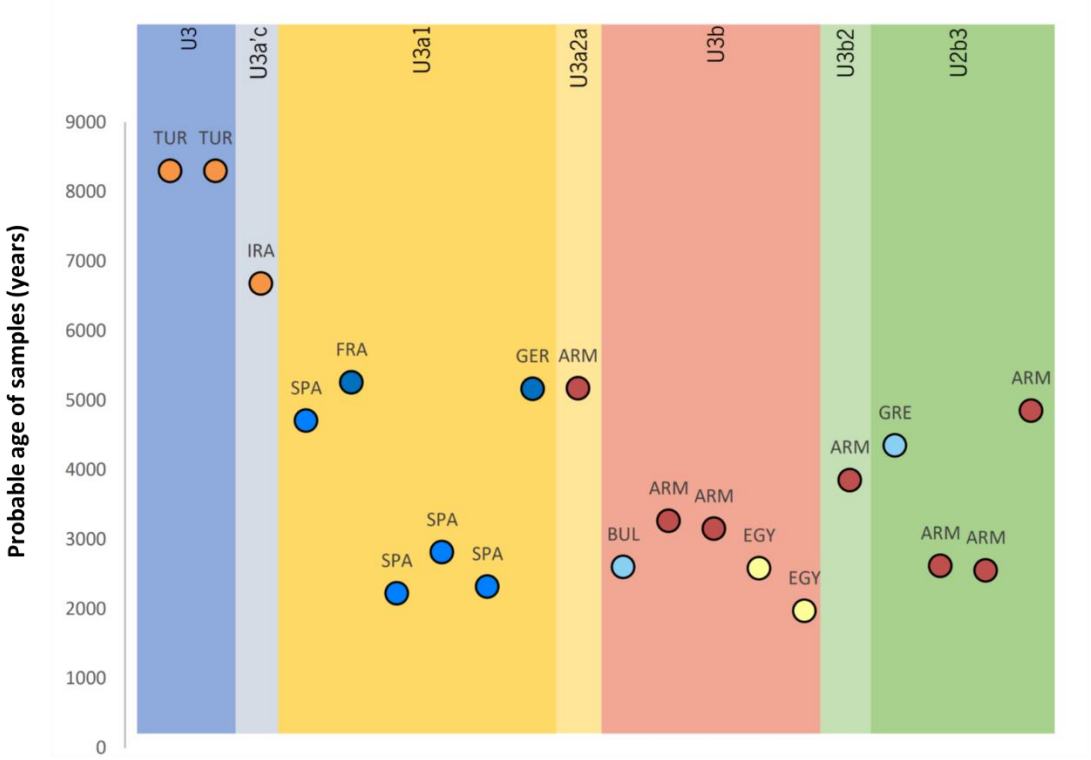

Figure 28 - **Date estimation of ancient samples of U3 clades.** Information regarding the country is labelled in each sample.

Phylogeography of U4'9

Haplogroup U4'9 is divided into two subclades, the more frequent and wide-spread U4 and the very rare U9. U4'9 dates to 37.4 [22.4;53.2] kya. U9, dating to 25.0 [15.9; 34.5] kya, is very rare and we can find samples in the Near East and South Asia. It was never detected in ancient samples.

U4 dates to 19.6 [14.4; 24.8] ka and it is distributed through South Asia, Southwest Asia and Europe. Regarding diversity (Figure 29), Northeast Europe seems to be the location with higher diversity suggesting a possible origin in Eastern Europe. The oldest sample of U4 is from Romania providing some support for an European origin in the Eastern side (Figure 30).

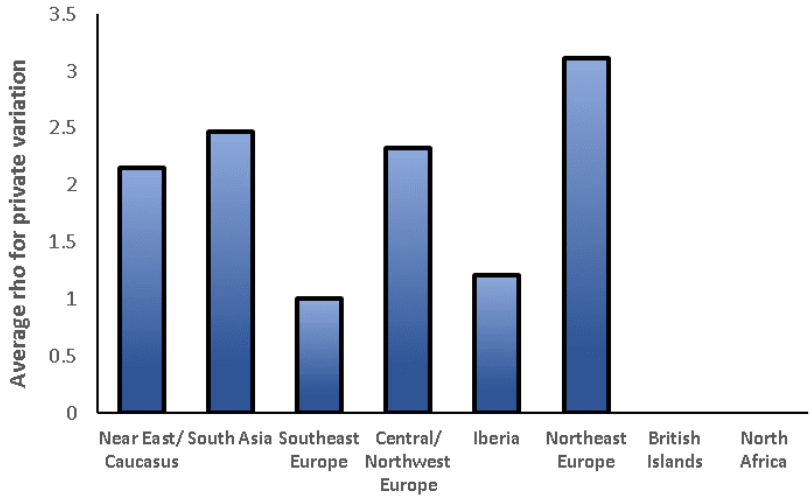

Figure 29 - Level of private variation by region for haplogroup U4.

U4a has a probable origin in Eastern Europe, considering both the tree structure (Figure 4) and the aDNA (Figure 30). Considering a source in this location and a migration West into the remaining Europe, the major signal is for U4a1a with a point migration age of 3.7 kya. The distribution of this star-like clade from Eastern Europe to the British Islands and Iberia strongly suggests an expansion in the Bronze age. Some of U4a1 might have expanded earlier at 10 kya. The two oldest samples in this clade are from Servia dating to about 10 kya. U4a2 shows an expansion at about 9 kya however its two subclades, U4a2a and U4a2b, display founder ages of 3.6 and 3.9 kya, respectively, again suggesting a migration in the Bronze Age.

U4b1 and U4b1a might have expanded in the postglacial period. However, U4b1b1 might represent another instance of a Bronze Age expansion. Nevertheless, the largest signal within U4 (pairing with U4a1a) is U4c1+14866T, that is also very star-like, dates to about 5 kya and it is widespread across Europe. Despite its slightly higher age estimate it is likely this also represents a major signal of Bronze Age expansion in a similar fashion as U4a1a, U4a2a and U4a2b.

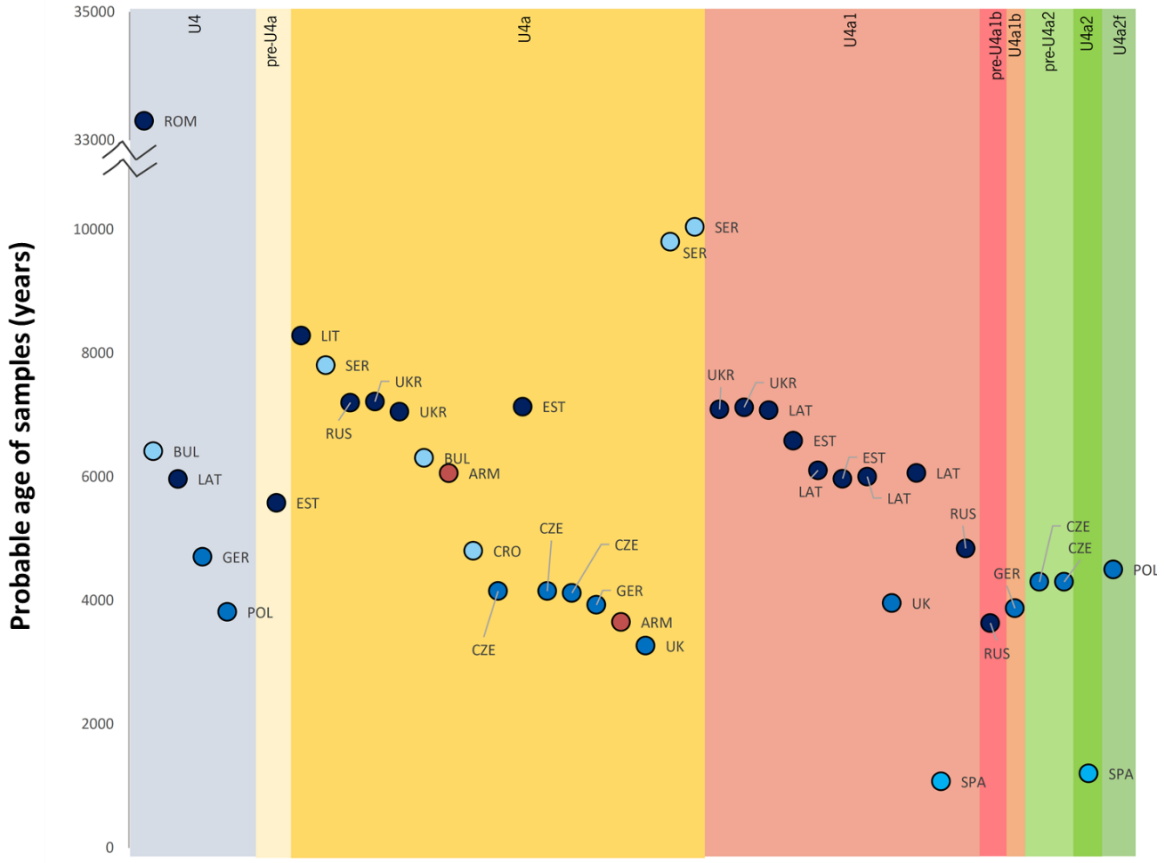

Figure 30 - **Date estimation of ancient samples of U4 clades including haplogroups between U4 and U4a2f.** Information regarding the country is labelled in each sample.

Overall the phylogeography of U4 shows that the clade has a point of origin in Eastern Europe, include the Russian and Ukrainian steppes, the homeland of the populations that drastically expanded in the Bronze Age. While this migration mostly involved men, it is clear from the phylogeography of U4 that women were part of this event, even if at a smaller scale. U4 has been previously pointed out as expanding in the postglacial period. We can find some lower signal of expansion before the Bronze Age, in some cases supported by aDNA, including an Iberian sequence (U4a2f) dating to nearly 6 kya (Villalba-Mouco *et al.*, 2019).

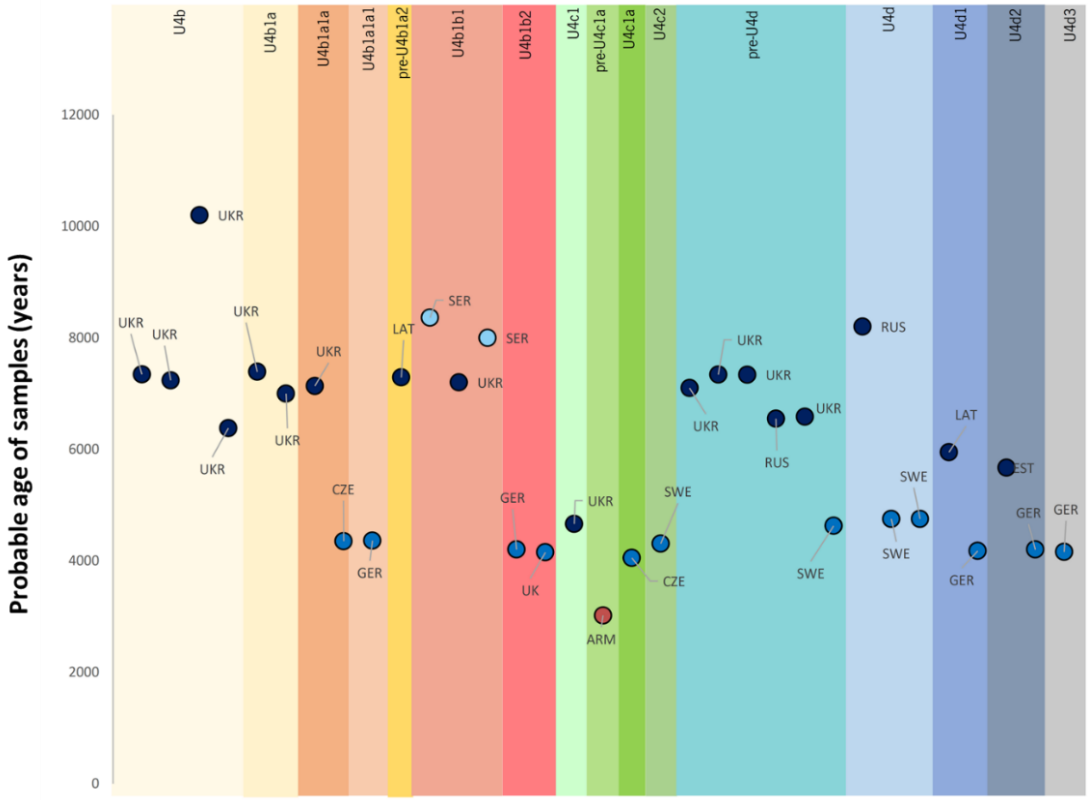

Figure 31 - **Date estimation of ancient samples of U4 clades including haplogroups between U4b and U4d3.** Information regarding the country is labelled in each sample.

Phylogeography of haplogroup U7

U7, dating to 18.5 [13.6; 23.3] kya, has a probable origin in Southwest Asia that has greatly expanded to South Asia in the postglacial period and the Neolithic (Figure 32) with both areas showing the highest level of private diversity. Nevertheless, U7 was involved in migrations into Europe. No dated U7 sequence from Europe was present in our aDNA database (Figure 33).

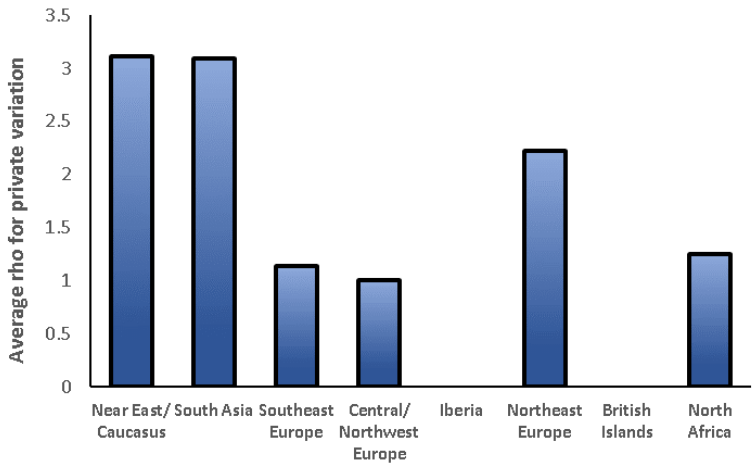

Figure 32 - Level of private variation by region for haplogroup U7.

There are only two major signals of U7 expansions into Europe, U7b and U7b1, with point estimates of migration dating to 6.3 and 7.6 kya. Most likely both represent Neolithic migration from the Near East, mostly into Mediterranean Europe (Southeast Europe).

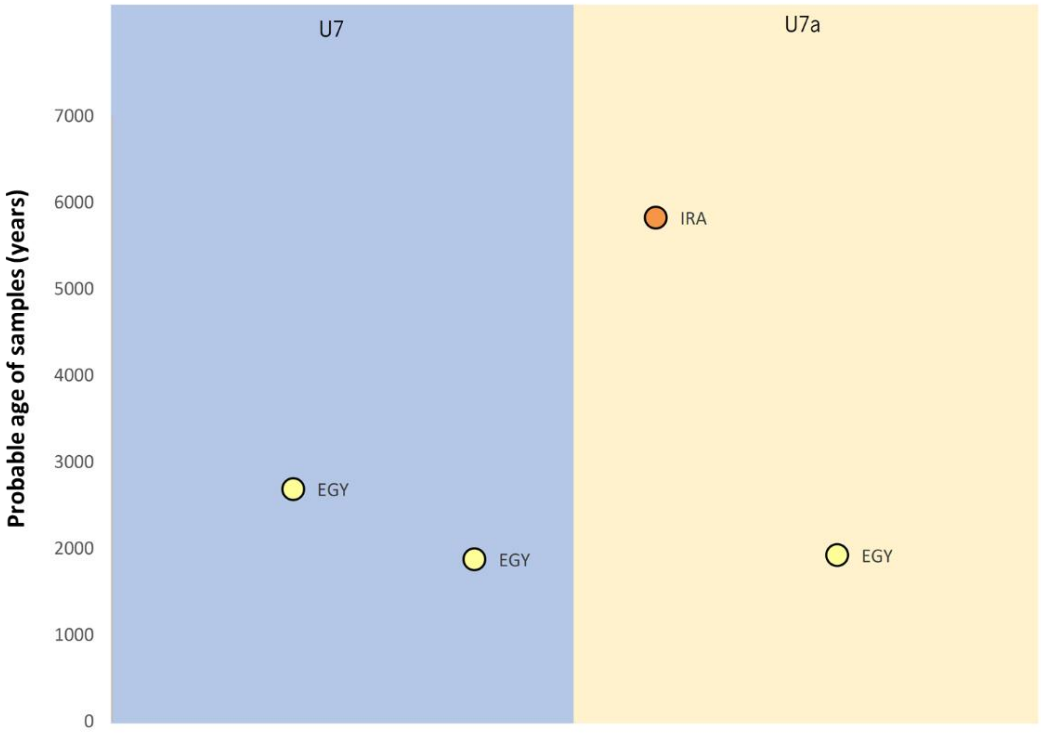

Figure 33 - **Date estimation of ancient samples of haplogroups U7 and U7a.** Information regarding the country is labelled in each sample.

Phylogeography of U8

Haplogroup U8 represents the second largest clade in Europe (following U5) and it also display a long history in the continent going back to the hunter-gatherer populations. It dates to 47.1 [30.8; 64.1] kya and splits between U8a and U8b.

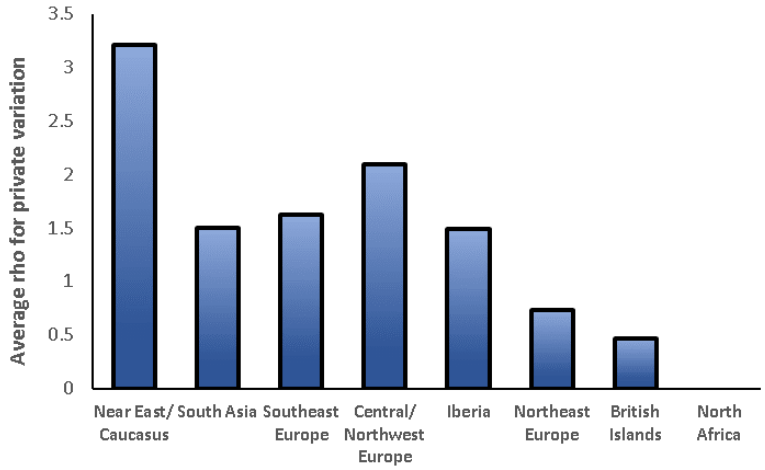

Figure 34 - Level of private variation by region for haplogroup U8.

U8 shows a higher level of private diversity in Southwest Asia which seems a surprising result considering that the most basal lineages do not exist in the Near East (U8a). The result is mostly related with the diversity of what is by far the most common subclade, K.

U8a has been previously been associated with Palaeolithic Hunter-gatherers in the Iberia Peninsula but the current tree shows that U8a is spread from Eastern Europe to Iberia (Figures 4,34), with little Mediterranean presence (except Iberia). Considering a founder age to Iberia we would obtain a founder age of about 19.5 kya. The oldest aDNA sequences are located in Germany supporting the Central European origin (Figure 35).

U8b splits between K and U8b1 (Figure 4). U8b1 (30.4 [21.5; 39.6] kya) has a mostly Mediterranean distribution, including a subclade in North Africa. It has a probable origin in Central Mediterranean with gene flow in various directions (North Africa, Central Europe, Iberia and the Near East) without a clear display of any massive migration. A Central European source also fits the presence of a sister U8c, detected only as aDNA, in Italy.

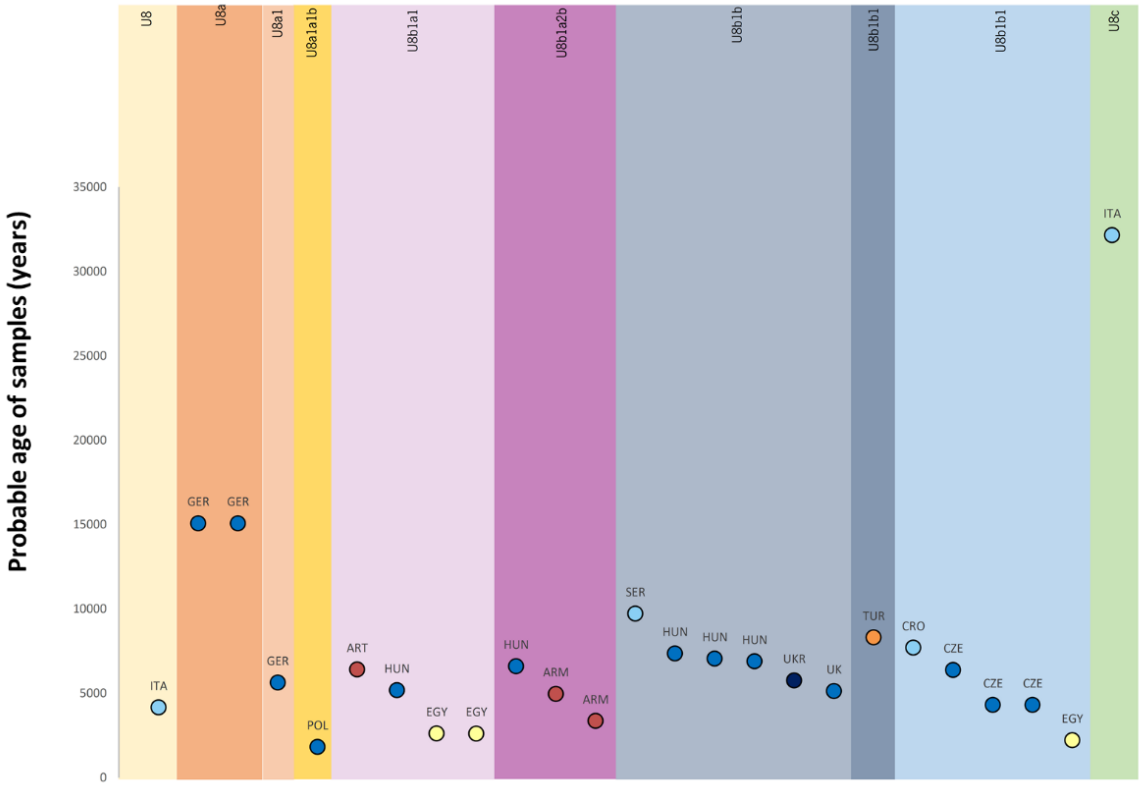

Figure 35 - **Date estimation of ancient samples of U8 clades including haplogroups between U8 and U8c.** Information regarding the country is labelled in each sample.

Finally, K (26.2 [17.7; 35.1] kya) is one of the most common haplogroups in Europe. Its diversity suggests an origin in the Near East. In such scenario, considering the European distribution of U8a and U8b, this could correspond to a back to Southwest Asia migration. The aDNA clade K3 is detected in the Caucasus offering support for this Southwest Asian origin of K.

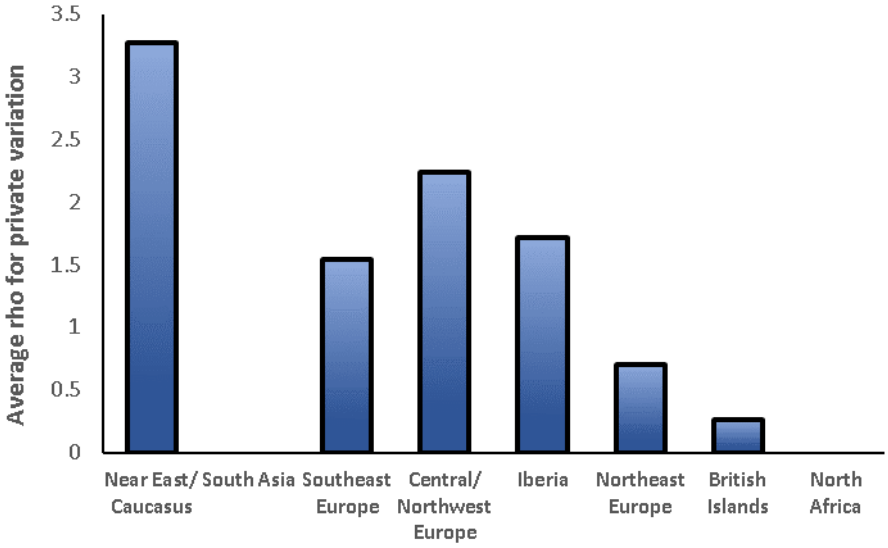

Figure 36 - Level of private variation by region for haplogroup K.

K1 is the largest K clade (21.9 [16.2; 27.7] kya) (Figure 4). Several of its subclades appear to have either a Southwest Asian origin or Southeast European (Figure 36). Some other subclades have a Central European distribution. Its diversity suggests a Southwest Asian origin (Figure 39). The oldest aDNA samples within K (across various subclades) are from Southwest Asia (Figures 39 - 44), with a few exceptions where older Southeast European Mesolithic samples were detected, in K1c (Figure 44).

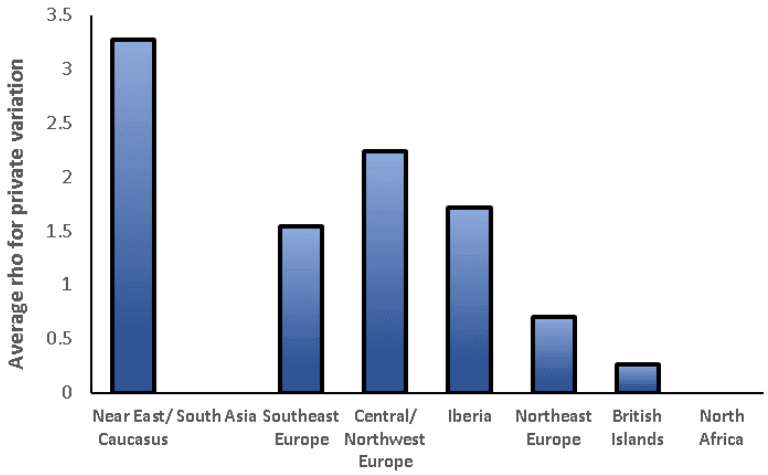

Figure 37 - Level of private variation by region for haplogroup K1.

A founder analysis of this clade from Southwest Asia to Southeast Europe indicates mostly postglacial expansion (commonly K1a) into this region, but a founder into Central Asia reflects mostly Neolithic expansions with the exception of a few clades that maintain a postglacial signal (K1a1+114T, K1a1b1, K1a4, K1+16362C, K1a1b1). K1a4a1 is the major founder of K1 into Iberia, displaying a founder estimate in the Neolithic period (6 kya). Several K1a4a1 samples appear in the Iberian aDNA database at 6 kya, although two samples date above this (at about 7 kya) (Villalba-Mouco *et al.*, 2019).

Nevertheless, it is a corroboration from aDNA that the clade is Neolithic in Iberia. The major founder into Britain (K1a10a) displays a founder age of only 3.3 kya probably with an entrance in the Bronze Age.

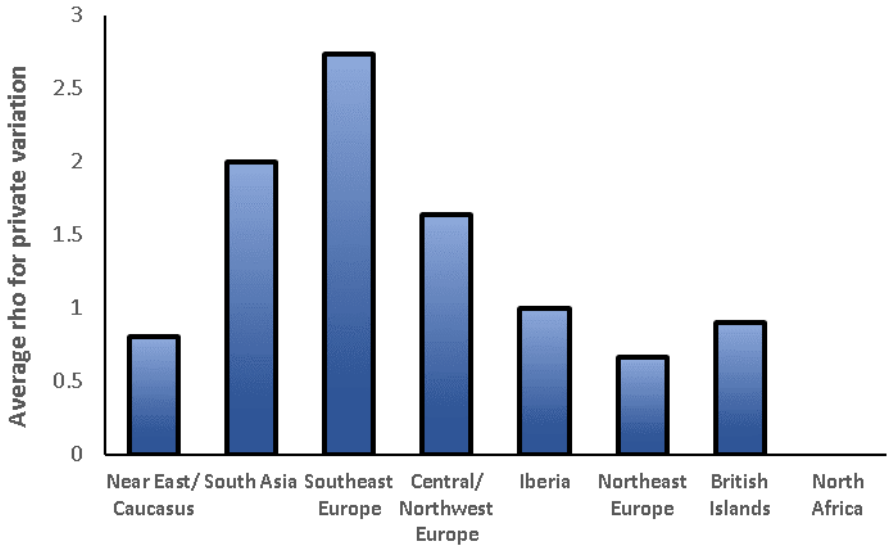

Figure 38 - Level of private variation by region for haplogroup K2.

K2 (17.6 [9.9; 25.6] kya) (Figure 38) has a very similar pattern to K1 (Figure 37) with some clades displaying a Southwest Asian/Southeast European probable source. In terms of diversity, Southeast Europe appears as the most diverse region. It is much rarer and rarely appears in a relevant way in the founder profiles. The exceptions are: K2b1a is a major founder with a Neolithic entrance in Iberia; K2b1a1a is a Bronze Age founder in Britain; and K2a is a probable Neolithic founder in Sardinia.

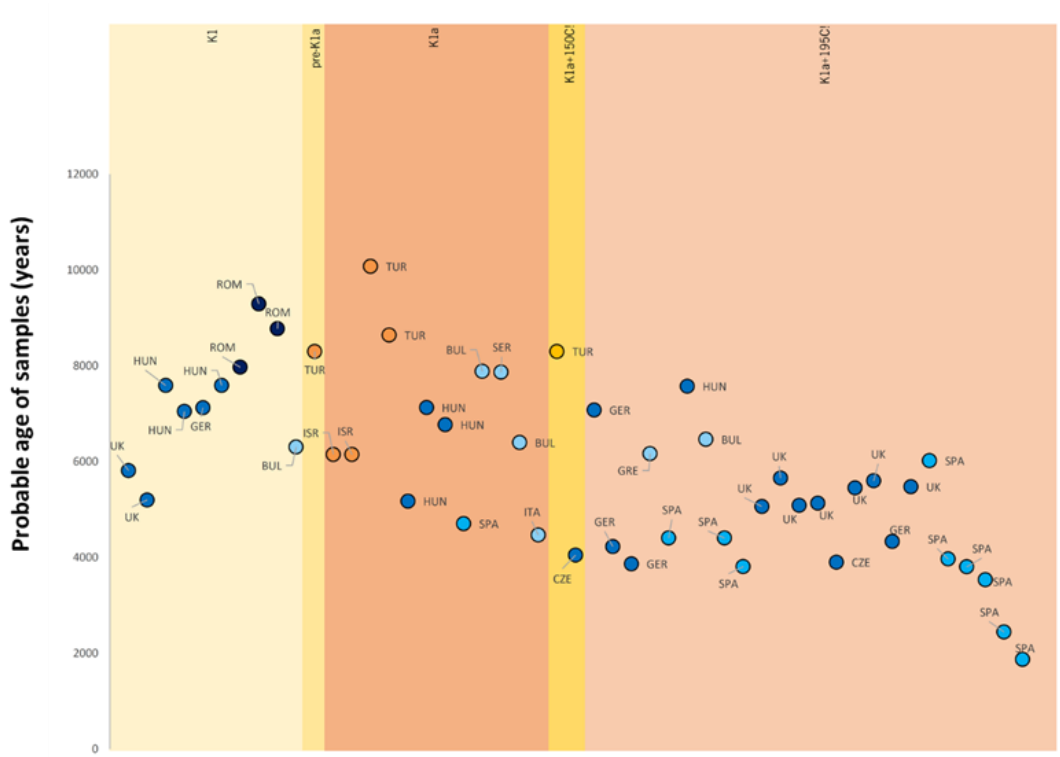

Figure 39 - **Date estimation of ancient samples of K clades including haplogroups between K1 and K1a + 195C!.** Information regarding the country is labelled in each sample.

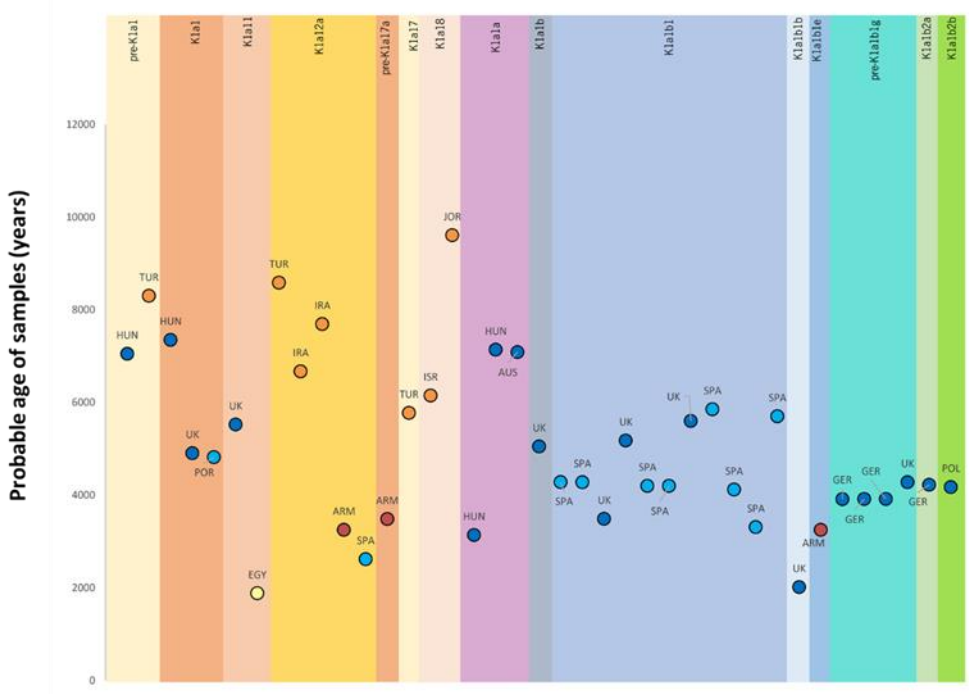

Figure 40 - **Date estimation of ancient samples of K clades including haplogroups between pre-K1a1 and K1a1b2b.** Information regarding the country is labelled in each sample.

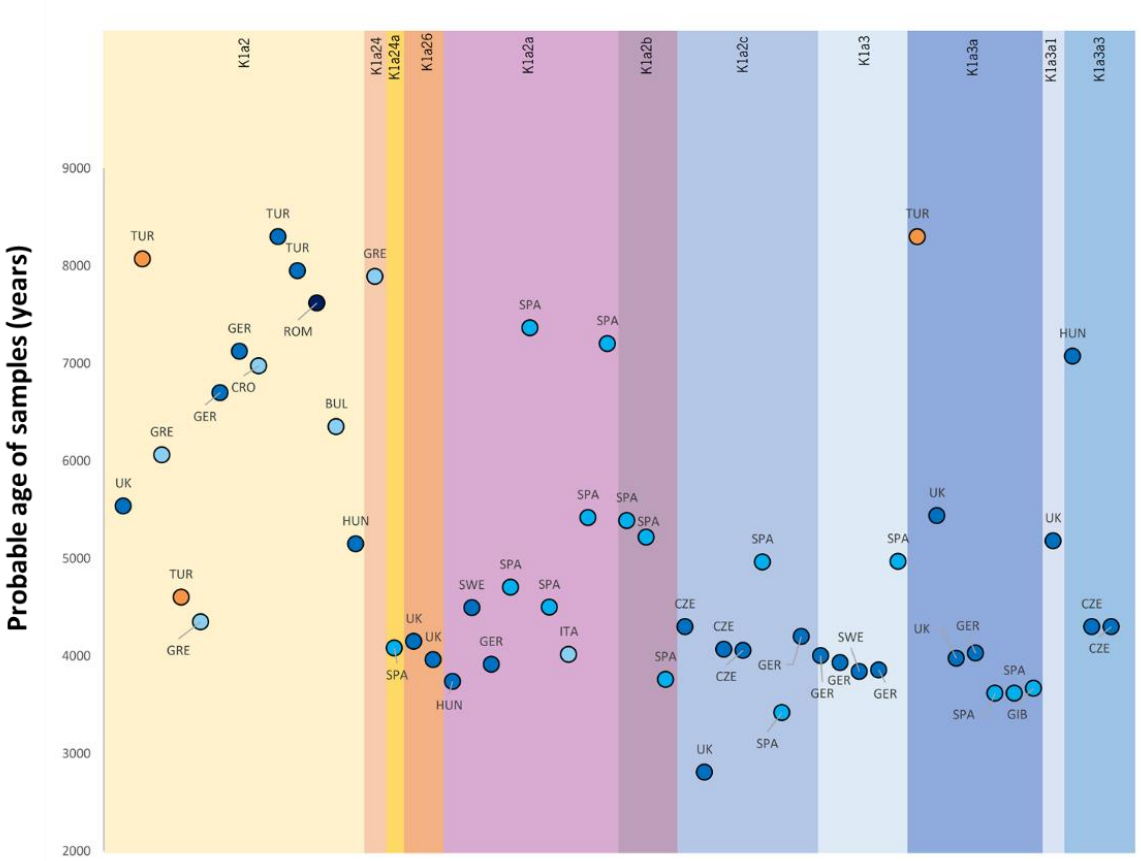

Figure 41 - **Date estimation of ancient samples of K clades including haplogroups between K1a2 and K1a3a3.** Information regarding the country is labelled in each sample.

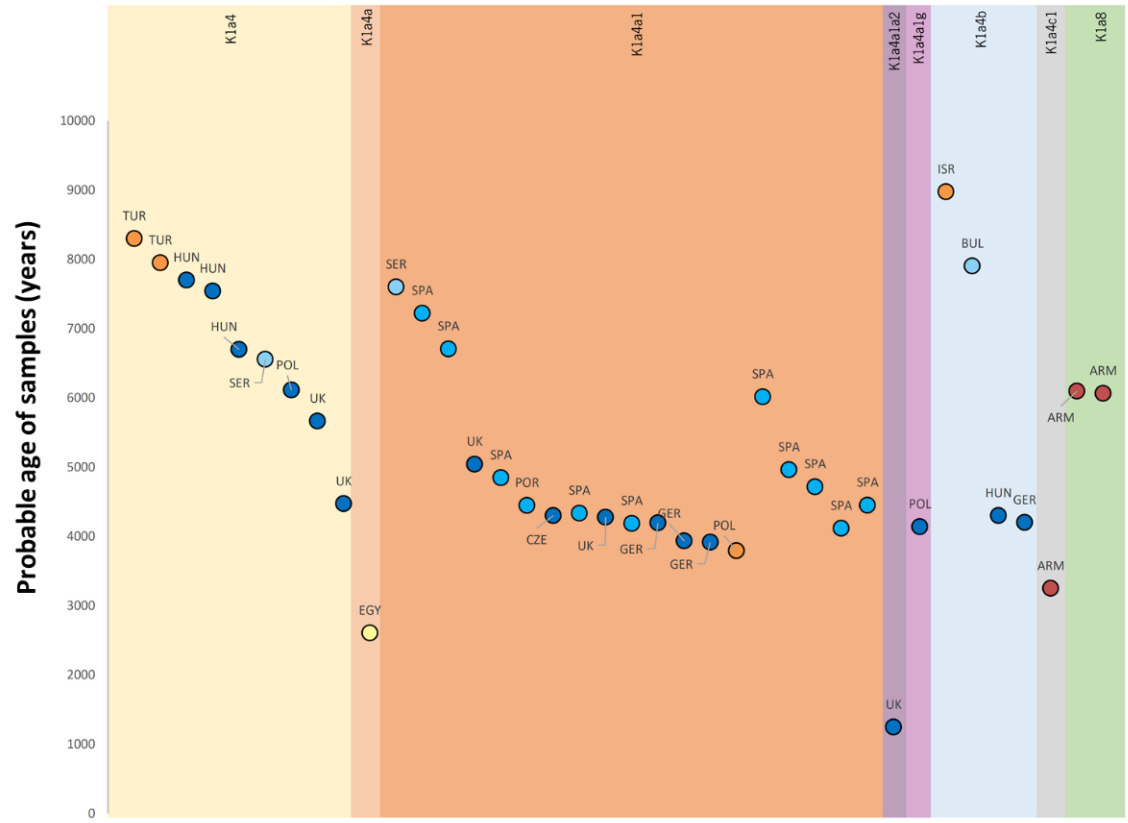

Figure 42 - **Date estimation of ancient samples of K clades including haplogroups between K1a4 and K1a8.** Information regarding the country is labelled in each sample.

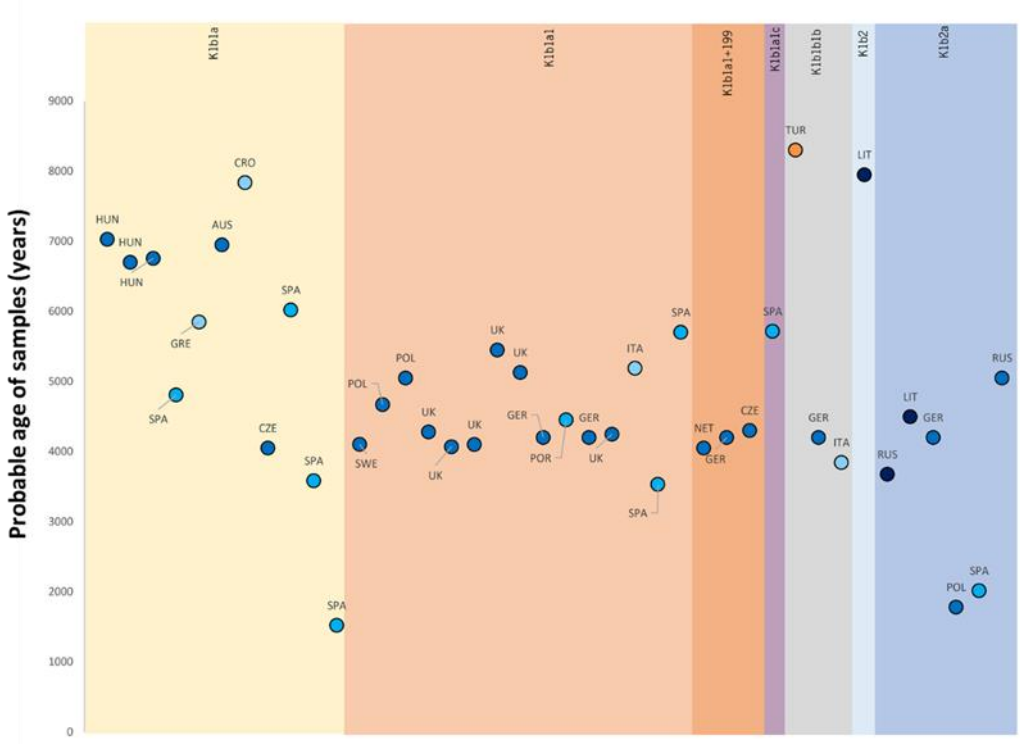

Figure 43 - **Date estimation of ancient samples of K clades including haplogroups between K1b1a and K1b2a.** Information regarding the country is labelled in each sample.

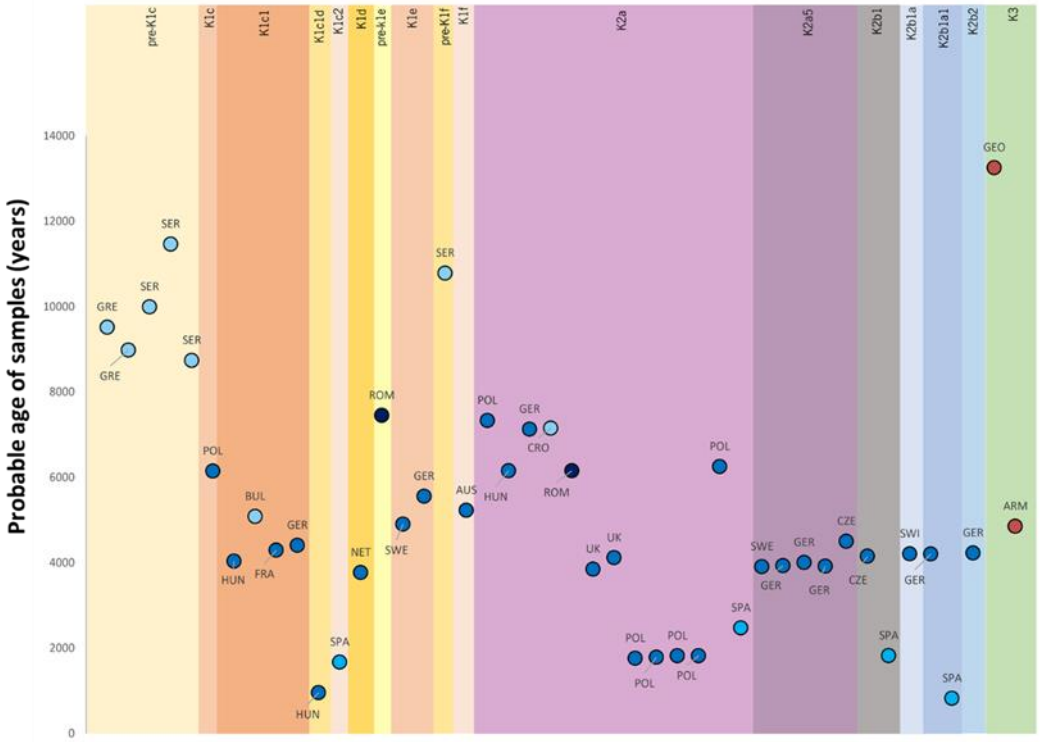

Figure 44 - **Date estimation of ancient samples of K clades including haplogroups between pre-K1c and K3.** Information regarding the country is labelled in each sample.

Chapter 5: Discussion

5. Discussion

Archaeogenetics, the application of genetic data and methodologies to unravel the human past, has been growing constantly for four decades. Recent years witnessed a real revolution in terms of data generating, with next generation sequencing and the incredible number of whole human genomes fully sequenced and the genomic data from human that lived thousands of years ago.

The Archaeogenetics of Europe has been in the centrefold of this revolution with the main advances in the field typically applied for the first time to Europe's past. Scientific efforts have proven extremely fruitful with astonishing finding in the last few years. Among those findings we can count the discovery of a nearly full replacement of the populations of Britain in the Bronze Age (Olalde *et al.*, 2018), or the massive male-mediated migration from the Russian Steppes that replaced men across all Europe, including a virtual full replacement in the Iberia Peninsula (Haak *et al.*, 2015; Olalde *et al.*, 2019).

One marker from a previous period of Archaeogenetics, mitochondrial DNA, is still being widely used to the study of the human past, mainly when applied in a phylogeographic context. Such approach provides a powerful asset, by not only providing a unique view on the female history of the population, but also by offering a different view on the data that is different and complementary to wide studies based on genomics and palaeogenomics. Such approach is growing more powerful with the use of ancient mitochondrial genomes. Nevertheless, many researchers still criticize the use of mtDNA, typically in the light of an inability to understand its properties and inference principles.

In that sense, the analysis of haplogroup U allow us to test the efficiency of the methodology and also retrieve new results from the archaeogenetics of Europe. Haplogroup U has been present in the European continent since the early settlers before 40 kya. Many of its subclades display considerable frequencies across the continent (U5, K, U4) and it is a basic principle that it witnessed most of the major events in the continent.

This dissertation aims to tell the history of human European populations as chronicled by haplogroup U. Haplogroup U most likely emerged in Southwest Asia, probably early after humans left Africa. Migrants into the European continent carried a root type of U or already some derived sequenced on the way to the U5 motif, that obviously originated U5, the derived U sequence with variant 1811 (U2'3'4'7'8'9) that originated U8 or already a form of U8, and possibly U2 that might have emerged in the Near East before. Such migration probably took place between 50 and 40 kya.

About 22 kya, Europe started being enveloped in ice until about 15 kya. Most of Europe was inhabited except for most Mediterranean Europe, the Balkans and Eastern Europe. With the recovery of the climate and the land conditions for living conditions, most of Europe was recolonized. U5b, a derived clade of U,

probably survived in Mediterranean Europe and expanded into the remaining continent. The other derived subclade of U5, U5a, also occupied most of Europe, although with a less clear picture of its source, most probably Central Mediterranean or the Balkans. While populations were recolonizing Europe from Refugia within Europe, the Near East represented a major source of recolonization with subclades of K (a derived form of U8 that might have retracted to Southwest Asia before the Ice Age), U1 and U7 expanding to Europe. That gene flow was stronger into Southeast Europe, with few moving further across the Mediterranean or North into Central Europe. Population dynamics within Europe were probably stronger than previously thought, including possible movements into the Iberia Peninsula (Olalde *et al.*, 2019).

After 10 kya, another major expansion shifted considerably the European genetic picture. Humans once again expanded from Southwest Asia, but this time carrying a new set of tools and way of life, with the advent of agriculture and wider settlements. Many subclades within U1, U2, U3, U7 and K expanded into Europe. Many people in Southeast Europe intermixed with these migrants increasing the diversity of the migration wave as demonstrated also for other mtDNA clades (Pereira *et al.*, 2017). This wave reached Iberia, Sardinia and the British Islands.

The Neolithic was not the last drastic change in Europe's population structure. By the Bronze Age, a group living in the European steppes moved across the full European geographic range replacing most of the men. However, men were not alone in the expansion. U4, that was mostly indigenous to Eastern Europe, shows clades displaying clear signals of Bronze age expansions across the entire Europe from the Steppes to Britain and Iberia. It was not a short-range expansion by women but probably accompanied males across the entire expansion.

Also, during that period many of the clades of indigenous people in Central Europe, descendants of the settlers of Europe in the postglacial, carrying in many cases U5 lineages, mixed and expanded into Iberia and more drastically into Britain, where most of the founders date to the Bronze Age.

Overall, the phylogeography of U displays a clear record of the history of the continent. Quite amazing for a single mitochondrial clade that survived over 40 kya in the continent. However, such statement would be naïve, as inferences were based on over 6500 modern mtDNA sequences and over 500 ancient mtDNA genomes and the inference power of mtDNA will increase drastically in the near future.

Upcoming work is still required to improve inferences, namely the application of alternative dating methods (as maximum likelihood) and the associated estimates of effective population sizes (through Bayesian Skyline Plots) applied to these haplogroups.

Chapter 6: References

6. References

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Chapter 7: Annexes

Table 1 | Complete dataset analyzed for mtDNA studies. Information regarding haplogroup and country is also provided.

SampleID	Haplogroup	Country	SampleID	Haplogroup	Country
11642_sard	K1+16362	Italy	JQ702852	K1+16362	Unknown
12933_sard	K1+16362	Italy	ESP0274	K1a	Spain
21128_sard	K1+16362	Italy	JQ706038	K1a	France
22634_sard	K1+16362	Italy	ALP545	K1a	Italy
22961_sard	K1+16362	Italy	VIKI5012	K1a	Europe NW
23556_sard	K1+16362	Italy	VIKI5032	K1a	Europe NW
23571_sard	K1+16362	Italy	VIKI5470	K1a	Europe NW
23595_sard	K1+16362	Italy	VIKI5906	K1a	Europe NW
23927_sard	K1+16362	Italy	VIKI5968	K1a	Europe NW
24917_sard	K1+16362	Italy	VIKI6090	K1a	Europe NW
24975_sard	K1+16362	Italy	VIKI6154	K1a	Europe NW
25435_sard	K1+16362	Italy	VIKI6396	K1a	Europe NW
26059_sard	K1+16362	Italy	VIKI6490	K1a	Europe NW
26501_sard	K1+16362	Italy	VIKI7011	K1a	Europe NW
26772_sard	K1+16362	Italy	1113001564_S15	K1a	Unknown
26994_sard	K1+16362	Italy	BGD219	K1a	Italy
28300_sard	K1+16362	Italy	BGD55	K1a	Italy
28340_sard	K1+16362	Italy	BG52	K1a	Italy
29225_sard	K1+16362	Italy	KC911440	K1a	Iran
29373_sard	K1+16362	Italy	JQ705705	K1a	France
29399_sard	K1+16362	Italy	JQ706027	K1a	Albania
29913_sard	K1+16362	Italy	KC878709	K1a	Turkey
30342_sard	K1+16362	Italy	JQ706053	K1a	North Caucasus
30438_sard	K1+16362	Italy	1113000507_S20	K1a	Unknown
30907_sard	K1+16362	Italy	JQ703255	K1a	Italy
31458_sard	K1+16362	Italy	HM043706	K1a	United States
31709_sard	K1+16362	Italy	BGD230	K1a	Italy
31857_sard	K1+16362	Italy	BG32	K1a	Italy
32522_sard	K1+16362	Italy	KC911353	K1a	Iran
33348_sard	K1+16362	Italy	csct_007075_sard	K1a	Italy
34109_sard	K1+16362	Italy	1113002112_S19	K1a	Unknown
36929_sard	K1+16362	Italy	JX153056	K1a	Greece
37083_sard	K1+16362	Italy	JQ705750	K1a	France
38049_sard	K1+16362	Italy	HM852762	K1a	Armenia
41789_sard	K1+16362	Italy	KC878720	K1a	Italy
42103_sard	K1+16362	Italy	JQ706037	K1a	Ethiopia
42718_sard	K1+16362	Italy	JF893456	K1a	Armenia
42748_sard	K1+16362	Italy	JQ705476	K1a	Italy
4585_sard	K1+16362	Italy	1113001275_S73	K1a	Unknown
459_sard	K1+16362	Italy	HQ384197	K1a	Iberia
4961_sard	K1+16362	Italy	JQ706031	K1a	Cyprus
8277_sard	K1+16362	Italy	1113000513_S82	K1a	Unknown
9375_sard	K1+16362	Italy	JQ706060	K1a	Slovakia
996_sard	K1+16362	Italy	JQ702266	K1a	Unknown
csct_007314_sard	K1+16362	Italy	csct_004168_sard	K1a	Italy
31426_sard	K1+16362	Italy	JX235371	K1a	United States

Table 1 | Complete dataset analysed for mtDNA studies. Information regarding haplogroup and country is also provided (continuation).

SampleID	Haplogroup	Country	SampleID	Haplogroup	Country
csct_004168_sard	K1a	Italy	1113001803_S29	K1a+150	Unknown
KF161234	K1a	Denmark	JQ702281	K1a+150	Spain
AY882395	K1a	Italy	JX193906	K1a+150	Unknown
JQ702991	K1a	British Isles	JQ704663	K1a+150	Unknown
JQ703133	K1a	British Isles	JQ705288	K1a+195	Unknown
KM101882	K1a	United States	ESP0405	K1a+195	Spain
ESP0264	K1a	Spain	JQ705776	K1a+195	Unknown
W6?	K1a	Netherlands	EF177412	K1a+195	Portugal
ALP573	K1a	Italy	KF162445	K1a+195	Denmark
gonl-111a	K1a	Unknown	JQ705731	K1a+195	Unknown
ESP0609	K1a	Spain	JQ706033	K1a+195	Unknown
1113000019_S83	K1a	Unknown	KT013297	K1a+195	Sweden
JX153014	K1a	Italy	1113001570_S1	K1a+195	Unknown
JQ702541	K1a	Unknown	1113003002_S5	K1a+195	Unknown
VIKI5660	K1a+150	Europe NW	FJ348175	K1a+195	Italy
1113000761_S10	K1a+150	Unknown	FJ348187	K1a+195	Italy
JQ702675	K1a+150	Unknown	KT749796	K1a+195	Italy
KF564291	K1a+150	Italy	KT749815	K1a+195	Italy
JQ705523	K1a+150	British Isles	ALP040	K1a+195	Italy
KF161915	K1a+150	Denmark	KT749813	K1a+195	Italy
EU603402	K1a+150	Unknown	KT749784	K1a+195	Italy
S355	K1a+150	British Isles	EU616820	K1a+195	Unknown
EU523125	K1a+150	Unknown	ESP0393	K1a+195	Spain
EU623472	K1a+150	Unknown	ESP0826	K1a+195	Spain
gonl-114b	K1a+150	Unknown	EF661004	K1a+195	Italy
gonl-86b	K1a+150	Unknown	KF683904	K1a+195	British Isles
M5955	K1a+150	United Kingdom	ESP0076	K1a+195	Spain
LIE069	K1a+150	Belgium	T-57	K1a+195	France
gonl-165b	K1a+150	Unknown	LP6008113-DNA_G03	K1a+195	Ireland
1113000350_S29	K1a+150	Unknown	KF162721	K1a+195	Denmark
1113000506_S74	K1a+150	Unknown	KF162750	K1a+195	Denmark
KT803045	K1a+150	France	LP6008114-DNA_C10	K1a+195	Ireland
KT725859	K1a+150	United States	LP6008114-DNA_F02	K1a+195	Ireland
JN657206	K1a+150	Germany	ESP0420	K1a+195	Spain
JQ703607	K1a+150	Germany	ESP0940	K1a+195	Spain
JX153165	K1a+150	Denmark	LP6008114-DNA_A02	K1a+195	Ireland
JX154021	K1a+150	Denmark	1113001758_S55	K1a+195	Unknown
KF162404	K1a+150	Denmark	GFM015	K1a+195	Greece
JQ705747	K1a+150	Denmark	GFM089	K1a+195	Greece
JX154015	K1a+150	Denmark	LP6008114-DNA_H02	K1a+195	Ireland
KF162944	K1a+150	Denmark	JQ702517	K1a+195	Unknown
csct_007096_sard	K1a+150	Italy	JQ705733	K1a+195	Unknown
JX153010	K1a+150	Italy	FJ460541	K1a+195	Tunisia
JQ706049	K1a+150	Unknown	KF432855	K1a+195	Canada
PU3	K1a+150	Italy	NA20764	K1a+195	Italy

Table 1 | Complete dataset analysed for mtDNA studies. Information regarding haplogroup and country is also provided (continuation).

SampleID	Haplogroup	Country	SampleID	Haplogroup	Country
2067_sard	K1a+195	Italy	JX153901	K1a+195	Denmark
21657_sard	K1a+195	Italy	JQ703485	K1a+195	Unknown
24197_sard	K1a+195	Italy	GU471244	K1a+195	United States
24434_sard	K1a+195	Italy	KF161392	K1a+195	Denmark
29185_sard	K1a+195	Italy	KF162855	K1a+195	Denmark
2969_sard	K1a+195	Italy	JQ702066	K1a+195	Unknown
29759_sard	K1a+195	Italy	VIKI6061	K1a+195	Europe NW
35616_sard	K1a+195	Italy	JQ705869	K1a+195	Unknown
42579_sard	K1a+195	Italy	KF163021	K1a+195	Denmark
4645_sard	K1a+195	Italy	KF162714	K1a+195	Denmark
679_sard	K1a+195	Italy	JX273289	K1a+195	Syria
csct_007363_sard	K1a+195	Italy	1113000256_S85	K1a+195	Unknown
csct_007429_sard	K1a+195	Italy	ESP0067	K1a+195	Spain
DQ523630	K1a+195	Italy	KC763426	K1a+195	Finland
36035_sard	K1a+195	Italy	JQ703486	K1a+195	Unknown
csct_003725_sard	K1a+195	Italy	JQ703100	K1a+195	Unknown
38897_sard	K1a+195	Italy	JQ702854	K1a+195	Unknown
756_sard	K1a+195	Italy	JQ703051	K1a+195	Unknown
DQ523636	K1a+195	Italy	JQ702365	K1a+195	Unknown
1267_sard	K1a+195	Italy	JQ704907	K1a+195	Unknown
1430_sard	K1a+195	Italy	KM052375	K1a1	Ukraine
B-29	K1a+195	France	JX273286	K1a1	Russia
ESP1006	K1a+195	Spain	JQ702610	K1a1	Unknown
C-34	K1a+195	France	JQ705773	K1a1	Italy
B-77	K1a+195	France	JQ703005	K1a10	British Isles
1113000042_S70	K1a+195	Unknown	EU232008	K1a10	Unknown
1113001210_S23	K1a+195	Unknown	EU170361	K1a10	British Isles
1113001304_S78	K1a+195	Unknown	JQ703281	K1a10a	Norway
ESP0054	K1a+195	Spain	EF485042	K1a10a	Unknown
ESP0452	K1a+195	Spain	JQ704109	K1a10a	Unknown
LIE230	K1a+195	Belgium	JX415317	K1a10a	British Isles
ESP0987	K1a+195	Spain	JX535003	K1a10a	British Isles
ESP0169	K1a+195	Spain	JQ703764	K1a10a	Sweden
ESP0194	K1a+195	Spain	JQ702872	K1a10a	British Isles
ESP0590	K1a+195	Spain	JQ704508	K1a10a	British Isles
ESP0391	K1a+195	Spain	LP6008114-DNA_D08	K1a10a	Ireland
ALP143	K1a+195	Italy	M5995_WS	K1a10a	United Kingdom
T-29	K1a+195	France	C-7	K1a10a	France
1113002651_S47	K1a+195	Unknown	LP6008116-DNA_E12	K1a10a	Ireland
KJ856704	K1a+195	Siberia	M2491_Wales_S	K1a10a	United Kingdom
KT749803	K1a+195	Italy	LP6008115-DNA_D05	K1a10a	Ireland
KT749775	K1a+195	Italy	M5991_Scotland_SW	K1a10a	United Kingdom
KT006904	K1a+195	France	HM054058	K1a10a	United States
KT749794	K1a+195	Italy	JQ702273	K1a10a	Unknown
JQ702740	K1a+195	British Isles	LP6008116-DNA_E06	K1a10a	Ireland

Table 1 | Complete dataset analysed for mtDNA studies. Information regarding haplogroup and country is also provided (continuation).

SampleID	Haplogroup	Country	SampleID	Haplogroup	Country
LP6008116-DNA_E06	K1a10a	Ireland	JX273265	K1a12a1a	Turkey
HQ287881	K1a10a	British Isles/France	JQ702193	K1a13	France
KM102078	K1a10a	United States	KC878721	K1a13	France
JQ704582	K1a10a	British Isles	JQ703526	K1a13	France
JX153886	K1a10a	Denmark	gonl-130b	K1a13	Unknown
1113000056_S10	K1a10a	Unknown	LIE091	K1a13	France
JQ706001	K1a10a	Unknown	GU944475	K1a13	United States
JQ704537	K1a10a	Unknown	JQ705445	K1a13a	Unknown
GU332639	K1a11a1	United States	MIR15	K1a13a	Ireland
JQ705336	K1a11a1	Switzerland	P10A7	K1a13a	Germany
JX679248	K1a11a1	United States	ESP0580	K1a13a	Spain
EF660932	K1a12	Italy	JQ704548	K1a13a	Spain
1042_sard	K1a12	Italy	ESP0484	K1a13a	Spain
1155_sard	K1a12	Italy	ESP0848	K1a13a	Spain
17900_sard	K1a12	Italy	JN202723	K1a13a	Croatia
28335_sard	K1a12	Italy	KM103657	K1a13a	Croatia
2929_sard	K1a12	Italy	KM103653	K1a13a	Bosnia-Herzegovina
3151_sard	K1a12	Italy	KM103655	K1a13a	Bosnia-Herzegovina
4261_sard	K1a12	Italy	KM103658	K1a13a	Croatia
43233_sard	K1a12	Italy	JQ706030	K1a13a	Croatia
4486_sard	K1a12	Italy	AY339563	K1a13a	Finland
7217_sard	K1a12	Italy	AY339564	K1a13a	Finland
8039_sard	K1a12	Italy	AY495261	K1a13a	Europe
KC911589	K1a12	Iran	KM101779	K1a13a	United States
JX273283	K1a12a	Russia	HQ675035	K1a14	Unknown
KT749802	K1a12a	Italy	GU471243	K1a14	Portugal
KT749785	K1a12a	Italy	JQ703285	K1a15	British Isles
KT749804	K1a12a	Italy	JQ702674	K1a15	British Isles
GQ149510	K1a12a	Unknown	JQ703379	K1a15	British Isles
JQ703711	K1a12a	Italy	LP6008115-DNA_C05	K1a15	Ireland
KC878719	K1a12a	North Caucasus	KJ856775	K1a15	Russia
JQ706050	K1a12a	Kuwait	JQ703365	K1a16	Unknown
EU600364	K1a12a	Druze	JQ702271	K1a16	British Isles
JX273259	K1a12a	Israel	JQ704062	K1a16	British Isles
KC911383	K1a12a	Iran	M2880_England_E	K1a16	United Kingdom
KX231545	K1a12a	Armenia	JQ702931	K1a16	Unknown
JX153006	K1a12a	Italy	KJ856734	K1a17	Siberia
JX153063	K1a12a	Italy	KJ856776	K1a17	Russia
EU600362	K1a12a	Druze	JX153028	K1a17	Italy
EU600363	K1a12a	Druze	ESP0675	K1a17	Spain
JQ706035	K1a12a1	Ethiopia	KJ445990	K1a17	Israel
JQ706036	K1a12a1	Ethiopia	JQ706034	K1a17	Egypt
JQ706066	K1a12a1a	Turkey	JQ706064	K1a17a	Turkey
KC878712	K1a12a1a	Turkey	EU600361	K1a17a	Druze
JQ706065	K1a12a1a	Turkey	EU600365	K1a18	Druze

Table 1 | Complete dataset analysed for mtDNA studies. Information regarding haplogroup and country is also provided (continuation).

SampleID	Haplogroup	Country	SampleID	Haplogroup	Country
JQ706048	K1a18	Kuwait	EU677845	K1a1a2a	Switzerland
JQ706054	K1a18	Saudi Arabia	JQ705393	K1a1a2a1	Slovakia
KT749807	K1a19	Italy	AY495257	K1a1a2a1	Europe
C-62	K1a19	France	KM047219	K1a1a2a1	Poland
ALP152	K1a19	Italy	JQ702802	K1a1a2a1	Finland
GFM039	K1a19	Greece	ALP002	K1a1b	Italy
OL6	K1a19	Italy	AY714044	K1a1b	India
JQ706040	K1a19	Iran	JQ704207	K1a1b1	British Isles
JX273291	K1a19	Kurd	JQ702732	K1a1b1	Belgium
JX273264	K1a19	Turkey	JX153308	K1a1b1	Denmark
JQ706058	K1a19	Italy	KF162203	K1a1b1	Denmark
KJ690071	K1a19	Turkey	JX153954	K1a1b1	Denmark
JQ308836	K1a19	Unknown	KF161679	K1a1b1	Denmark
JQ706039	K1a19a	Georgia	KF162816	K1a1b1	Denmark
JQ706063	K1a19a	Turkey	JQ702782	K1a1b1	British Isles
JQ740736	K1a1a	Latvia	MAL	K1a1b1	Spain
ESP0640	K1a1a	Spain	JX297145	K1a1b1	Spain
ESP0406	K1a1a	Spain	KJ445999	K1a1b1	France (Basque)
JQ704696	K1a1a	British Isles	DQ200804	K1a1b1	Basque Country
KM047211	K1a1a	Poland	M6029	K1a1b1	United Kingdom
JQ702166	K1a1a	British Isles	NA20813	K1a1b1	Italy
HM103363	K1a1a	Unknown	JX275889	K1a1b1	British Isles
1113000401_S87	K1a1a	Unknown	JQ705951	K1a1b1a	Unknown
ESP0679	K1a1a	Spain	JQ702245	K1a1b1a	Unknown
1113001988_S18	K1a1a	Unknown	JQ703069	K1a1b1a	Unknown
1113001659_S77	K1a1a	Unknown	GU004259	K1a1b1a	British Isles
JN814516	K1a1a	British Isles	JQ705772	K1a1b1a	Unknown
HM590878	K1a1a	United States	KT749812	K1a1b1a	Italy
KF162741	K1a1a	Denmark	gonl-45a	K1a1b1a	Unknown
KF162002	K1a1a	Denmark	HQ901176	K1a1b1a	British Isles
1113000012_S37	K1a1a	Unknown	DQ301795	K1a1b1a	Europe
JQ705483	K1a1a	British Isles	EU862197	K1a1b1a	United States
FJ348183	K1a1a1	Italy	HM054510	K1a1b1a	United States
GU722598	K1a1a1	United States	GU571200	K1a1b1a	Germany
EF449506	K1a1a1	Unknown	JQ703308	K1a1b1a	Germany
OL20	K1a1a1	Italy	JQ702859	K1a1b1a	Lithuania
M3702_WS	K1a1a1	United Kingdom	GU320192	K1a1b1a	Romania
1113002083_S85	K1a1a1	Unknown	EU052292	K1a1b1a	Unknown
ESP0566	K1a1a1	Spain	EU259709	K1a1b1a	Unknown
JQ703160	K1a1a2	Germany	EU523126	K1a1b1a	Unknown
HQ610936	K1a1a2a	Unknown	GU585492	K1a1b1a	Unknown
GU980957	K1a1a2a	Czech Republic	JQ704775	K1a1b1a	Unknown
KF162101	K1a1a2a	Denmark	JQ703662	K1a1b1a	Ukraine
JQ702869	K1a1a2a	Slovakia	JQ705568	K1a1b1a	Ukraine
1113001959_S49	K1a1a2a	Unknown	JX153534	K1a1b1a	Denmark

Table 1 | Complete dataset analysed for mtDNA studies. Information regarding haplogroup and country is also provided (continuation).

SampleID	Haplogroup	Country	SampleID	Haplogroup	Country
JQ703165	K1a1b1a	Russia	AY339554	K1a1b1b1	Finland
JQ702755	K1a1b1a	Poland	KF161130	K1a1b1b1	Denmark
JQ705016	K1a1b1a	Poland	1113001123_S71	K1a1b1c	Unknown
FJ938288	K1a1b1a	Belarus	1113000165_S54	K1a1b1c	Unknown
JQ702238	K1a1b1a	Unknown	1113002799_S81	K1a1b1c	Unknown
JQ702780	K1a1b1a	Belarus	GU592026	K1a1b1c	Unknown
DQ301803	K1a1b1a	Europe	GU592041	K1a1b1c	Unknown
JQ703012	K1a1b1a	Russia	JQ702898	K1a1b1c	British Isles
JQ705957	K1a1b1a	Unknown	EU284179	K1a1b1c	Unknown
1113001709_S55	K1a1b1a	Unknown	JQ704096	K1a1b1d	British Isles
1113001214_S60	K1a1b1a	Unknown	KM102137	K1a1b1d	United States
JX273256	K1a1b1a	Romania	JQ704056	K1a1b1e	Unknown
CM003747	K1a1b1a	Europe	JQ703737	K1a1b1e	British Isles
DQ301802	K1a1b1a	Europe	1113000177_S76	K1a1b1e	Unknown
GU723693	K1a1b1a	United States	1113002036_S13	K1a1b1e	Unknown
KC914580	K1a1b1a	United States	1113002257_S12	K1a1b1e	Unknown
KF435080	K1a1b1a	United States	KJ445998	K1a1b1e	Italy
GU722599	K1a1b1a	Germany	NA20505	K1a1b1e	Italy
JQ704654	K1a1b1a	Germany	HQ176413	K1a1b1e	Italy
KC878724	K1a1b1a	Italy	JQ706057	K1a1b1e	Italy
FJ228404	K1a1b1a	Romania	JQ703805	K1a1b1e	British Isles
JQ702945	K1a1b1a	Russia	JX287343	K1a1b1e	United States
KM047228	K1a1b1a	Poland	gonl-150b	K1a1b1f	Unknown
JQ702671	K1a1b1a	Ukraine	1113000661_S63	K1a1b1f	Unknown
EU926147	K1a1b1a	United States	LP6008115-DNA_D06	K1a1b1f	Ireland
DQ301789	K1a1b1a	Europe	M8463_ESW	K1a1b1f	United Kingdom
HQ667591	K1a1b1a	Hungary	JX048065	K1a1b1f	British Isles
JQ705628	K1a1b1a	Ukraine	JQ702781	K1a1b1f	Germany
KR491936	K1a1b1a	United States	ESP0312	K1a1b1g	Spain
DQ301813	K1a1b1a	Europe	JQ668027	K1a1b1g	Grece
JQ705938	K1a1b1a	Unknown	FJ348218	K1a1b1g	Italy
JQ703064	K1a1b1a	Unknown	HQ586011	K1a1b2a	United States
HM101136	K1a1b1a	United States	M6074	K1a1b2a1	United Kingdom
JQ703855	K1a1b1a	Germany	gonl-40b	K1a1b2a1a	Unknown
EU170362	K1a1b1a	Unknown	1113002887_S9	K1a1b2a1a	Unknown
DQ301805	K1a1b1a	Europe	JQ701856	K1a1b2a1a	Unknown
KF161996	K1a1b1a	Denmark	NA20759	K1a1b2a1a	Italy
JQ702155	K1a1b1a	Hungary	1113000205_S17	K1a1b2a1a	Unknown
JQ703463	K1a1b1a	Unknown	1113000234_S1	K1a1b2a1a	Unknown
NA20539	K1a1b1a	Italy	1113000305_S72	K1a1b2a1a	Unknown
JQ704812	K1a1b1a	Unknown	1113002435_S30	K1a1b2a1a	Unknown
JQ702798	K1a1b1b	British Isles	1113000085_S11	K1a1b2a1a	Unknown
JQ702785	K1a1b1b	British Isles	1113000196_S44	K1a1b2a1a	Unknown
JQ704983	K1a1b1b	Sweden	HQ413154	K1a1b2a1a	United States
JX171125	K1a1b1b1	Finland	KF161582	K1a1b2a1a	Denmark

Table 1 | Complete dataset analysed for mtDNA studies. Information regarding haplogroup and country is also provided (continuation).

SampleID	Haplogroup	Country	SampleID	Haplogroup	Country
DQ301798	K1a1b2a1a	Europe	KC878722	K1a24	Italy
JQ701858	K1a1b2a1a	Unknown	1113001798_S77	K1a24	Unknown
JQ702624	K1a1b2b	Unknown	JQ703891	K1a24	Unknown
JQ703073	K1a1b2b	British Isles	JQ705218	K1a24a	Unknown
FJ865502	K1a1b2b	Unknown	KT749797	K1a24a	Italy
JN048471	K1a1b2b	Armenia	KT749798	K1a24a	Italy
JQ705697	K1a1c	Unknown	JQ704924	K1a24a	British Isles
JQ705454	K1a1c	Belgium	JF489152	K1a24a	British Isles
JX153883	K1a1c	Denmark	gonl-237a	K1a24a	Unknown
JQ702086	K1a1c	British Isles	gonl-222b	K1a24a	Unknown
JX152823	K1a1c	Denmark	1113000576_S2	K1a24a	Unknown
JX153526	K1a1c	Denmark	1113000811_S8	K1a24a	Unknown
JX153699	K1a1c	Denmark	JQ702717	K1a24a	Unknown
JX153744	K1a1c	Denmark	JQ706051	K1a25	Lebanon
JX153941	K1a1c	Denmark	HM625696	K1a25	Unknown
KF161510	K1a1c	Denmark	1113000551_S85	K1a25	Unknown
KF162662	K1a1c	Denmark	JQ704591	K1a26	British Isles
KF162988	K1a1c	Denmark	JQ705689	K1a26	British Isles
KF162500	K1a1c	Denmark	KF142159	K1a26	United States
JX152915	K1a1c	Denmark	B-44	K1a26	France
KF162540	K1a1c	Denmark	M6084	K1a26	United Kingdom
KF162374	K1a1c	Denmark	GU811147	K1a26	British Isles
KF162782	K1a1c	Denmark	JQ705433	K1a26	British Isles
JQ705685	K1a1c	Unknown	JQ702947	K1a26	British Isles
JX153313	K1a1c	Denmark	JN415475	K1a27	France
KC878713	K1a2	Turkey	JQ705460	K1a27	Syria
1113000075_S57	K1a2	Unknown	JX273263	K1a28	Turkey
T-91	K1a2	France	JF303729	K1a28	Armenia
AY495254	K1a2	Europe	JX273262	K1a28	Greece
BG91	K1a2	Italy	JX273268	K1a29	Turkey
KC911410	K1a2	Iran	JX273252	K1a29a	Palestine
41680_sard	K1a2	Italy	HM852805	K1a29a	Azerbaijan
csct_005445_sard	K1a2	Italy	JQ705354	K1a2a	Unknown
csct_007102_sard	K1a2	Italy	JQ703651	K1a2a	Ukraine
csct_002614_sard	K1a2	Italy	1113000981_S36	K1a2a	Unknown
csct_000166_sard	K1a2	Italy	HG01617	K1a2a	Spain
5726_sard	K1a2	Italy	HG01675	K1a2a	Spain
csct_007469_sard	K1a2	Italy	JQ705456	K1a2a	British Isles
KF723708	K1a2	Italy	JQ705620	K1a2a	Germany
EU760854	K1a2	British Isles	JQ705646	K1a2a	Poland
JQ703309	K1a2	Unknown	JQ705347	K1a2a	Unknown
HG04014	K1a23	United Kingdom	EU849002	K1a2a	Unknown
JQ703522	K1a23	Syria	JQ703041	K1a2a	British Isles
JQ706042	K1a23	Iran	EKD009	K1a2a	United Kingdom
KF161567	K1a23	Denmark	ESP0523	K1a2a	Spain

Table 1 | Complete dataset analysed for mtDNA studies. Information regarding haplogroup and country is also provided (continuation).

SampleID	Haplogroup	Country	SampleID	Haplogroup	Country
KT749777	K1a2a	Italy	JQ702705	K1a3	Poland
EU915473	K1a2a	Italy	JX273258	K1a3	Israel
KF161641	K1a2a	Denmark	KJ856749	K1a3	Siberia
gonl-249b	K1a2a	Unknown	JX273266	K1a3	Turkey
gonl-98b	K1a2a	Unknown	JX273278	K1a3	Iraq
JQ701973	K1a2a	Unknown	JQ705784	K1a3	Unknown
NA20522	K1a2a1	Italy	JN202911	K1a30	France
NA06986	K1a2a1	Unknown	JQ705751	K1a30	Unknown
JQ701835	K1a2a1	Unknown	KC878710	K1a30a	Turkey
JQ702665	K1a2a1	Germany	KC878711	K1a30a	Turkey
JQ703581	K1a2a2	Unknown	KM986530	K1a30a	Yemen
KF171123	K1a2a2	Finland	JQ706056	K1a31	Unknown
AY339565	K1a2a2	Finland	KC911309	K1a31	Iran
JQ703026	K1a2a2	British Isles	KC257392	K1a3a	Unknown
HM041971	K1a2b	France	HM021760	K1a3a	France
JQ705994	K1a2b	Unknown	HM598686	K1a3a	United States
M4000_WN	K1a2b	United Kingdom	LIE063	K1a3a	Belgium
1113001642_S27	K1a2b	Unknown	ESP0636	K1a3a	Spain
GQ281051	K1a2b	Unknown	ESP0414	K1a3a	Spain
JQ704011	K1a2b	Unknown	1113002468_S46	K1a3a	Unknown
csct_000131_sard	K1a2b	Italy	LP6008116-DNA_A04	K1a3a	Ireland
csct_007226_sard	K1a2b	Italy	1113002790_S49	K1a3a	Unknown
csct_007262_sard	K1a2b	Italy	1113002853_S13	K1a3a	Unknown
csct_002622_sard	K1a2b	Italy	EU344156	K1a3a	Unknown
2098_sard	K1a2b	Italy	EU089746	K1a3a	Unknown
csct_000411_sard	K1a2b	Italy	KF161099	K1a3a	Denmark
JQ705745	K1a2b	Lithuania	KF162885	K1a3a	Denmark
JQ704017	K1a2b	Unknown	1113000946_S70	K1a3a	Unknown
M6188	K1a2c	United Kingdom	LP6008114-DNA_B05	K1a3a	Ireland
LIE213	K1a2c	Belgium	csct_004287_sard	K1a3a	Italy
JQ702304	K1a2c	Unknown	JQ705485	K1a3a	Germany
JN647926	K1a2c	Armenia	JX153062	K1a3a	Italy
JQ703037	K1a2c	Unknown	JQ703528	K1a3a	Unknown
JX273282	K1a3	Russia	JQ703648	K1a3a1	Italy
AY495264	K1a3	Europe	1113000843_S55	K1a3a1	Unknown
KM259909	K1a3	Greece	1113001805_S45	K1a3a1	Unknown
JQ703347	K1a3	Norway	gonl-3b	K1a3a1	Unknown
KF162290	K1a3	Denmark	KM101967	K1a3a1	United States
KF162055	K1a3	Denmark	JQ703096	K1a3a1	France
JX153475	K1a3	Denmark	csct_007735_sard	K1a3a1	Italy
JX273254	K1a3	Palestine	ESP0935	K1a3a1	Spain
JX273261	K1a3	Iraq	1113002735_S47	K1a3a1	Unknown
JQ706044	K1a3	Iran	1113000651_S11	K1a3a1	Unknown
1113000678_S87	K1a3	Unknown	1113002784_S48	K1a3a1	Unknown
EU330213	K1a3	Unknown	JQ705841	K1a3a1	Slovakia

Table 1 | Complete dataset analysed for mtDNA studies. Information regarding haplogroup and country is also provided (continuation).

SampleID	Haplogroup	Country	SampleID	Haplogroup	Country
KT749805	K1a3a1	Italy	csct_000681_sard	K1a3a3	Sardinia
DQ301814	K1a3a1a	Morocco	csct_006280_sard	K1a3a3	Sardinia
GU799583	K1a3a1b	British Isles	21201_sard	K1a3a3	Sardinia
AY495258	K1a3a1b	Europe	csct_007915_sard	K1a3a3	Sardinia
HM640207	K1a3a1b	Unknown	22854_sard	K1a3a3	Sardinia
JQ702348	K1a3a1b	Unknown	23321_sard	K1a3a3	Sardinia
KM371020	K1a3a1b	Unknown	24319_sard	K1a3a3	Sardinia
MIR01	K1a3a2	England	24920_sard	K1a3a3	Sardinia
AY495256	K1a3a2	Europe	26320_sard	K1a3a3	Sardinia
KF161801	K1a3a2	Denmark	27328_sard	K1a3a3	Sardinia
JQ702676	K1a3a2	Uzbekistan	27377_sard	K1a3a3	Sardinia
csct_000148_sard	K1a3a3	Sardinia	11904_sard	K1a3a3	Sardinia
csct_002358_sard	K1a3a3	Sardinia	29574_sard	K1a3a3	Sardinia
csct_000821_sard	K1a3a3	Sardinia	38504_sard	K1a3a3	Sardinia
csct_005386_sard	K1a3a3	Sardinia	csct_004139_sard	K1a3a3	Sardinia
csct_007613_sard	K1a3a3	Sardinia	csct_007128_sard	K1a3a3	Sardinia
csct_003775_sard	K1a3a3	Sardinia	csct_000713_sard	K1a3a3	Sardinia
csct_004242_sard	K1a3a3	Sardinia	csct_000767_sard	K1a3a3	Sardinia
csct_001618_sard	K1a3a3	Sardinia	csct_000217_sard	K1a3a3	Sardinia
csct_000139_sard	K1a3a3	Sardinia	csct_000419_sard	K1a3a3	Sardinia
1499_sard	K1a3a3	Sardinia	csct_000075_sard	K1a3a3	Sardinia
csct_000042_sard	K1a3a3	Sardinia	8250_sard	K1a3a3	Sardinia
csct_000475_sard	K1a3a3	Sardinia	csct_000190_sard	K1a3a3	Sardinia
csct_007098_sard	K1a3a3	Sardinia	csct_000631_sard	K1a3a3	Sardinia
csct_007771_sard	K1a3a3	Sardinia	csct_003745_sard	K1a3a3	Sardinia
31915_sard	K1a3a3	Sardinia	csct_004219_sard	K1a3a3	Sardinia
32497_sard	K1a3a3	Sardinia	csct_005400_sard	K1a3a3	Sardinia
33628_sard	K1a3a3	Sardinia	csct_000540_sard	K1a3a3	Sardinia
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3494_sard	K1a3a3	Sardinia	36611_sard	K1a3a3	Sardinia
35685_sard	K1a3a3	Sardinia	37337_sard	K1a3a3	Sardinia
12882_sard	K1a3a3	Sardinia	38919_sard	K1a3a3	Sardinia
37409_sard	K1a3a3	Sardinia	4139_sard	K1a3a3	Sardinia
37841_sard	K1a3a3	Sardinia	43231_sard	K1a3a3	Sardinia
37979_sard	K1a3a3	Sardinia	csct_002512_sard	K1a3a3	Sardinia
37981_sard	K1a3a3	Sardinia	csct_003774_sard	K1a3a3	Sardinia
12927_sard	K1a3a3	Sardinia	2083_sard	K1a3a3	Sardinia
38137_sard	K1a3a3	Sardinia	csct_007333_sard	K1a3a3	Sardinia
39559_sard	K1a3a3	Sardinia	csct_007375_sard	K1a3a3	Sardinia
41777_sard	K1a3a3	Sardinia	csct_007525_sard	K1a3a3	Sardinia
43079_sard	K1a3a3	Sardinia	csct_007675_sard	K1a3a3	Sardinia
7495_sard	K1a3a3	Sardinia	22634_sard	K1a3a3	Sardinia
834_sard	K1a3a3	Sardinia	31840_sard	K1a3a3	Sardinia
1613_sard	K1a3a3	Sardinia	29946_sard	K1a3a3	Sardinia

Table 1 | Complete dataset analysed for mtDNA studies. Information regarding haplogroup and country is also provided (continuation).

SampleID	Haplogroup	Country	SampleID	Haplogroup	Country
2565_sard	K1a3a3	Sardinia	27564_sard	K1a3a3	Sardinia
csct_000257_sard	K1a3a3	Sardinia	3112_sard	K1a3a3	Sardinia
csct_000081_sard	K1a3a3	Sardinia	csct_007483_sard	K1a3a3	Sardinia
csct_003707_sard	K1a3a3	Sardinia	28934_sard	K1a3a3	Sardinia
csct_003785_sard	K1a3a3	Sardinia	31068_sard	K1a3a3	Sardinia
37559_sard	K1a3a3	Sardinia	csct_007084_sard	K1a3a3	Sardinia
1567_sard	K1a3a3	Sardinia	csct_007486_sard	K1a3a3	Sardinia
csct_000421_sard	K1a3a3	Sardinia	csct_004300_sard	K1a3a3	Sardinia
csct_005452_sard	K1a3a3	Sardinia	csct_007599_sard	K1a3a3	Sardinia
csct_000675_sard	K1a3a3	Sardinia	csct_000744_sard	K1a3a3	Sardinia
csct_007202_sard	K1a3a3	Sardinia	csct_006270_sard	K1a3a3	Sardinia
csct_003703_sard	K1a3a3	Sardinia	1113003388_S95	K1a3a3	Unknown
37038_sard	K1a3a3	Sardinia	JQ701962	K1a3a3	British Isles
13155_sard	K1a3a3	Sardinia	JQ704830	K1a3a3	British Isles
csct_000271_sard	K1a3a3	Sardinia	GFM014	K1a3a3	Greece
11465_sard	K1a3a3	Sardinia	JQ705192	K1a3a3	Unknown
csct_007587_sard	K1a3a3	Sardinia	GU371909	K1a3a3	United States
22859_sard	K1a3a3	Sardinia	1113000912_S44	K1a3a4	Unknown
25079_sard	K1a3a3	Sardinia	M3703	K1a3a4	United Kingdom
25777_sard	K1a3a3	Sardinia	JQ703427	K1a3a4	British Isles
11780_sard	K1a3a3	Sardinia	HQ610202	K1a3a4	United States
30398_sard	K1a3a3	Sardinia	JQ703775	K1a3a4	Norway
12518_sard	K1a3a3	Sardinia	AY495263	K1a4	Europe
1798_sard	K1a3a3	Sardinia	KC911477	K1a4	Iran
18939_sard	K1a3a3	Sardinia	LK04	K1a4	Cyprus
csct_000412_sard	K1a3a3	Sardinia	EU714298	K1a4	British Isles
csct_007258_sard	K1a3a3	Sardinia	EU675299	K1a4	Unknown
38764_sard	K1a3a3	Sardinia	KC911418	K1a4	Iran
41561_sard	K1a3a3	Sardinia	JQ703323	K1a4	Unknown
csct_007142_sard	K1a3a3	Sardinia	1113002412_S70	K1a4	Unknown
2252_sard	K1a3a3	Sardinia	JX273253	K1a4	Palestine
32275_sard	K1a3a3	Sardinia	KT932091	K1a4	Italy
csct_000445_sard	K1a3a3	Sardinia	KT634229	K1a4	Bulgaria
csct_007783_sard	K1a3a3	Sardinia	JQ702505	K1a4	Italy
csct_000414_sard	K1a3a3	Sardinia	JX273285	K1a4	Romania
csct_007144_sard	K1a3a3	Sardinia	M6135	K1a4	United Kingdom
35463_sard	K1a3a3	Sardinia	1113001778_S62	K1a4	Unknown
4642_sard	K1a3a3	Sardinia	JQ704724	K1a4	Unknown
csct_000648_sard	K1a3a3	Sardinia	JX273270	K1a4	Adygea
csct_004284_sard	K1a3a3	Sardinia	KM101805	K1a4	United States
csct_005720_sard	K1a3a3	Sardinia	HG01537	K1a4	Spain
csct_007619_sard	K1a3a3	Sardinia	ESP0810	K1a4	Spain
csct_000833_sard	K1a3a3	Sardinia	JQ705656	K1a4	Switzerland
csct_000723_sard	K1a3a3	Sardinia	JX273280	K1a4	Russia
4213_sard	K1a3a3	Sardinia	JQ703296	K1a4	Unknown

Table 1 | Complete dataset analysed for mtDNA studies. Information regarding haplogroup and country is also provided (continuation).

SampleID	Haplogroup	Country	SampleID	Haplogroup	Country
JX273260	K1a4	Iraq	ESP0950	K1a4a1	Spain
EU130551	K1a4	Italy	M6145	K1a4a1	United Kingdom
csct_007787_sard	K1a4	Italy	LP6008116-DNA_E07	K1a4a1	Ireland
JQ705162	K1a4	Unknown	KF161531	K1a4a1	Denmark
1113002960_S66	K1a4+146	Unknown	KF161355	K1a4a1	Denmark
1113001231_S54	K1a4a	Unknown	ESP0726	K1a4a1	Spain
BGD57	K1a4a	Italy	ESP0617	K1a4a1	Spain
csct_007703_sard	K1a4a	Italy	JQ702744	K1a4a1	British Isles
KC878715	K1a4a	Turkey	JQ704770	K1a4a1	Poland
JQ705100	K1a4a	Europe	LP6008113-DNA_G05	K1a4a1	Ireland
EU603401	K1a4a	Unknown	JQ701810	K1a4a1	Unknown
ESP0072	K1a4a	Spain	JQ704076	K1a4a1	Unknown
JQ702521	K1a4a	Germany	JQ705785	K1a4a1	Portugal
1113001447_S12	K1a4a	Unknown	KF162673	K1a4a1	Denmark
1113002918_S47	K1a4a	Unknown	JQ705558	K1a4a1	British Isles
ALP517	K1a4a	Italy	AY495266	K1a4a1	Europe
JX273281	K1a4a	Russia	JQ705404	K1a4a1	Germany
JQ705661	K1a4a1	Unknown	HM045846	K1a4a1	British Isles
JQ704216	K1a4a1	Unknown	JQ705229	K1a4a1	British Isles
NA20530	K1a4a1	Italy	JQ704320	K1a4a1	British Isles
KM101937	K1a4a1	United States	JQ704808	K1a4a1	Sweden
KM101939	K1a4a1	United States	M6151	K1a4a1	United Kingdom
AY495262	K1a4a1	Europe	M6181_ESW	K1a4a1	United Kingdom
JQ704078	K1a4a1	Unknown	LP6008113-DNA_E03	K1a4a1	Ireland
JQ705537	K1a4a1	Unknown	HG01536	K1a4a1	Spain
JN581646	K1a4a1	Italy (Venice)	ESP0303	K1a4a1	Spain
ESP0589	K1a4a1	Spain	JQ703548	K1a4a1	Unknown
ESP0913	K1a4a1	Spain	JN581650	K1a4a1	Italy (Venice)
ESP0339	K1a4a1	Spain	JQ703704	K1a4a1	France
ALP142	K1a4a1	Italy	DQ301808	K1a4a1a	Europe
ESP0944	K1a4a1	Spain	1113001193_S68	K1a4a1a	Unknown
ESP0279	K1a4a1	Spain	BGD34	K1a4a1a	Italy
1113001382_S63	K1a4a1	Unknown	1113002506_S54	K1a4a1a	Unknown
1113002748_S96	K1a4a1	Unknown	KF162058	K1a4a1a	Denmark
JQ702306	K1a4a1	Unknown	KT749782	K1a4a1a	Italy
KF417432	K1a4a1	British Isles	JQ702168	K1a4a1a	Unknown
JN001930	K1a4a1	United States	1113000915_S32	K1a4a1a	Unknown
EF464682	K1a4a1	Unknown	JQ702700	K1a4a1a+195	Unknown
JQ702452	K1a4a1	Unknown	1113000980_S7	K1a4a1a+195	Unknown
JQ704944	K1a4a1	Unknown	KP752420	K1a4a1a+195	Finland
JQ704727	K1a4a1	British Isles	1113002157_S59	K1a4a1a+195	Unknown
JQ704092	K1a4a1	Germany	1113002915_S66	K1a4a1a+195	Unknown
BG148	K1a4a1	Italy	1113001039_S22	K1a4a1a+195	Unknown
HQ843088	K1a4a1	British Isles	JX047544	K1a4a1a+195	British Isles
JX127147	K1a4a1	British Isles	KU937305	K1a4a1a+195	British Isles

Table 1 | Complete dataset analysed for mtDNA studies. Information regarding haplogroup and country is also provided (continuation).

SampleID	Haplogroup	Country	SampleID	Haplogroup	Country
KP718061	K1a4a1a+195	United States	gonl-65a	K1a4a1a2a	Unknown
JQ703444	K1a4a1a+195	Unknown	VIKI5293	K1a4a1a2a	Europe NW
JX152839	K1a4a1a+195	Denmark	VIKI6323	K1a4a1a2a	Europe NW
JX152846	K1a4a1a+195	Denmark	VIKI6325	K1a4a1a2a	Europe NW
JX153933	K1a4a1a+195	Denmark	VIKI7174	K1a4a1a2a	Europe NW
KF161488	K1a4a1a+195	Denmark	VIKI7256	K1a4a1a2a	Europe NW
KF161533	K1a4a1a+195	Denmark	gonl-102b	K1a4a1a2a	Unknown
KJ446000	K1a4a1a+195	France	HM031133	K1a4a1a2a	Unknown
JQ702693	K1a4a1a+195	Unknown	JQ703665	K1a4a1a2a	Unknown
JQ340869	K1a4a1a+195	British Isles	JQ703685	K1a4a1a2a	Unknown
JQ702773	K1a4a1a+195	British Isles	gonl-149a	K1a4a1a2a	Unknown
GU123015	K1a4a1a+195	Russia (Volga-Urals)	JQ702896	K1a4a1a2b	Unknown
gonl-29a	K1a4a1a+195	Unknown	JQ703880	K1a4a1a2b	Unknown
JQ705980	K1a4a1a+195	Unknown	JQ703212	K1a4a1a2b	British Isles
JQ704873	K1a4a1a+195	Unknown	ALP177	K1a4a1a2b	Italy
KM101806	K1a4a1a+195	United States	JQ705714	K1a4a1a2b	Hungary
JQ704836	K1a4a1a1	Unknown	JX153663	K1a4a1a2b	Denmark
KF162875	K1a4a1a1	Denmark	KF161092	K1a4a1a2b	Denmark
HQ907958	K1a4a1a1	British Isles	KF162127	K1a4a1a2b	Denmark
JQ702811	K1a4a1a1	British Isles	HG00331	K1a4a1a2b	Finland
KF162733	K1a4a1a1	Denmark	JX153211	K1a4a1a2b	Finland
KF161295	K1a4a1a1	Denmark	JX153253	K1a4a1a2b	Finland
KF161116	K1a4a1a1	Denmark	JQ702797	K1a4a1a2b	Sweden
KF161764	K1a4a1a2	Denmark	JQ702213	K1a4a1a2b	Unknown
AY495265	K1a4a1a2	Europe	JQ702887	K1a4a1a2b	Unknown
JQ703130	K1a4a1a2	Unknown	1113000003_S89	K1a4a1a2b	Unknown
KM101914	K1a4a1a2	United States	1113002998_S61	K1a4a1a2b	Unknown
JQ703168	K1a4a1a2	Unknown	1113002556_S66	K1a4a1a2b	Unknown
JX153167	K1a4a1a2	Denmark	JQ703782	K1a4a1a2b	British Isles
JQ705270	K1a4a1a2a	Unknown	LP6008116-DNA_H12	K1a4a1a2b	Ireland
KF161920	K1a4a1a2a	Denmark	JQ701808	K1a4a1a2b	Unknown
KF162364	K1a4a1a2a	Denmark	JX153257	K1a4a1a2b	Finland
684_sard	K1a4a1a2a	Italy	JQ703763	K1a4a1a2b	France
GU361766	K1a4a1a2a	United States	LP6008113-DNA_C07	K1a4a1a2b	Ireland
KF723707	K1a4a1a2a	Germany	JQ703876	K1a4a1a2b	Unknown
JX153646	K1a4a1a2a	Denmark	KF161836	K1a4a1a2b	Denmark
KF161995	K1a4a1a2a	Denmark	JN086562	K1a4a1a2b	United States
JX153264	K1a4a1a2a	Finland	JN990448	K1a4a1a2b	United States
JN559854	K1a4a1a2a	Sweden	KF161491	K1a4a1a3	Denmark
JQ705257	K1a4a1a2a	Unknown	JQ703007	K1a4a1a3	British Isles
JX153525	K1a4a1a2a	Denmark	JN089380	K1a4a1a3	British Isles
EU328539	K1a4a1a2a	Unknown	GU122978	K1a4a1a3	Russia (Volga-Urals)
JQ705556	K1a4a1a2a	Croatia	HQ839861	K1a4a1a3	Unknown
KT700199	K1a4a1a2a	United States	KM101905	K1a4a1a3	United States
JX153374	K1a4a1a2a	Denmark	GP3_E10	K1a4a1a3	Germany

Table 1 | Complete dataset analysed for mtDNA studies. Information regarding haplogroup and country is also provided (continuation).

SampleID	Haplogroup	Country	SampleID	Haplogroup	Country
gonl-90b	K1a4a1a3	Unknown	JQ705979	K1a4a1e	Unknown
JN122621	K1a4a1a3	Unknown	KF162742	K1a4a1e	Denmark
ESP0594	K1a4a1a3	Spain	KF162102	K1a4a1e	Denmark
KF161570	K1a4a1b	Denmark	JQ704187	K1a4a1e	Unknown
FJ460525	K1a4a1b	Tunisia	JQ705838	K1a4a1f	British Isles
JX153625	K1a4a1b	Finland	JQ705901	K1a4a1f	Unknown
JQ702586	K1a4a1b1	Unknown	KM101821	K1a4a1f	United States
JQ703407	K1a4a1b1	British Isles	JQ705805	K1a4a1f	Unknown
gonl-183a	K1a4a1b1	Unknown	HQ336048	K1a4a1f	British Isles
GU191795	K1a4a1b1	British Isles	HG00346	K1a4a1f	Finland
EU677385	K1a4a1b1	Unknown	JQ705816	K1a4a1f	Unknown
GU971379	K1a4a1b1	Unknown	JQ702302	K1a4a1f1	Unknown
JQ705017	K1a4a1b2	Unknown	M6278	K1a4a1f1	United Kingdom
JQ702779	K1a4a1b2	British Isles	JQ703540	K1a4a1f1	Unknown
M6154_Wales_S	K1a4a1b2	United Kingdom	JQ702760	K1a4a1f1	Unknown
JQ704948	K1a4a1b2	Unknown	ESP0796	K1a4a1g	Spain
EU616625	K1a4a1c	Unknown	JQ703493	K1a4a1g	Switzerland
KC878725	K1a4a1c	Italy	JQ704759	K1a4a1g	France
KT749779	K1a4a1c1	Italy	JX048671	K1a4a1g	Canada
JN258704	K1a4a1c1	British Isles	JQ703726	K1a4a1g	Unknown
JX153840	K1a4a1c1	Finland	1113000939_S14	K1a4a1g	Unknown
GP2_C6	K1a4a1c1	Germany	1113001126_S72	K1a4a1g	Unknown
KF703542	K1a4a1c1	British Isles	1113001237_S18	K1a4a1g	Unknown
JF433953	K1a4a1c1	United States	1113002509_S92	K1a4a1g	Unknown
EU692798	K1a4a1c1	Unknown	JQ703807	K1a4a1g	Unknown
39198_sard	K1a4a1c1	Italy	JQ705215	K1a4a1h	Germany
M6180_WS	K1a4a1d	United Kingdom	GP2_D4	K1a4a1h	Germany
KF161586	K1a4a1d	Denmark	1113000556_S88	K1a4a1h	Unknown
KT749781	K1a4a1d	Italy	JQ701994	K1a4a1h	Germany
KT749790	K1a4a1d	Italy	HG01051	K1a4a1h	Puerto Rico
HM852863	K1a4a1e	Turkey	JQ702759	K1a4a1h	Unknown
JX273275	K1a4a1e	Russia	ESP0219	K1a4a1h	Spain
JX273251	K1a4a1e	Russia	JQ702315	K1a4a1i	Unknown
JX297150	K1a4a1e	Spain	M6263_Wales_N	K1a4a1i	United Kingdom
KJ446001	K1a4a1e	France	LK24	K1a4b	Cyprus
HM103359	K1a4a1e	Unknown	KT749814	K1a4b	Italy
KF161298	K1a4a1e	Denmark	JX273257	K1a4b	Romania
JQ704526	K1a4a1e	British Isles	JQ703267	K1a4b	Unknown
ESP0203	K1a4a1e	Spain	JX273284	K1a4b1	Palestine
M6272_Wales_S	K1a4a1e	United Kingdom	KJ445989	K1a4b1	Israel
ESP0131	K1a4a1e	Spain	JN088539	K1a4b1	Armenia
1113002657_S7	K1a4a1e	Unknown	KJ445988	K1a4b1	Israel
BG106	K1a4a1e	Italy	KJ445987	K1a4b1	Israel

Table 1 | Complete dataset analysed for mtDNA studies. Information regarding haplogroup and country is also provided (continuation).

SampleID	Haplogroup	Country	SampleID	Haplogroup	Country
KF451868	K1a4b1	Israel	KF162073	K1a4d	Denmark
DQ301792	K1a4b1	Druze	KF161368	K1a4d	Denmark
EU600366	K1a4b1	Druze	KF162391	K1a4d	Denmark
JX273287	K1a4b1	Syria	KF161393	K1a4d	Denmark
KT749800	K1a4c	Italy	JQ704760	K1a4d	Germany
LK32	K1a4c	Cyprus	JQ703025	K1a4d	Switzerland
JQ706020	K1a4c1	Unknown	KF161319	K1a4d	Denmark
KT749811	K1a4c1	Italy	KF162022	K1a4d	Denmark
DQ301809	K1a4c1	North Caucasus	KF162455	K1a4d	Denmark
JQ706006	K1a4c1	Unknown	JQ705156	K1a4d	Unknown
1113001148_S53	K1a4c1	Unknown	JQ703034	K1a4d	Unknown
HQ538515	K1a4c1	Armenia	KC477768	K1a4d	Sweden
KC911519	K1a4c1	Iran	JF710373	K1a4d	Netherlands
JQ703523	K1a4c1	Italy	JQ704761	K1a4e	Unknown
1113001726_S16	K1a4c1	Unknown	JQ701964	K1a4e	Unknown
1113001100_S63	K1a4c1	Unknown	EU259093	K1a4e	Unknown
HQ435872	K1a4c1	Armenia	1113001806_S60	K1a4f	Unknown
KX231660	K1a4c1	Armenia	JX273277	K1a4f	Iraq
JQ704933	K1a4d	Unknown	EF177416	K1a4f	Portugal
JQ703085	K1a4d	British Isles	JX273279	K1a4f	Iraq
JQ701838	K1a4d	France	KJ446007	K1a4f	Palestine
EU926621	K1a4d	Germany	KJ446008	K1a4f	Palestine
JQ702070	K1a4d	Unknown	KC900995	K1a4f	Greece
gonl-87b	K1a4d	Unknown	GU722601	K1a4f	Unknown
JQ703001	K1a4d	Netherlands	KJ856742	K1a4f	Siberia
gonl-162b	K1a4d	Unknown	OL59	K1a4f1	Italy
JQ705775	K1a4d	British Isles	JX273267	K1a4f1	Turkey
HM565771	K1a4d	British Isles	JQ704764	K1a4f1	Malta
JQ705629	K1a4d	British Isles	ALP327	K1a4f1	Italy
LIE220	K1a4d	Belgium	KF163000	K1a4f1	Denmark
AY495253	K1a4d	Europe	EU219921	K1a4g	Unknown
AY495255	K1a4d	Europe	BG59	K1a4g	Italy
AY495259	K1a4d	Europe	LIE231	K1a4g	Belgium
KM101857	K1a4d	United States	HG00121	K1a4g	British Isles
KF162139	K1a4d	Denmark	VIKI6865	K1a4g	Europe NW
KF163019	K1a4d	Denmark	HM065508	K1a4g	Italy
JQ703006	K1a4d	Unknown	JQ703361	K1a4h	Unknown
JQ704963	K1a4d	Germany	JQ702911	K1a4h1	Unknown
JQ703048	K1a4d	Germany	EU564851	K1a4h1	Unknown
GP3_C8	K1a4d	Germany	JQ702908	K1a4h1	Unknown
gonl-103b	K1a4d	Unknown	KJ446006	K1a4i	Adygea
gonl-219a	K1a4d	Unknown	HM852890	K1a4i	Georgia
gonl-250b	K1a4d	Unknown	JX273269	K1a4i	Turkey
1113002008_S58	K1a4d	Unknown	PU39	K1a4i	Italy

Table 1 | Complete dataset analysed for mtDNA studies. Information regarding haplogroup and country is also provided (continuation).

SampleID	Haplogroup	Country	SampleID	Haplogroup	Country
KF162898	K1a4i	Denmark	FJ460554	K1a8b	Tunisia
JX273292	K1a4j1	Kurd	FJ460551	K1a8b	Tunisia
KC878714	K1a4j	Turkey	JQ706052	K1a8b	Lebanon
VB18	K1a4j1	Italy	JQ706061	K1a8b	Syria
VB39	K1a4j1	Italy	JQ706043	K1a8b	Iran
JX273290	K1a4j1	Kurd	JQ702512	K1a9	Unknown
JX273271	K1a4j1	Azerbaijan	DQ301790	K1a9	Europe
1113002094_S35	K1a5	Unknown	KJ856803	K1a9	Czech Republic
KF161427	K1a5	Denmark	GU295448	K1a9	Russia
KF161113	K1a5	Denmark	JQ702117	K1a9	Russia
DQ301793	K1a5a	Druze	JQ702076	K1a9	Unknown
EU600367	K1a5a	Druze	JQ702508	K1a9	Unknown
JX273274	K1a5a	Russia	KF040496	K1a9	United States
EU600368	K1a5a	Druze	DQ301806	K1a9	Europe
KJ446002	K1a5a	Israel	KC878723	K1a9	Bulgaria
KJ446003	K1a5a	Israel	DQ301791	K1a9	Europe
KJ446004	K1a5a	Israel	JQ703075	K1a9	Germany
KJ446005	K1a5a	Israel	JQ702555	K1a9	Unknown
JQ706059	K1a5b	Slovakia	JQ702175	K1a9	Unknown
HQ637410	K1a5b	United States	JQ702471	K1a9	Unknown
KT749776	K1a5b	Italy	JQ704228	K1a9	Belarus
DQ301801	K1a6	Druze	KF448539	K1a9	British Isles
EU600369	K1a6	Druze	KF161479	K1a9	Denmark
KJ445991	K1a6	Israel	JQ703171	K1a9	Germany
KJ445992	K1a6	Israel	KF161684	K1a9	Denmark
KJ445993	K1a6	Israel	JQ702100	K1a9	Unknown
KJ445994	K1a6	Israel	JQ705026	K1a9	Unknown
KJ445995	K1a6	Israel	1113000453_S31	K1b1	Unknown
KJ445997	K1a6	Israel	ALP363	K1b1a	Italy
DQ301799	K1a6	Druze	B-48	K1b1a	France
JX273288	K1a6	Syria	ESP0319	K1b1a	Spain
DQ301807	K1a7	Yemen	LIE009	K1b1a	Belgium
JQ706029	K1a7	North Caucasus	C-79	K1b1a	France
JQ706055	K1a7	Saudi Arabia	JQ702745	K1b1a1	Unknown
ALP163	K1a8	Italy	JQ705400	K1b1a1	British Isles
1113000157_S32	K1a8	Unknown	ESP0207	K1b1a1	Spain
JQ702902	K1a8	Unknown	M6317	K1b1a1	United Kingdom
DQ301817	K1a8a	Saudi Arabia	JQ703008	K1b1a1	Germany
JX273255	K1a8a1	Palestine	GU797785	K1b1a1	British Isles
DQ301816	K1a8a1	Lebanon	JQ705686	K1b1a1	Sweden
DQ301818	K1a8a1	Syria	1113000808_S17	K1b1a1	Unknown
1113000909_S79	K1a8b	Unknown	1113000998_S91	K1b1a1	Unknown
1113002951_S88	K1a8b	Unknown	M6319_WN	K1b1a1	United Kingdom
1113000195_S75	K1a8b	Unknown	KF162372	K1b1a1	Denmark
1113002896_S86	K1a8b	Unknown	JQ705225	K1b1a1+199	Unknown

Table 1 | Complete dataset analysed for mtDNA studies. Information regarding haplogroup and country is also provided (continuation).

SampleID	Haplogroup	Country	SampleID	Haplogroup	Country
GU722600	K1b1a1+199	British Isles	AY495260	K1b1b1	Europe
1113003052_S80	K1b1a1+199	Unknown	1113001273_S6	K1b1b1	Unknown
JX152882	K1b1a1a	Denmark	csct_005735_sard	K1b1c	Italy
KF048032	K1b1a1a	British Isles	ALP593	K1b1c	Italy
JX091694	K1b1a1a	British Isles	csct_000391_sard	K1b1c	Italy
gonl-55b	K1b1a1a	Unknown	csct_007236_sard	K1b1c	Italy
KF162711	K1b1a1a	Denmark	csct_002448_sard	K1b1c	Italy
JX153706	K1b1a1a	Denmark	KC878716	K1b1c	Turkey
JX153356	K1b1a1a	Denmark	DQ301810	K1b1c	Palestine
JX153378	K1b1a1a	Denmark	KC911594	K1b1c	Iran
KF161067	K1b1a1a	Denmark	GU455378	K1b1c	British Isles
M6326_Wales_S	K1b1a1a	United Kingdom	HM852812	K1b1c	Azerbaijan
1113000373_S81	K1b1a1a	Unknown	KC911572	K1b1c	Iran
1113001413_S77	K1b1a1a	Unknown	JX152834	K1b1c	Denmark
1113001013_S72	K1b1a1a	Unknown	JX153719	K1b1c	Denmark
1113002475_S19	K1b1a1a	Unknown	KF162621	K1b1c	Denmark
KF162474	K1b1a1a	Denmark	JX273293	K1b1c	Israel
JX152901	K1b1a1a	Denmark	EU600370	K1b1c	Druze
JX153865	K1b1a1a	Denmark	KM101710	K1b1c	
JQ701895	K1b1a1a	Unknown	KP744017	K1b1c	United States
KF161951	K1b1a1a	Denmark	KC878717	K1b1c	Turkey
KT749791	K1b1a1a	Italy	JQ703003	K1b1c	Unknown
JQ704057	K1b1a1a	Unknown	DQ358976	K1b2	Unknown
JQ702919	K1b1a1a	Unknown	C-19	K1b2	France
JQ702752	K1b1a1b	Italy	1113002440_S21	K1b2	Unknown
ESP0912	K1b1a1c	Spain	JX153399	K1b2a	Denmark
ESP0217	K1b1a1c	Spain	KF161857	K1b2a	Denmark
GU361772	K1b1a1c	Germany	M6346	K1b2a	United Kingdom
KF161232	K1b1a1c	Denmark	GU362081	K1b2a	United States
KF162683	K1b1a1c	Denmark	HM852763	K1b2a	Armenia
JQ705149	K1b1a1c	Finland	KF161883	K1b2a	Denmark
KC158584	K1b1a1c1	British Isles	JQ703033	K1b2a	British Isles
EU239477	K1b1a1c1	United States	EU855118	K1b2a	British Isles
NA11892	K1b1a1d	Unknown	JQ703378	K1b2a	British Isles
M4769	K1b1a1d1	United Kingdom	JQ705467	K1b2a	Finland
B-52	K1b1a1d1	France	GFM003	K1b2a	Greece
JX891380	K1b1a1d1	British Isles	C-63	K1b2a	France
JX154012	K1b1a1d1	Denmark	KF162749	K1b2a	Denmark
JX153429	K1b1a1d1	Denmark	HQ000094	K1b2a1	United States
EU714300	K1b1a2	Portugal	JQ703969	K1b2a1	Slovenia
JQ703194	K1b1a2	Portugal	KJ856831	K1b2a1	Slovakia
EF177415	K1b1a2	Portugal	AY339562	K1b2a1	Finland
ESP0722	K1b1a2	Spain	AY339561	K1b2a1	Finland
DQ301800	K1b1b	Yemen	1113001712_S49	K1b2a1	Unknown
KC847159	K1b1b1	Greece	BG76	K1b2a1	Italy

Table 1 | Complete dataset analysed for mtDNA studies. Information regarding haplogroup and country is also provided (continuation).

SampleID	Haplogroup	Country	SampleID	Haplogroup	Country
KT749792	K1b2a1	Italy	JQ703021	K1b2a3	Germany
KT749786	K1b2a1	Italy	EU621708	K1b2a3	Unknown
KT749787	K1b2a1	Italy	KT749780	K1b2a3	Italy
JN581652	K1b2a1	Italy(Venice)	JX273244	K1b2a3	France
KM101865	K1b2a1	United States	AF382005	K1b2b	Spain
FJ348210	K1b2a1	Italy	ESP0914	K1b2b	Spain
1113002698_S41	K1b2a1	Unknown	ESP0422	K1b2b	Spain
1113001029_S31	K1b2a1	Unknown	VIKI6939	K1b2b	Europe NW
1113003072_S54	K1b2a1a	Unknown	KJ856815	K1b2b	Poland
1113000134_S36	K1b2a1a	Unknown	EF428259	K1b2b	Unknown
KF162638	K1b2a1a	Denmark	JQ820100	K1b2b	Canada
KF161910	K1b2a1a	Denmark	JQ703206	K1b2b	British Isles
KF162842	K1b2a1a	Denmark	JX273245	K1b2b	France
KF161763	K1b2a1a	Denmark	ESP0474	K1b2b	Spain
KF162144	K1b2a1a	Denmark	HM775970	K1b2b	Spain
JQ705289	K1b2a1a	Unknown	JQ705771	K1b2b	Spain
JQ705246	K1b2a1a1	Unknown	JQ702810	K1b2b	Spain
JQ705519	K1b2a1a1	British Isles	M6241	K1b2b	United Kingdom
JQ702926	K1b2a1a1	Sweden	gonl-168b	K1b2b	Unknown
JQ705103	K1b2a1a1	Unknown	JX153522	K1b2b1	Denmark
JQ705044	K1b2a2	Germany	gonl-40a	K1b2b1	Unknown
1113001665_S56	K1b2a2	Unknown	KF161201	K1b2b1	Denmark
JQ705736	K1b2a2	British Isles	JQ702540	K1c1	Belarus
gonl-156b	K1b2a2	Unknown	JQ702192	K1c1	Unknown
EU372659	K1b2a2	Unknown	1113000062_S84	K1c1	Unknown
KF163028	K1b2a2	Denmark	1113000597_S60	K1c1	Unknown
KC878718	K1b2a2	Turkey	M6387	K1c1	United Kingdom
KJ856838	K1b2a2	Russia	GU585491	K1c1	British Isles
KJ856836	K1b2a2	Russia	GU936958	K1c1	United States
KJ856840	K1b2a2	Russia	JX153878	K1c1	Denmark
KJ856772	K1b2a2	Russia	KF162978	K1c1	Denmark
JQ774501	K1b2a2	Russia	AY339555	K1c1	Finland
JQ702849	K1b2a2	Poland	AY339559	K1c1	Finland
KF162900	K1b2a2	Denmark	JQ702133	K1c1	Finland
KJ856701	K1b2a2	Siberia	AY339560	K1c1	Finland
KJ856823	K1b2a2	Russia	JX273276	K1c1	Czech Republic
gonl-53a	K1b2a2a	Unknown	JQ705520	K1c1	Spain
EU849091	K1b2a2a	Sweden	EF177407	K1c1	Portugal
KP419691	K1b2a2a	Sweden	KM101918	K1c1	United States
KT821555	K1b2a2a	Sweden	JX152876	K1c1	Denmark
JQ702325	K1b2a2a	Unknown	JQ702148	K1c1	British Isles
JQ702636	K1b2a2a	Unknown	JX153548	K1c1	Finland
1113000140_S78	K1b2a3	Unknown	KP100791	K1c1	British Isles
M6344	K1b2a3	United Kingdom	HG01685	K1c1	Spain
gonl-116a	K1b2a3	Unknown	KT749788	K1c1	Italy

Table 1 | Complete dataset analysed for mtDNA studies. Information regarding haplogroup and country is also provided (continuation).

SampleID	Haplogroup	Country	SampleID	Haplogroup	Country
KT749801	K1c1	Italy	M6425	K1c1b	United Kingdom
HM625702	K1c1	Unknown	M6427_WN	K1c1b	United Kingdom
KM101977	K1c1	United States	LP6008115-DNA_F06	K1c1b	Ireland
AY339556	K1c1	Finland	B-7	K1c1b	France
KT749789	K1c1	Italy	LP6008114-DNA_D09	K1c1b	Ireland
AY339558	K1c1	Finland	KC866617	K1c1b	British Isles
EU157918	K1c1	Unknown	KF181927	K1c1b	British Isles
KF162422	K1c1	Denmark	AY495250	K1c1b	Europe
AY339557	K1c1	Finland	AY495251	K1c1b	Europe
JQ705481	K1c1	Poland	EU677421	K1c1b	United States
KF161656	K1c1	Denmark	HM474856	K1c1b	Germany
KF161428	K1c1	Denmark	JQ703261	K1c1b	France
JQ702618	K1c1	British Isles	csct_004251_sard	K1c1b	Italy
JX273248	K1c1	Italy	1113001999_S58	K1c1b	Unknown
GU722602	K1c1	British Isles	KT892947	K1c1b	United States
HQ011278	K1c1	United States	KM101768	K1c1b	United States
HQ108165	K1c1	British Isles	JQ705781	K1c1b	Denmark
ESP0529	K1c1	Spain	KF162308	K1c1b	Denmark
ESP0352	K1c1	Spain	KF162373	K1c1b	Denmark
ESP0723	K1c1	Spain	KF162399	K1c1b	Denmark
1113000469_S92	K1c1	Unknown	JQ702333	K1c1b	British Isles
1113001737_S49	K1c1	Unknown	JQ703054	K1c1b	British Isles
1113002728_S66	K1c1	Unknown	AY195765	K1c1b	Europe
LP6008113-DNA_H03	K1c1	Ireland	M6416_England_N	K1c1b	United Kingdom
LP6008117-DNA_A03	K1c1	Ireland	HM594675	K1c1b	British Isles
GP3_G3	K1c1	Germany	KF162340	K1c1b	Denmark
gonl-244b	K1c1	Unknown	AY495243	K1c1b	Europe
1113000297_S46	K1c1	Unknown	MIR11	K1c1b	Ireland
GFM007	K1c1	Greece	M6426_WN	K1c1b	United Kingdom
A-23	K1c1	France	1113001698_S20	K1c1b	Unknown
JQ705131	K1c1	Netherlands	HQ454119	K1c1b	British Isles
JQ703695	K1c1	Unknown	KU159394	K1c1b	United States
HG01605	K1c1a	Spain	JQ703487	K1c1b	Unknown
HM851442	K1c1a	United States	HG00177	K1c1c	Finland
AY882394	K1c1a	Italy	HG00326	K1c1c	Finland
M6392_Ireland_Ulster	K1c1a	United Kingdom	JQ703860	K1c1c	Finland
1113000369_S73	K1c1a	Unknown	JX153201	K1c1c	Finland
JQ702851	K1c1b	Unknown	JX153261	K1c1c	Finland
JQ702796	K1c1b	Spain	JX153541	K1c1c	Finland
FJ348212	K1c1b	Italy	JX153567	K1c1c	Finland
M3070_England_SW	K1c1b	United Kingdom	JX153240	K1c1c	Finland
GU371910	K1c1b	British Isles	JX171127	K1c1c	Finland
LP6008114-DNA_G04	K1c1b	Ireland	JX171126	K1c1c	Finland
LP6008114-DNA_H04	K1c1b	Ireland	HG00185	K1c1c	Finland
B-72	K1c1b	France	JQ703696	K1c1c	Finland

Table 1 | Complete dataset analysed for mtDNA studies. Information regarding haplogroup and country is also provided (continuation).

SampleID	Haplogroup	Country	SampleID	Haplogroup	Country
JX153615	K1c1c	Finland	JN897373	K1c1i	British Isles
KR919601	K1c1c	Finland	LP6008114-DNA_A07	K1c1i	Ireland
EU753433	K1c1c	Finland	JX153990	K1c1i	Denmark
KC170989	K1c1c	Russia	HM032895	K1c1i	British Isles
JX153574	K1c1c	Finland	JQ703044	K1c2	Unknown
KC763425	K1c1c	Finland	JQ705821	K1c2	Unknown
EU262720	K1c1c	Unknown	JQ702977	K1c2	Unknown
KF162649	K1c1c	Denmark	JQ703124	K1c2	Unknown
KC763427	K1c1c	Finland	JQ702861	K1c2	Unknown
A-26	K1c1d	France	JQ705178	K1c2	Unknown
1113002443_S49	K1c1d	Unknown	JQ704904	K1c2	Unknown
1113000138_S3	K1c1d	Unknown	JQ702031	K1c2	Unknown
JQ703292	K1c1d	Germany	1113000536_S80	K1c2	Unknown
JF819714	K1c1d	British Isles	KM101839	K1c2	United States
JQ705406	K1c1d	Germany	JQ706028	K1c2	North Caucasus
KF161293	K1c1d	Denmark	KF161284	K1c2	Denmark
JQ703189	K1c1e	Unknown	LP6008113-DNA_G06	K1c2	Ireland
HM765466	K1c1e	Unknown	LP6008113-DNA_H10	K1c2	Ireland
GU123011	K1c1e	Russia (Volga-Urals)	1113000664_S82	K1c2	Unknown
JQ702901	K1c1e	Poland	1113002286_S22	K1c2	Unknown
JQ702905	K1c1e	Romania	LP6008114-DNA_A06	K1c2	Ireland
AY495245	K1c1f	Europe	M6494_Wales_S	K1c2	United Kingdom
JQ703815	K1c1f	Germany	M6497_WN	K1c2	United Kingdom
JX153577	K1c1f	Finland	P10H8	K1c2	Germany
KF161960	K1c1f	Denmark	VIKI6272	K1c2	Europe NW
HQ398201	K1c1f	Slovakia	GU323604	K1c2	British Isles
KF161150	K1c1f	Denmark	HQ342147	K1c2	British Isles
1113003007_S91	K1c1f	Unknown	JQ703067	K1c2	British Isles
M6444_Scotland_SW	K1c1f	United Kingdom	JQ704729	K1c2	British Isles
JQ702722	K1c1g	Unknown	JQ705122	K1c2	British Isles
LP6008114-DNA_H07	K1c1g	Ireland	JN620369	K1c2	United States
KP150426	K1c1g	Italy	KF729956	K1c2	Australia
1113002519_S33	K1c1g	Unknown	KM101945	K1c2	United States
KF736454	K1c1h	Romania	JX153764	K1c2	Denmark
KT763050	K1c1h	Sweden	JQ705173	K1c2	Unknown
JF813785	K1c1h	Finland	JQ702632	K1c2	British Isles
KF162802	K1c1h	Denmark	KF162997	K1c2	Denmark
JX153393	K1c1h	Denmark	HM245922	K1c2	United States
JX153523	K1c1h	Denmark	KF162275	K1c2	Denmark
KF161369	K1c1h	Denmark	JQ702944	K1c2	Unknown
KF161498	K1c1h	Denmark	LP6008113-DNA_G12	K1c2	Ireland
KF162896	K1c1h	Denmark	JQ704951	K1c2	British Isles
KF162960	K1c1h	Denmark	JQ703095	K1c2	Germany
1113000520_S22	K1c1h	Unknown	LP6008116-DNA_C09	K1c2	Ireland
VIKI6186	K1c1i	Europe NW	KF161808	K1c2	Denmark

Table 1 | Complete dataset analysed for mtDNA studies. Information regarding haplogroup and country is also provided (continuation).

SampleID	Haplogroup	Country	SampleID	Haplogroup	Country
EU664585	K1c2	British Isles	1113001372_S70	K1d	Unknown
JX153919	K1c2	Denmark	1113001938_S79	K1d	Unknown
KF162554	K1c2	Denmark	1113002362_S51	K1d	Unknown
JX154001	K1c2	Denmark	JX294315	K1d	British Isles
JQ703159	K1c2	British Isles	JX152800	K1d1	Denmark
FJ608581	K1c2	Australia	KF161935	K1d1	Denmark
M5289_WN	K1c2	United Kingdom	KF161973	K1d1	Denmark
KC980908	K1c2	France	KF161990	K1d1	Denmark
EU669889	K1c2	Denmark	KF162487	K1d1	Denmark
JX153966	K1c2	Denmark	JQ702254	K1d1	British Isles
KF161219	K1c2	Denmark	JQ702883	K1d1	Unknown
JQ705291	K1c2	British Isles	JQ705538	K1e	British Isles
M6457_Ireland_Ulster	K1c2	United Kingdom	JX293716	K1e	British Isles
MBR	K1c2	United Kingdom	JQ705063	K1e1	British Isles
DQ830736	K1c2	Unknown	KT749809	K1e1	Italy
JQ706007	K1c2	Germany	1113001442_S72	K1e1	Unknown
JQ703679	K1c2	British Isles	1113001829_S50	K1e1	Unknown
KF162571	K1c2	Denmark	1113002532_S6	K1e1	Unknown
JQ703019	K1c2	British Isles	EU073969	K1e1	Unknown
KC866616	K1c2	British Isles	ESP0101	K2a	Spain
LP6008116-DNA_C12	K1c2	Ireland	JQ701884	K2a	Unknown
KT749808	K1c2	Italy	JQ704625	K2a	Unknown
HM625683	K1c2	Unknown	KR712273	K2a	Finland
HQ538516	K1c2	United States	JQ705543	K2a	Spain
JQ704737	K1c2	Poland	1113000044_S43	K2a	Unknown
JQ703122	K1c2	Unknown	1113000581_S3	K2a	Unknown
DQ301797	K1c2	Morocco	1113001868_S82	K2a	Unknown
JQ703200	K1c2	Germany	1113002371_S47	K2a	Unknown
1113001910_S78	K1c2	Unknown	1113002640_S96	K2a	Unknown
JQ701845	K1c2	British Isles	1113002875_S39	K2a	Unknown
JQ702129	K1c2	British Isles	LIE113	K2a	Belgium
HM149346	K1c2	British Isles	AY495241	K2a	Europe
KF161686	K1c2	Denmark	AY495247	K2a	Europe
ALP054	K1c2	Italy	KF199874	K2a	United States
1113001557_S62	K1c2	Unknown	KF162596	K2a	Denmark
M6499_Wales_S	K1c2	United Kingdom	KF162260	K2a	Denmark
LIE084	K1c2	Belgium	JQ702111	K2a	Unknown
B-25	K1c2	France	GU565530	K2a	Unknown
1113000167_S83	K1c2	Unknown	JN541065	K2a	British Isles
M6500_Wales_N	K1c2	United Kingdom	JQ703752	K2a	Germany
M6502_EY	K1c2	United Kingdom	JQ705452	K2a	British Isles
JQ705317	K1c2	Unknown	JQ705611	K2a	Spain
KM047210	K1d	Poland	JX273273	K2a	Russia
M6513	K1d	United Kingdom	EU130564	K2a	Sweden
1113001005_S53	K1d	Unknown	EU259094	K2a	Unknown

Table 1 | Complete dataset analysed for mtDNA studies. Information regarding haplogroup and country is also provided (continuation).

SampleID	Haplogroup	Country	SampleID	Haplogroup	Country
KF162149	K2a	Denmark	KP878219	K2a11	Sweden
NA12005	K2a	Unknown	EU884127	K2a11	British Isles
HM194602	K2a	United States	HM804486	K2a11	Unknown
JQ703050	K2a	British Isles	DQ301815	K2a1a	Algeria
JQ704879	K2a	Hungary (Gyula)	KF408388	K2a2	United States
JQ704822	K2a	France	AY495246	K2a2	Europe
LIE072	K2a	Belgium	HQ154135	K2a2a	Germany
A-69	K2a	France	LP6008182-DNA_C01	K2a2a1	Ireland
A-70	K2a	France	ALP357	K2a2a1	Italy
1113003031_S53	K2a	Unknown	HM347598	K2a2a1	Belarus
1113000641_S26	K2a	Unknown	JQ705090	K2a2a1	Belarus
1113001716_S85	K2a	Unknown	DQ301804	K2a2a1	Europe
M3361_Scotland_C	K2a	United Kingdom	DQ301812	K2a2a1	Europe
M6538_WS	K2a	United Kingdom	KC757125	K2a2a1	United States
M6536_Wales_S	K2a	United Kingdom	EU327986	K2a2a1	Unknown
1113001756_S40	K2a	Unknown	HQ914446	K2a2a1	Ukraine
GP2_C3	K2a	Germany	JQ702429	K2a2a1	Belarus
1113002911_S89	K2a	Unknown	JQ703072	K2a2a1	Poland
1113002897_S20	K2a	Unknown	JX566771	K2a2a1	Poland
1113002084_S11	K2a	Unknown	JQ701811	K2a2a1	Russia
1113002120_S28	K2a	Unknown	JQ703629	K2a2a1	Russia
gonl-153b	K2a	Unknown	JQ703837	K2a3	Unknown
gonl-244a	K2a	Unknown	JQ704707	K2a3	Unknown
1113000871_S16	K2a	Unknown	JQ703146	K2a3	Netherlands
1113001554_S67	K2a	Unknown	1113001666_S57	K2a3	Unknown
ESP0101	K2a	Spain	1113002909_S43	K2a3	Unknown
M6535_Wales_S	K2a	United Kingdom	1113000339_S70	K2a3	Unknown
1113001137_S2	K2a	Unknown	EKD014	K2a3	United Kingdom
1113002164_S21	K2a	Unknown	HG00236	K2a3	British Isles
1113001556_S21	K2a1	Unknown	KJ856802	K2a3	Czech Republic
JQ665461	K2a1	United States	JX153148	K2a3	Denmark
JQ702134	K2a10	Unknown	JX153766	K2a3	Denmark
KC257379	K2a10	Unknown	JX153914	K2a3	Denmark
BGD165	K2a10	Italy	KF161160	K2a3	Denmark
B-14	K2a10	France	JQ703039	K2a3	France
M6543_England_SE	K2a10	United Kingdom	KT749778	K2a3	Italy
KF030560	K2a10	United States	KF162019	K2a3	Denmark
KF723709	K2a10	United States	HQ658476	K2a3	Sweden
JX153923	K2a10	Denmark	KJ856676	K2a3	Russia
GP2_C9	K2a10	Germany	AY495252	K2a3	Europe
GP2_B1	K2a10	Germany	LP6008116-DNA_D11	K2a3	Ireland
JQ703553	K2a10	France	KM101834	K2a3	United States
JX417188	K2a10	Unknown	JQ702353	K2a3	British Isles
JQ702771	K2a11	Unknown	ESP0286	K2a3	Spain
HG01334	K2a11	British Isles	HM103361	K2a3	Unknown

Table 1 | Complete dataset analysed for mtDNA studies. Information regarding haplogroup and country is also provided (continuation).

SampleID	Haplogroup	Country	SampleID	Haplogroup	Country
HM103360	K2a3	Unknown	JQ704843	K2a5a1	Portugal
HG00349	K2a3a	Finland	KC911393	K2a5b	Iran
1113000437_S27	K2a3a	Unknown	AY714017	K2a5b	India
1113000748_S55	K2a3a	Unknown	JX273250	K2a5b	Turkey
1113002327_S19	K2a3a	Unknown	KJ856739	K2a5b	Siberia
KF162745	K2a3a	Denmark	NA20910	K2a5b	Unknown
HM625707	K2a3a1	Unknown	KJ445985	K2a5b	Pakistan
AY495249	K2a3a1	Europe	JQ705059	K2a6	Unknown
JN867338	K2a3a1	United States	JQ703521	K2a6	Unknown
HQ246214	K2a3a1	United States	JQ703049	K2a6	Unknown
JQ702920	K2a4	Unknown	JQ702341	K2a6	Norway
JX273272	K2a4	Russia	JQ702417	K2a6	Unknown
LIE106	K2a4	Belgium	JQ705301	K2a6	Unknown
M6567_EE	K2a4	United Kingdom	JX414172	K2a6	Unknown
AY495242	K2a4	Europe	KC209782	K2a6	Unknown
JQ664545	K2a4	Croatia	1113000027_S1	K2a6	Unknown
M1076_England_Yorks	K2a4	United Kingdom	1113001199_S35	K2a6	Unknown
M4768_Scotland_SE	K2a4	United Kingdom	1113001209_S11	K2a6	Unknown
M5086_Wales_N	K2a4	United Kingdom	1113001610_S45	K2a6	Unknown
M6566_WN	K2a4	United Kingdom	1113002271_S7	K2a6	Unknown
JX153120	K2a4	Finland	M9190_WS	K2a6	United Kingdom
JX153185	K2a4	Finland	AY495239	K2a6	Europe
JQ703318	K2a5	Unknown	AY495240	K2a6	Europe
gonl-189b	K2a5	Unknown	AY495244	K2a6	Europe
gonl-120a	K2a5	Unknown	AY495248	K2a6	Europe
KJ445986	K2a5	Pakistan	KF161755	K2a6	Denmark
JX021502	K2a5	Germany	KF161921	K2a6	Denmark
1113001749_S86	K2a5	Unknown	KT749799	K2a6	Italy
gonl-189a	K2a5	Unknown	KF162723	K2a6	Denmark
1113002241_S27	K2a5	Unknown	HQ413155	K2a6	Germany
gonl-107a	K2a5	Unknown	JX154039	K2a6	Denmark
KF162819	K2a5	Denmark	KF162147	K2a6	Denmark
JQ703018	K2a5	British Isles	KF162231	K2a6	Denmark
1113002807_S81	K2a5	Unknown	HQ213857	K2a6	British Isles
1113000574_S49	K2a5	Unknown	HQ224515	K2a6	British Isles
1113001036_S82	K2a5	Unknown	FJ492878	K2a6	United States
1113001635_S77	K2a5	Unknown	KF424268	K2a6	France
KF161200	K2a5	Denmark	KM267904	K2a6	France
KF162078	K2a5	Denmark	JX152934	K2a6	Denmark
EU910091	K2a5a	United States	JX153806	K2a6	Denmark
M6577	K2a5a	United Kingdom	JX153924	K2a6	Denmark
M6579_WS	K2a5a1	United Kingdom	KF161518	K2a6	Denmark
M8318_SNW	K2a5a1	United Kingdom	1113001272_S18	K2a6	Unknown
EU718789	K2a5a1	British Isles	GP2_A10	K2a6	Germany
KM101733	K2a5a1	Unknown	JQ703300	K2a6	Germany

Table 1 | Complete dataset analysed for mtDNA studies. Information regarding haplogroup and country is also provided (continuation).

SampleID	Haplogroup	Country	SampleID	Haplogroup	Country
JQ704662	K2a6	British Isles	ROMVR234	K2a9	Romania
KF161807	K2a6	Denmark	HELT04	K2a9	Greece
KF161954	K2a6	Denmark	TURAT8	K2a9	Turkey
KF161774	K2a6	Denmark	SICTR5	K2a9	Italy: Sicily
1113000211_S42	K2a6	Unknown	LP6008116-DNA_H03	K2a9	Ireland
KM101766	K2a6	United States	K1a1b1b1	K2a9	Unknown
gonl-159b	K2a6	Unknown	4240_sard	K2a9	Italy
M3327_WN	K2a6	United Kingdom	csct_007697_sard	K2a9	Italy
LP6008116-DNA_B11	K2a6	Ireland	csct_000004_sard	K2a9	Italy
M8276_WS	K2a6	United Kingdom	csct_003929_sard	K2a9	Italy
FJ644290	K2a6	British Isles	csct_007431_sard	K2a9	Italy
KC861916	K2a6	United States	csct_007176_sard	K2a9	Italy
JQ702373	K2a6	Unknown	csct_005387_sard	K2a9	Italy
JQ703534	K2a6	British Isles	csct_004248_sard	K2a9	Italy
KF161289	K2a6	Denmark	JQ705829	K2a9	Italy
KF162975	K2a6	Denmark	csct_000208_sard	K2a9	Italy
JX154033	K2a6	Denmark	csct_000741_sard	K2a9	Italy
JQ705073	K2a6	British Isles	csct_000442_sard	K2a9	Italy
JQ704912	K2a7	Unknown	csct_007204_sard	K2a9	Italy
B-32	K2a7	France	KJ445983	K2a9	Italy
B-93	K2a7	France	KJ445984	K2a9	Italy
M6613_Wales_N	K2a7	United Kingdom	JQ702282	K2a9	Lithuania
JQ702380	K2a7	Germany	KT749793	K2a9	Italy
JQ703136	K2a7	British Isles	KT749795	K2a9	Italy
LP6008113-DNA_G08	K2a7	Ireland	KT749816	K2a9	Italy
JQ702640	K2a7	France	HM103362	K2b	Unknown
EU284177	K2a7	Unknown	BG68	K2b1	Italy
NA20756	K2a8	Italy	ALE	K2b1	Italy
DQ282493	K2a8	Europe	1113000066_S58	K2b1	Unknown
DQ282494	K2a8	Europe	1113000132_S2	K2b1	Unknown
DQ282495	K2a8	Europe	1113000098_S31	K2b1	Unknown
DQ282496	K2a8	Europe	KT749783	K2b1	Italy
DQ282497	K2a8	Europe	1113000817_S65	K2b1	Unknown
DQ282498	K2a8	Europe	1113002903_S49	K2b1	Unknown
DQ282499	K2a8	Europe	1113002348_S79	K2b1	Unknown
DQ282500	K2a8	Europe	JQ704070	K2b1	Unknown
DQ282501	K2a8	Europe	ALP146	K2b1a	Italy
DQ282502	K2a8	Europe	ESP0180	K2b1a	Spain
DQ282504	K2a8	Europe	ESP0275	K2b1a	Spain
KM102076	K2a8	United States	ESP1018	K2b1a	Spain
KM102133	K2a8	United States	ESP0259	K2b1a	Spain
KM102140	K2a8	United States	ESP0444	K2b1a	Spain
JQ705029	K2a8	Spain	ESP0025	K2b1a	Spain
DQ282503	K2a8	Europe	ESP0363	K2b1a	Spain
ROMMA5	K2a9	Romania	KM102010	K2b1a	United States

Table 1 | Complete dataset analysed for mtDNA studies. Information regarding haplogroup and country is also provided (continuation).

SampleID	Haplogroup	Country	SampleID	Haplogroup	Country
KF644446	K2b1a	Canada	JQ703375	K2b1a1a	British Isles
KC469897	K2b1a	British Isles	EU770310	K2b1a1a	British Isles
JQ703184	K2b1a	British Isles	JQ702805	K2b1a1a	British Isles
JX273246	K2b1a	Iraq	B-22	K2b1a1a	France
JQ703038	K2b1a	British Isles	JF497777	K2b1a2	British Isles
JQ701883	K2b1a	Unknown	HG00243	K2b1a2	British Isles
JQ704004	K2b1a1	Unknown	JX847130	K2b1a2	British Isles
1113001898_S14	K2b1a1	Unknown	JQ705010	K2b1a3	Unknown
JQ705092	K2b1a1	Germany	EU294321	K2b1a3	Unknown
JX152899	K2b1a1	Denmark	HG00128	K2b1a3	British Isles
1113000121_S91	K2b1a1	Unknown	KF161291	K2b1a4	Denmark
1113001681_S47	K2b1a1	Unknown	KF161816	K2b1a4	Denmark
1113002560_S64	K2b1a1	Unknown	JQ702075	K2b1a4	Germany
KC907699	K2b1a1	France	KF162823	K2b1a4	Denmark
JQ703767	K2b1a1	Germany	KF161652	K2b1a4	Denmark
EU669888	K2b1a1	British Isles	JX153873	K2b1a4	Denmark
JX153673	K2b1a1	Denmark	KF161918	K2b1a4	Denmark
JQ703066	K2b1a1	British Isles	JQ705204	K2b1b	Germany
JQ702033	K2b1a1	British Isles	JQ704900	K2b1b	Unknown
JX440337	K2b1a1	British Isles	1113003027_S40	K2b1b	Unknown
EU825946	K2b1a1	Unknown	JQ704064	K2b1b	Germany
LP6008116-DNA_F11	K2b1a1	Ireland	M6655	K2b1b	United Kingdom
JQ703859	K2b1a1	Belgium	KU188280	K2b1b	Sweden
JQ705469	K2b1a1	Germany	JQ702672	K2b1b	British Isles
JQ702754	K2b1a1	British Isles	KF162316	K2b1b	Denmark
JQ702487	K2b1a1	British Isles	KT749810	K2b1b	Italy
JQ705327	K2b1a1a	Unknown	JQ703197	K2b1b	Germany
JQ272844	K2b1a1a	British Isles	1113002617_S89	K2b2	Unknown
KM101968	K2b1a1a	United States	KC911571	K2b2	Iran
JN409346	K2b1a1a	Germany	JX273249	K2b2	Italy
1113000334_S86	K2b1a1a	Unknown	1532_sard	K2b2	Italy
gonl-32b	K2b1a1a	Unknown	3099_sard	K2b2	Italy
LP6008115-DNA_B07	K2b1a1a	Ireland	DQ301796	K2c	Yemen
ESP0778	K2b1a1a	Spain	JX273247	K2c	Italy
GP2_F2	K2b1a1a	Germany	csct_004135_sard	K2c	Italy
GFMP	K2b1a1a	United Kingdom	VY02	U	Czech Republic
ESP0494	K2b1a1a	Spain	VY29	U	Czech Republic
KF162648	K2b1a1a	Denmark	x5467	U	Portugal
JX153267	K2b1a1a	Finland	KX866973	U1a	Turkey
JQ702131	K2b1a1a	Finland	SJSb38	U1a1	Syria
JN202493	K2b1a1a	British Isles	KT779188	U1a1	Lebanon
JQ702394	K2b1a1a	British Isles	KJ856759	U1a1	Siberia
KM101901	K2b1a1a	United States	389	U1a1	Turkey
JN107640	K2b1a1a	British Isles	K98	U1a1	Turkey (Kurd)
KF161841	K2b1a1a	Denmark	KJ445915	U1a1	China

Table 1 | Complete dataset analysed for mtDNA studies. Information regarding haplogroup and country is also provided (continuation).

SampleID	Haplogroup	Country	SampleID	Haplogroup	Country
KF451758	U1a1	Unknown	MF362877	U1a1a1	Armenia
KM434265	U1a1	North Europe	csct_005666_sard	U1a1a1	Greece
MF362915	U1a1	Armenia	csct_007188_sard	U1a1a1	Greece
KY674520	U1a1	Armenia	HQ615882	U1a1a1	Greece
HM852790	U1a1	Azerbaijan	SJS29	U1a1a1	Syria
KX398117	U1a1a	Iran	KU378664	U1a1a1	Turkey
KX821325	U1a1a	Turkey	MF362986	U1a1a1	Turkey
YEM4	U1a1a	Yemen	HM852882	U1a1a1	Georgia
1113001339_S63	U1a1a	Unknown	KT223400	U1a1a1	United Kingdom
gonl-225b	U1a1a	Unknown	ADY33	U1a1a1	Adygei
PU88	U1a1a	Italy	KAB23	U1a1a1	Kabardia
KJ445921	U1a1a	Palestine	KC911344	U1a1a1	Armenia
KF451246	U1a1a	Unknown	EF556161	U1a1a1	Unknown
GU218692	U1a1a	Greece	KC911328	U1a1a1a	Iran
C-17	U1a1a	France	KC911437	U1a1a1a	Iran
1113002161_S89	U1a1a	Unknown	HM156682	U1a1a1a	India
GP3_G12	U1a1a	Germany	HG03780	U1a1a1a	United Kingdom
KP763854	U1a1a	India	TURATb15	U1a1a1a	Turkey
AY289073	U1a1a	India	KC477757	U1a1a1a	Kurdistan
KT779193	U1a1a	Lebanon	PALAO735	U1a1a1a	Palestine
KT779198	U1a1a	Lebanon	GFM070	U1a1a2	Greece
MF362819	U1a1a	Armenia	HG01625	U1a1a2	Spain
NOS11	U1a1a	North Ossetia	JQ703793	U1a1a2	Greece
KJ445920	U1a1a	Pakistan	KJ719558	U1a1a2	Sweden
KF450884	U1a1a	Unknown	KR698932	U1a1a2	Sweden
KF451864	U1a1a	Druze	JX289842	U1a1a2	Finland
KJ445919	U1a1a	Druze	KY498015	U1a1a2	Sweden
DRZ32	U1a1a	Druze	ALP228	U1a1a3	Italy
DRZ43	U1a1a	Druze	ESP0696	U1a1a3	Spain
DRZ48	U1a1a	Druze	AY882396	U1a1a3	North Caucasus
HM852847	U1a1a	Turkey	IRQ125	U1a1a3	Iraq
KF162488	U1a1a	Denmark	ATb2	U1a1a3	Turkey
179	U1a1a	Turkey	JQ705601	U1a1a3	Unknown
338	U1a1a	Turkey	SICTO576	U1a1a3	Italy: Sicily
KUR98	U1a1a	Kurdistan	45	U1a1a3	Turkey
NOS44	U1a1a+16129	North Ossetia	KC911502	U1a1a3	Iran
ADY44	U1a1a+16129	Adygei	JQ705704	U1a1a3	Unknown
KT779167	U1a1a+16129	Lebanon	ESP0078	U1a1b	Spain
KP851971	U1a1a+16129	Italy	ESP0991	U1a1b	Spain
KX460824	U1a1a+16129	Turkey	JQ704153	U1a1b	Spain
KJ445918	U1a1a+16129	North Caucasus	EF556157	U1a1b	Unknown
EU597497	U1a1a+16129	Unknown	YJ39	U1a1b	Yemen
KF451847	U1a1a+16129	Unknown	KC911607	U1a1b	Iran
ADY24	U1a1a+16129	Adygei	JQ705515	U1a1b	Unknown
PU34	U1a1a1	Italy	KJ445914	U1a1b	Palestine

Table 1 | Complete dataset analysed for mtDNA studies. Information regarding haplogroup and country is also provided (continuation).

SampleID	Haplogroup	Country	SampleID	Haplogroup	Country
KF451253	U1a1b	Unknown	MF362756	U1a1d	Armenia
MF362911	U1a1b	Armenia	129	U1a1d	Turkey
AT41	U1a1c	Turkey	HM241417	U1a1d	North Europe
KT698016	U1a1c	Serbia	EF692533	U1a1d	Unknown
KT698030	U1a1c	Serbia	JQ703930	U1a2	Unknown
JX153116	U1a1c1	Italy	HG03886	U1a2	United Kingdom
1113002722_S6	U1a1c1	Unknown	EF556194	U1a2	Unknown
1113001387_S20	U1a1c1	Unknown	csct_000618_sard	U1a2	Italy
TURAT71	U1a1c1	Turkey	csct_000013_sard	U1a2	Italy
JQ704034	U1a1c1	Italy	csct_000439_sard	U1a2	Italy
DQ523634	U1a1c1a	Italy	csct_003730_sard	U1a2	Italy
FJ748753	U1a1c1a	Tibet	csct_003897_sard	U1a2	Italy
AY714038	U1a1c1b	India	csct_005433_sard	U1a2	Italy
HG03862	U1a1c1c	United Kingdom	csct_005457_sard	U1a2	Italy
KC911365	U1a1c1c	Iran	csct_005922_sard	U1a2	Italy
KC911388	U1a1c1c1	Iran	csct_007284_sard	U1a2	Italy
37335_sard	U1a1c1c1	Italy	HM852789	U1a3	Azerbaijan
csct_000043_sard	U1a1c1c1	Italy	KC540656	U1a3	United Kingdom
csct_000103_sard	U1a1c1c1	Italy	HM852844	U1a3	Iran
csct_000207_sard	U1a1c1c1	Italy	csct_006362_sard	U1a3	Italy
csct_000387_sard	U1a1c1c1	Italy	KF451616	U1a3	Unknown
csct_000574_sard	U1a1c1c1	Italy	KF451612	U1a3	Unknown
csct_000603_sard	U1a1c1c1	Italy	KJ445913	U1a3	Italy
csct_000691_sard	U1a1c1c1	Italy	KJ445912	U1a3	Italy
csct_004086_sard	U1a1c1c1	Italy	KY382658	U1b1	Italy
csct_004410_sard	U1a1c1c1	Italy	PU10	U1b1	Italy
csct_005723_sard	U1a1c1c1	Italy	csct_000093_sard	U1b1	Italy
csct_007228_sard	U1a1c1c1	Italy	csct_000261_sard	U1b1	Italy
DQ523621	U1a1c1c1	Italy	M7692_England_C	U1b1	United Kingdom
csct_000449_sard	U1a1c1c1	Italy	ALP617	U1b1	Italy
1502_sard	U1a1c1c1	Italy	KJ445908	U1b1	Bedouin
csct_005816_sard	U1a1c1c1	Italy	KF451170	U1b1	Unknown
KM047208	U1a1c1d	Poland	SJSb14	U1b1	Syria
KJ445916	U1a1c1d	Pakistan	HQ325737	U1b1	Armenia
KF451000	U1a1c1d	Unknown	JQ705911	U1b1	United Kingdom
TURAT94	U1a1c1d	Turkey	KR758760	U1b1	United Kingdom
KC911457	U1a1c1d	Iran	MF362780	U1b1	Armenia
KJ445917	U1a1c1d	Bedouin	MF362787	U1b1	Armenia
KF451137	U1a1c1d	Unknown	TURAT22	U1b1	Turkey
KC911306	U1a1c1d	Iran	SJSb25	U1b1	Syria
HG04098	U1a1c1d	United Kingdom	TURATb41	U1b1	Unknown
AY714042	U1a1c1d	India	182	U1b2	Turkey
KX467280	U1a1c1d	India	GU123007	U1b2	Siberia
JX462732	U1a1c1d1	India	JX153823	U1b2	Finland
KC911527	U1a1c1d1	Iran	63	U1b2	Turkey

Table 1 | Complete dataset analysed for mtDNA studies. Information regarding haplogroup and country is also provided (continuation).

SampleID	Haplogroup	Country	SampleID	Haplogroup	Country
KC911628	U1b2	Iran	KJ445970	U2a2	Pakistan
1113001313_S55	U1b2	Unknown	HG03960	U2a2	India
GFM022	U1b2	Greece	HG03767	U2b	Pakistan
HM852772	U1b2	Armenia	NA21119	U2b	India
KU647695	U1b2	Poland	GQ337548	U2b	Unknown
NOS8	U1b2	North Ossetia	HG03695	U2b	Sri Lanka
141	U1b2	Turkey	HG03754	U2b	Sri Lanka
234	U1b2	Turkey	HG04107	U2b	Sri Lanka
MF362900	U1b3	Armenia	JX462726	U2b1	India
AY882397	U1b3	Italy	GQ337626	U2b1	Unknown
KJ445909	U1b3	Palestine	GQ337627	U2b1	Unknown
KT779157	U1b3	Lebanon	GQ337632	U2b1	Unknown
KT779158	U1b3	Lebanon	EU330890	U2b1	Thailand
KT779181	U1b3	Lebanon	KY686212	U2b1	Myanmar
SJSb43	U1b3	Syria	HG03861	U2b1	India
BGD204	U1b3	Italy	HM156687	U2b1	India
1113003037_S68	U1b3	Unknown	AY714020	U2b1a	India
ALP589	U1b3	Italy	KF056260	U2b1a	Tibet
JQ705292	U1b3	Unknown	KF056258	U2b1a	Tibet
1113002403_S22	U1b3	Unknown	KF056259	U2b1a	Tibet
ESP0077	U1b3	Spain	HG04158	U2b2	Bangladesh
EF661008	U1b3	Italy	HG04214	U2b2	India
KJ445910	U1b3	Druze	HG03823	U2b2	Bangladesh
KF451100	U1b3	Unknown	NA21095	U2b2	India
KJ445911	U1b3	Italy	AY714025	U2b2	India
KF451627	U1b3	Unknown	KT424061	U2b2	Unknown
123	U1b3	Turkey	HG03694	U2b2	Sri Lanka
GQ337580	U2	Unknown	HM156680	U2b2	India
KJ445947	U2a1	Pakistan	HG04038	U2b2	Sri Lanka
JX488759	U2a1a	India	HG03826	U2b2	Bangladesh
GQ337552	U2a1a	Unknown	HG03703	U2b2	Pakistan
NA20866	U2a1a	India	AY882380	U2b2	Pakistan
AY882379	U2a1a	Pakistan	KJ445865	U2b2	Pakistan
AY713990	U2a1a	India	KJ445866	U2b2	Pakistan
HG03829	U2a1a	Bangladesh	HG04200	U2b2	India
AY713992	U2a1b	India	NA20887	U2b2	India
HG04002	U2a1b	India	AY714027	U2b2	India
GQ337620	U2a1b	Unknown	HG03802	U2b2	Bangladesh
HG03985	U2a1b	Sri Lanka	HG03908	U2b2	Bangladesh
HG03742	U2a1b	India	HG02603	U2b2	Pakistan
NA20875	U2a2	India	HG03603	U2b2	Bangladesh
KF056257	U2a2	Tibet	HQ153103	U2b2	Sri Lanka
KJ445969	U2a2	Pakistan	HG04212	U2b2	India
HG03653	U2a2	Pakistan	AY714010	U2c	India
NA20904	U2a2	India	KC533505	U2c1	South Africa

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SampleID	Haplogroup	Country	SampleID	Haplogroup	Country
JX984460	U2c1	Afghanistan	JQ702485	U2e1	Unknown
NA21111	U2c1	India	JQ701887	U2e1	Belarus
KX467288	U2c1	India	csct_000057_sard	U2e1	Italy - Sardinia
GQ337570	U2c1	Unknown	JQ703356	U2e1	Germany
AY714005	U2c1a	India	JQ702654	U2e1	Switzerland
HM036565	U2c1a	Great Himalayas	KJ856827	U2e1	Poland
HG03817	U2c1a	Bangladesh	BUL7065	U2e1	Unknown
GQ337537	U2c1a	Unknown	JQ703994	U2e1	Unknown
HG03691	U2c1a	Sri Lanka	E677	U2e1	Spain
HG04099	U2c1a	Sri Lanka	591_S6	U2e1	Unknown
HM036556	U2c1b	Great Himalayas	E626	U2e1	Spain
KP900022	U2c1b	Pakistan	DNA_F0_v2	U2e1	Ireland
HG03619	U2c1b	Pakistan	IRQ6	U2e1'2'3	Iraq
KC911315	U2c1b	Iran	KP763851	U2e1'2'3	India
AY882381	U2c1b	Pakistan	PALAO909	U2e1'2'3	Unknown
EU440736	U2d1	Unknown	NA20807	U2e1'2'3	Italy
JQ706047	U2d1	Kuwait	KM378618	U2e1'2'3	United States
KC911602	U2d1	Iran	11991_sard	U2e1'2'3	Italy
JQ706041	U2d1	Iran	20356_sard	U2e1'2'3	Italy
JQ706032	U2d1	North Caucasus	21362_sard	U2e1'2'3	Italy
JQ706062	U2d1	Turkey	22828_sard	U2e1'2'3	Italy
PALAO2192	U2d1	Palestine	24905_sard	U2e1'2'3	Italy
AT93	U2d1	Turkey	26686_sard	U2e1'2'3	Italy
GP3_H1	U2d2	Germany	268_sard	U2e1'2'3	Italy
ALP348	U2d2	Italy	27208_sard	U2e1'2'3	Italy
JQ705999	U2d2	Unknown	28280_sard	U2e1'2'3	Italy
KC911489	U2d2	Iran	28900_sard	U2e1'2'3	Italy
535_S6	U2d2	Unknown	29907_sard	U2e1'2'3	Italy
689_S9	U2d2	Unknown	31244_sard	U2e1'2'3	Italy
HM852846	U2d2	Turkey	31528_sard	U2e1'2'3	Italy
JQ706067	U2d2	Russia	4987_sard	U2e1'2'3	Italy
KC911405	U2d2a	Iran	csct_000534_sard	U2e1'2'3	Italy - Sardinia
JQ706026	U2d2a	North Caucasus	23929_sard	U2e1'2'3	Italy
JQ706046	U2d2a	North Caucasus	40281_sard	U2e1'2'3	Italy
MF362793	U2d2a	Armenia	40476_sard	U2e1'2'3	Italy
JQ706025	U2d3	North Caucasus	MF362873	U2e1a	Armenia
JQ706045	U2d3	North Caucasus	FJ828532	U2e1a	Unknown
AF381995	U2e	Jordania	KY606237	U2e1a	Finland
AY714026	U2e	India	KY930472	U2e1a	Bulgaria
CEU237	U2e1	Unknown	MF362889	U2e1a	Armenia
FRANF341	U2e1	France	KU867611	U2e1a	Spain
ADY10	U2e1	Adygei	DQ112891	U2e1a1	Italy
KJ856705	U2e1	Kazakhstan	EF657718	U2e1a1	Europe
FJ147311	U2e1	Siberia	DQ112818	U2e1a1	Dutch
JQ704042	U2e1	British Isles	1113000349_S59	U2e1a1	Unknown

Table 1 | Complete dataset analysed for mtDNA studies. Information regarding haplogroup and country is also provided (continuation).

SampleID	Haplogroup	Country	SampleID	Haplogroup	Country
EF657570	U2e1a1	Europe	JQ705711	U2e1a1	Unknown
ESP0107	U2e1a1	Spain	JX297141	U2e1a1	Spain
ESP0724	U2e1a1	Spain	JX219370	U2e1a1	Germany
KC533489	U2e1a1	South Africa	KC911479	U2e1a1	Iran
AY882382	U2e1a1	Spain	M7728	U2e1a1	United Kingdom
HG01705	U2e1a1	Spain	JQ705989	U2e1a1	Unknown
JX154067	U2e1a1	Finland	JX160107	U2e1a1	Germany
JQ702398	U2e1a1	Unknown	JX153514	U2e1a1	Denmark
KJ445820	U2e1a1	Italy	KF161708	U2e1a1	Denmark
KF161351	U2e1a1	Denmark	KF161810	U2e1a1	Denmark
DQ156211	U2e1a1	Spain	KF162556	U2e1a1	Denmark
JQ703957	U2e1a1	Unknown	DNA_G0	U2e1a1	Ireland
JX152969	U2e1a1	Finland	350_S9	U2e1a1	Unknown
KJ856697	U2e1a1	Slovakia	411_S1	U2e1a1	Unknown
KJ856694	U2e1a1	Belarus	363_S8	U2e1a1	Unknown
JX153403	U2e1a1	Denmark	776_S8	U2e1a1	Unknown
KJ856799	U2e1a1	Poland	E140	U2e1a1	Spain
1113000186_S37	U2e1a1	Unknown	MIR29	U2e1a1	Ireland
ALP046	U2e1a1	Italy	113_S1	U2e1a1	Unknown
KJ856736	U2e1a1	Slovakia	DNA_H0	U2e1a1	Ireland
303_S2	U2e1a1	Unknown	E760	U2e1a1	Spain
865_S6	U2e1a1	Unknown	E146	U2e1a1	Spain
926_S6	U2e1a1	Unknown	E641	U2e1a1	Spain
448_S3	U2e1a1	Unknown	LIE085	U2e1a1a	Belgium
380_S5	U2e1a1	Unknown	LIE024	U2e1a1a	Belgium
000_S1	U2e1a1	Unknown	JQ705936	U2e1a1a	Unknown
120_S2	U2e1a1	Unknown	KF161275	U2e1a1a	Denmark
904_S2	U2e1a1	Unknown	AY339545	U2e1a1a	Finland
HQ218053	U2e1a1	United States	FJ490554	U2e1a1a	United States
JQ703589	U2e1a1	Unknown	JQ705117	U2e1a1a	Unknown
KC911513	U2e1a1	Iran	AY339546	U2e1a1a	Finland
AY714040	U2e1a1	India	JX153922	U2e1a1b	Denmark
JQ702106	U2e1a1	Unknown	JQ705861	U2e1a1b	Unknown
JQ705602	U2e1a1	Unknown	JQ703203	U2e1a1b	Unknown
LIE034	U2e1a1	Belgium	HQ424846	U2e1a1b	United States
EF177434	U2e1a1	Portugal	JQ704999	U2e1a1b	Germany
JQ703530	U2e1a1	France	KM101951	U2e1a1c	United States
KJ856834	U2e1a1	Ukraine	KJ856821	U2e1a1c	Poland
KJ856677	U2e1a1	Belarus	T-8	U2e1a1c	France
KF606970	U2e1a1	Czech Republic	ALP022	U2e1a1c	Italy
JX154073	U2e1a1	Finland	1113002717_S55	U2e1a1c	Unknown
JQ704061	U2e1a1	Unknown	FJ348188	U2e1a1c	Italy
M7719	U2e1a1	United Kingdom	FJ348194	U2e1a1c	Italy
NA_B05	U2e1a1	Ireland	JQ704817	U2e1a1c	Unknown
JQ705559	U2e1a1	Unknown	JQ664526	U2e1a1c	Croatia

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SampleID	Haplogroup	Country	SampleID	Haplogroup	Country
JX462739	U2e1b	India	AF382004	U2e1c1	Spain
FRANF349	U2e1b	France	OL39	U2e1c1	Italy
IRQ192	U2e1b	Iraq	E271	U2e1c1	Spain
DNA_F0	U2e1b	Ireland	JQ701857	U2e1c1	British Isles
AY714049	U2e1b	India	808_S1	U2e1c1	Unknown
CHV36	U2e1b	Russia	KU867597	U2e1c1	Spain
JQ705941	U2e1b	Czech Republic	ARM1	U2e1c1	Armenia
KJ856743	U2e1b	Siberia	JQ702520	U2e1d	Unknown
KJ856692	U2e1b	Russia	JQ704268	U2e1d	Unknown
EF657633	U2e1b1	Europe	JQ703488	U2e1d	Unknown
EF657248	U2e1b1	Europe	783_S1	U2e1e	Unknown
EF657632	U2e1b1	Europe	E687	U2e1e	Spain
KJ856731	U2e1b1	Belarus	HM852857	U2e1e	Turkey
KF161340	U2e1b1	Denmark	EF452294	U2e1e	Unknown
KF162886	U2e1b1	Denmark	JQ702316	U2e1e	Unknown
KF163041	U2e1b1	Denmark	KY967269	U2e1f	Ireland
TURAT62	U2e1b1	Turkey	JQ705813	U2e1f	British Isles
AT19	U2e1b1	Turkey	NA12347	U2e1f1	United States
X3236	U2e1b1	Portugal	KC134317	U2e1f1	British Isles
JQ664543	U2e1b1	Croatia	AY195764	U2e1f1	Europe
KJ856798	U2e1b1	Poland	KF162087	U2e1f1	Denmark
JQ704773	U2e1b1	Unknown	KJ856719	U2e1f1	Russia
KJ856835	U2e1b1	Ukraine	KP637273	U2e1f1	Saudi Arabia
JQ702663	U2e1b1	Unknown	I-137b	U2e1f1	Netherlands
JQ705384	U2e1b1	Finland	771_S3	U2e1f1	Unknown
KJ856725	U2e1b1	Belarus	I-59a	U2e1g	Netherlands
JQ703917	U2e1b1	Poland	I-166b	U2e1g	Netherlands
KJ856830	U2e1b1	Russia	DNA_A0	U2e1g	Ireland
KJ856817	U2e1b1	Poland	JQ705068	U2e1g	Unknown
KJ856833	U2e1b1	Ukraine	JQ703491	U2e1g	Switzerland
KJ856812	U2e1b1	Poland	KC464359	U2e1g	Denmark
csct_000108_sard	U2e1b1	Italy - Sardinia	JX152813	U2e1g	Denmark
csct_000252_sard	U2e1b1	Italy - Sardinia	KF162606	U2e1g	Denmark
EF661006	U2e1b2	Italy	KF162827	U2e1g	Denmark
287_S3	U2e1b2	Unknown	KJ856820	U2e1g	Poland
M1567	U2e1b2	United Kingdom	KJ856819	U2e1g	Poland
M7738	U2e1b2	United Kingdom	CHV45	U2e1h	Russia
NA12287	U2e1b2	United States	KA19	U2e1h	Pakistan
I-142a	U2e1b2	Netherlands	KJ445816	U2e1h	Pakistan
JQ705946	U2e1b2	Germany	KA31	U2e1h	Pakistan
K60	U2e1b2	Turkey (Kurd)	KA12	U2e1h	Pakistan
KF142160	U2e1c	British Isles	KJ445818	U2e1h	Pakistan
JQ705933	U2e1c1	Unknown	KJ445817	U2e1h	Pakistan
KU867619	U2e1c1	Spain	FJ493504	U2e1h	Siberia
KU867594	U2e1c1	Spain	PU23	U2e1h	Italy

Table 1 | Complete dataset analysed for mtDNA studies. Information regarding haplogroup and country is also provided (continuation).

SampleID	Haplogroup	Country	SampleID	Haplogroup	Country
NOS14	U2e1h	North Ossetia	340_S6	U2e2a1a	Unknown
KF849954	U2e1h	China	947_S1	U2e2a1a	Unknown
KJ445819	U2e1h	Pakistan	T_121	U2e2a1a	France
EF660957	U2e1h	Italy	468_S8	U2e2a1a	Unknown
111_S5	U2e1h	Unknown	040_S1	U2e2a1a	Unknown
KF161734	U2e1h	Denmark	EF657645	U2e2a1a	Europe
KJ856797	U2e1h	Poland	DQ489501	U2e2a1a	Netherlands
262_S6	U2e1h	Unknown	JX153738	U2e2a1a1	Denmark
JN581653	U2e1h	Unknown	JX154009	U2e2a1a1	Denmark
119_S9	U2e2	Unknown	KF161419	U2e2a1a1	Denmark
KC911567	U2e2	Iran	KF161589	U2e2a1a1	Denmark
MF362922	U2e2	Armenia	KF161713	U2e2a1a1	Denmark
JQ705900	U2e2a	Unknown	KF162253	U2e2a1a1	Denmark
JX462708	U2e2a	India	KF162362	U2e2a1a1	Denmark
KF162209	U2e2a1	Denmark	KF162537	U2e2a1a1	Denmark
X3179	U2e2a1	Portugal	KF162685	U2e2a1a1	Denmark
KF161136	U2e2a1	Denmark	JX152917	U2e2a1a1	Denmark
219_S9	U2e2a1a	Unknown	JX153778	U2e2a1a1	Denmark
863_S5	U2e2a1a	Unknown	KF162776	U2e2a1a1	Denmark
620_S5	U2e2a1a	Unknown	JX153742	U2e2a1a1	Denmark
691_S8	U2e2a1a	Unknown	NA_H08	U2e2a1a1	Ireland
JQ703968	U2e2a1a	Germany	228_S9	U2e2a1a1	Unknown
KF161670	U2e2a1a	Denmark	I-37a	U2e2a1a1	Netherlands
PS39	U2e2a1a	Czech Republic	KF161751	U2e2a1a1	Denmark
KF162325	U2e2a1a	Denmark	JQ704000	U2e2a1a1	Unknown
M7771	U2e2a1a	United Kingdom	KF162930	U2e2a1a1	Denmark
M3069	U2e2a1a	United Kingdom	JQ702432	U2e2a1a1	Unknown
M7761	U2e2a1a	United Kingdom	KF162489	U2e2a1a1	Denmark
KJ856807	U2e2a1a	Russia	KF162154	U2e2a1a1	Denmark
JQ705672	U2e2a1a	Unknown	KF162699	U2e2a1a1	Denmark
KJ856723	U2e2a1a	Belarus	KF161532	U2e2a1a1	Denmark
JQ702934	U2e2a1a	Unknown	KF161824	U2e2a1a1	Denmark
JQ702250	U2e2a1a	British Isles	KF162328	U2e2a1a2	Denmark
542_S8	U2e2a1a	Unknown	JX153656	U2e2a1a2	Denmark
JX153140	U2e2a1a	Denmark	JQ705667	U2e2a1a2	British Isles
KJ856722	U2e2a1a	Russia	KF161976	U2e2a1a2	Denmark
KJ856693	U2e2a1a	Belarus	EF528162	U2e2a1b	Unknown
KF163034	U2e2a1a	Denmark	HM000084	U2e2a1b	Unknown
KJ856805	U2e2a1a	Poland	SICTR41	U2e2a1b	Italy: Sicily
072_S5	U2e2a1a	Unknown	FJ984932	U2e2a1b	British Isles
791_S7	U2e2a1a	Unknown	JQ704009	U2e2a1b	Unknown
B_18	U2e2a1a	France	JQ705386	U2e2a1c	Unknown
JX153832	U2e2a1a	Finland	I-247b	U2e2a1c	Netherlands
003_S8	U2e2a1a	Unknown	025_S4	U2e2a1c	Unknown
074_S7	U2e2a1a	Unknown	753_S1	U2e2a1c	Unknown

Table 1 | Complete dataset analysed for mtDNA studies. Information regarding haplogroup and country is also provided (continuation).

SampleID	Haplogroup	Country	SampleID	Haplogroup	Country
I-1a	U2e2a1c	Netherlands	AF381983	U3a	Morocco
E080	U2e2a1c	Spain	KP184339	U3a	Germany
039_S6	U2e2a1c	Unknown	csct_000524_sard	U3a	Italy
699_S4	U2e2a1c	Unknown	23935_sard	U3a	Italy
LIE016	U2e2a1c	Belgium	HQ436348	U3a	Armenia
M3985	U2e2a1c	United Kingdom	M7519_WN	U3a	United Kingdom
JQ705651	U2e2a1c	Sweden	LK37	U3a	Cyprus
JQ704627	U2e2a1c	British Isles	AZB40	U3a	Unknown
JQ702004	U2e2a1d	Unknown	ESP0901	U3a1	Spain
636_S6	U2e2a1d	Unknown	1113002320_S12	U3a1	Unknown
GP3_C6	U2e2a1d	Germany	gonl-83a	U3a1	Unknown
GP3_B9	U2e2a1d	Germany	1113001134_S89	U3a1	Unknown
KJ856678	U2e2a1d	Russia	1113000393_S9	U3a1	Unknown
KJ856714	U2e2a1d	Russia	gonl-23b	U3a1	Unknown
JQ701947	U2e2a1d	Unknown	1113002521_S19	U3a1	Unknown
HM156688	U2e2a1d	India	ESP0397	U3a1	Spain
KJ856698	U2e2a1d	India	ESP0199	U3a1	Spain
HM156683	U2e2a1d	India	ESP0020	U3a1	Spain
JQ701890	U2e2a1d	Unknown	JX153939	U3a1	Denmark
KJ856696	U2e2a1d	Russia	KF162006	U3a1	Denmark
KJ856690	U2e2a1d	Russia	KT698026	U3a1	Serbia
KJ856710	U2e2a1d	Russia	TR17	U3a1	Czech Republic
EF657690	U2e2a1d	Europe	KX539226	U3a1	Turkey
KP763831	U2e3	India	HQ404665	U3a1	Spain
JX286498	U2e3	Italy	ESP0201	U3a1	Spain
LP6008114-DNA_A09	U2e3a	Ireland	ESP0661	U3a1	Spain
LP6008115-DNA_F07	U2e3a	Ireland	ESP0481	U3a1	Spain
LP6008116-DNA_E03	U2e3a	Ireland	HG00359	U3a1	Finland
LP6008116-DNA_H10	U2e3a	Ireland	M7782	U3a1	United Kingdom
LP6008116-DNA_B02	U2e3a	Ireland	LIE119	U3a1	Netherlands
LP6008116-DNA_C03	U2e3a	Ireland	JX154025	U3a1	Denmark
KM101926	U2e3a	United States	KF161806	U3a1	Denmark
JQ704102	U2e3a	Unknown	KF162097	U3a1	Denmark
JQ702389	U2e3a	Unknown	KF162952	U3a1	Denmark
JQ702941	U2e3a	Unknown	KF161367	U3a1	Denmark
HM852891	U3a	Azerbaijan	JQ705014	U3a1	Unknown
336	U3a	Turkey	LP6008115-DNA_A03	U3a1	Ireland
KJ445941	U3a	Algeria	KF161327	U3a1	Denmark
KJ445942	U3a	Algeria	KF162390	U3a1	Denmark
KJ445940	U3a	Algeria	KF162263	U3a1	Denmark
KC911550	U3a	Iran	JQ705387	U3a1	Unknown
KT779163	U3a	Lebanon	41126_sard	U3a1	Italy
KT779189	U3a	Lebanon	HM625682	U3a1	Unknown
KT779202	U3a	Lebanon	KT779191	U3a1	Lebanon
KT779172	U3a	Lebanon	KJ856809	U3a1	Czech Republic

Table 1 | Complete dataset analysed for mtDNA studies. Information regarding haplogroup and country is also provided (continuation).

SampleID	Haplogroup	Country	SampleID	Haplogroup	Country
CZE267	U3a1	Czech Republic	KF162718	U3a1c	Denmark
JX152854	U3a1	Denmark	JX154057	U3a1c	Denmark
X4054	U3a1	Portugal	KF161165	U3a1c	Denmark
DQ156213	U3a1	Spain	KF161178	U3a1c	Denmark
EU057183	U3a1	Unknown	KF162675	U3a1c	Denmark
1113000025_S15	U3a1a	Unknown	JQ703769	U3a1c	Denmark
gonl-240a	U3a1a	Unknown	1113001772_S60	U3a1c1	Unknown
T-19	U3a1a	France	M7669_WN	U3a1c1	United Kingdom
M7645_WN	U3a1a	United Kingdom	M7830_WS	U3a1c1	United Kingdom
T-81	U3a1a	France	ESP0386	U3a1c1	Spain
JQ703990	U3a1a	Unknown	GP2_A3	U3a1c1	Germany
1113001467_S91	U3a1a	Unknown	JQ705739	U3a1c1	Unknown
KJ856806	U3a1a	Russia	JQ704420	U3a1c1	Unknown
GU122986	U3a1a	Russia (Volga-Urals)	HQ286323	U3a1c1	British Isles
KY369151	U3a1a	Unknown	JX153689	U3a1c1	Denmark
KJ856754	U3a1a	Russia	KF161262	U3a1c1	Denmark
KF161357	U3a1a	Denmark	KF161553	U3a1c1	Denmark
KF161897	U3a1a	Denmark	JQ618033	U3a2	United States
KF162268	U3a1a	Denmark	IRQ119	U3a2	Iraq
JQ705871	U3a1a	Unknown	KC911305	U3a2	Iran
FJ968795	U3a1a	United States	PU97	U3a2	Italy
JN203207	U3a1a1	Poland	1113000011_S46	U3a2a	Unknown
JX153017	U3a1a1	Italy	1113003042_S59	U3a2a	Unknown
M1932_ESW	U3a1a1	United Kingdom	1113001171_S95	U3a2a	Unknown
JQ704950	U3a1a1	British Isles	1113001976_S62	U3a2a	Unknown
JQ702677	U3a1b	Unknown	KP726893	U3a2a	Russia
JQ702681	U3a1b	Unknown	FJ348224	U3a2a	Italy
1113001317_S29	U3a1b	Unknown	KX675305	U3a2a	Kyrgyzstan
1113002987_S73	U3a1b	Unknown	JX153094	U3a2a	Italy
GP3_F11	U3a1b	Germany	KJ856832	U3a2a	Belarus
1113001513_S95	U3a1b	Unknown	TURATb38	U3a2a	Turkey
1113001170_S30	U3a1b	Unknown	TR30	U3a2a	Czech Republic
gonl-100b	U3a1b	Unknown	1113001884_S48	U3a2a	Unknown
1113000899_S14	U3a1b	Unknown	PALAO957	U3a2a1	Palestine
1113002715_S5	U3a1b	Unknown	AY882383	U3a2a1	Yemen
JQ664533	U3a1b	Croatia	YJ41	U3a2a1	Yemen
gonl-18b	U3a1c	Unknown	KC911522	U3a2a1a	Iran
M5062_WN	U3a1c	United Kingdom	KC911568	U3a2a1a	Iran
M7812_England_N	U3a1c	United Kingdom	KC911314	U3a2a1a	Iran
1113002277_S73	U3a1c	Unknown	KT698017	U3a3	Serbia
1113000842_S76	U3a1c	Unknown	KX495668	U3a3	Turkey
B-16	U3a1c	France	JQ704440	U3a3	Unknown
1113000006_S62	U3a1c	Unknown	HM852895	U3a3	Georgia
1113002392_S7	U3a1c	Unknown	KC911491	U3a3	Iran
AF381982	U3a1c	Spain	MF362878	U3a3	Armenia

Table 1 | Complete dataset analysed for mtDNA studies. Information regarding haplogroup and country is also provided (continuation).

SampleID	Haplogroup	Country	SampleID	Haplogroup	Country
IRQ134	U3a3	Iraq	YJ28	U3b1a1	Yemen
MF362811	U3a3	Armenia	AY882385	U3b1a1	Yemen
MF362799	U3a3	Armenia	P10C10	U3b1b	Germany
KX462879	U3b	Turkey	KJ856837	U3b1b	Russia
MF362919	U3b	Armenia	FJ711758	U3b1b	Slovakia
MF362917	U3b	Armenia	KY421199	U3b1b	Poland
IRQ167	U3b	Iraq	KY646098	U3b1b	Finland
AT28	U3b	Turkey	VY05	U3b1b	Czech Republic
HM852819	U3b	Iran	JQ705043	U3b1b	Latvia
KJ856808	U3b	Russia	KJ856822	U3b1b	Poland
TURATb16	U3b	Turkey	KJ856800	U3b1b	Czech Republic
MF362824	U3b	Armenia	EU807742	U3b1b	Siberia
7	U3b	Turkey	1113001802_S44	U3b1b	Unknown
MF362746	U3b	Armenia	1113002751_S63	U3b1b	Unknown
KAB20	U3b	Kabardia	KJ856691	U3b1b	Belarus
JN663830	U3b	Armenia	KJ856702	U3b1b	Belarus
JX174726	U3b	Germany	KJ856707	U3b1b	Belarus
MF362797	U3b	Armenia	EF660959	U3b1b	Italy
AY714023	U3b	India	KU318667	U3b1b	Russia
EF177433	U3b1	Portugal	KX821320	U3b2	Turkey
205	U3b1	Turkey	KX821319	U3b2	Turkey
TURATb1	U3b1	Turkey	KX788165	U3b2	Turkey
ATb9	U3b1	Turkey	LIE109	U3b2	Belgium
IRQ51	U3b1	Iraq	KC851932	U3b2	Italy
1113002311_S63	U3b1	Unknown	1113000706_S32	U3b2	Unknown
VY23	U3b1	Czech Republic	1113000993_S70	U3b2	Unknown
KJ856829	U3b1	Poland	1113002462_S13	U3b2	Unknown
JQ703911	U3b1	Unknown	JQ702150	U3b2	Unknown
ROMVR226	U3b1	Romania	KT779162	U3b2	Lebanon
KF055871	U3b1	Spain	KT779161	U3b2	Lebanon
KF055879	U3b1	Spain	KT779173	U3b2	Lebanon
KF055884	U3b1	Spain	ESP0122	U3b2	Spain
X4173	U3b1	Portugal	KJ856828	U3b2	Poland
KF055889	U3b1	Spain	KT779160	U3b2	Lebanon
KF055875	U3b1	Spain	HM852770	U3b2	Armenia
csct_000531_sard	U3b1	Italy	KJ856724	U3b2	Russia
csct_007667_sard	U3b1	Italy	KM101894	U3b2	United States
KT779159	U3b1	Lebanon	KJ856789	U3b2	Poland
KT779183	U3b1	Lebanon	KJ856747	U3b2	Siberia
EF556158	U3b1a	Israel	JQ704130	U3b2	Hungary
YEM2	U3b1a	Yemen	KT779168	U3b2	Lebanon
KC911623	U3b1a1	Iran	KT779197	U3b2	Lebanon
KC911333	U3b1a1	Iran	KJ856790	U3b2a	Czech Republic
KC911378	U3b1a1	Iran	KT779169	U3b2a	Lebanon
172	U3b1a1	Turkey	KT779170	U3b2a	Lebanon

Table 1 | Complete dataset analysed for mtDNA studies. Information regarding haplogroup and country is also provided (continuation).

SampleID	Haplogroup	Country	SampleID	Haplogroup	Country
KT779194	U3b2a	Lebanon	1113002718_S65	U3b3	Unknown
JN969086	U3b2a	Australia	JX297178	U3b3	Spain
KT779165	U3b2a	Lebanon	KJ445943	U3b3	Palestine
ROMMA52	U3b2a	Unknown	HQ384204	U3b3	Iberia
KT779200	U3b2a1	Lebanon	MF362891	U3b3	Armenia
EU935438	U3b2a1	Egypt	AY882384	U3b3	Adygea
1113000895_S25	U3b2a1	Unknown	KJ445946	U3b3	Adygea
1113002904_S50	U3b2a1	Unknown	ADY2	U3b3	Adygea
FJ348193	U3b2a1	Italy	KAB22	U3b3	Kabardia
FJ348201	U3b2a1	Italy	ADY42	U3b3	Adygea
FJ348182	U3b2a1	Italy	NOS22	U3b3	North Ossetia
PU15	U3b2a1	Italy	ADY28	U3b3	Adygea
C-11	U3b2a1	France	302	U3b3	Turkey
LK07	U3b2a1	Cyprus	SJS23	U3b3	Syria
ESP1003	U3b2a1	Spain	KT779186	U3b3	Lebanon
ALP183	U3b2a1	Italy	KT779178	U3b3	Lebanon
GFM112	U3b2a1	Turkey	KJ445944	U3b3	Israel
311	U3b2a1	Turkey	KJ445945	U3b3	Israel
KUR66	U3b2a1	Turkey (Kurd)	304	U3b3	Turkey
KT779175	U3b2a1	Lebanon	KJ856721	U3b3	Russia
KC911445	U3b2a1	Iran	KM078028	U3b3	Ukraine
KJ856733	U3b2a1	Russia	146	U3b3	Turkey
KJ856712	U3b2a1	Russia	JQ703694	U3b3	Poland
AK09	U3b2a1	Greece	KC911310	U3b3	Iran
KT779203	U3b2a1	Lebanon	KC911399	U3b3	Iran
JX153143	U3b2a1	Denmark	IRQ196	U3b3	Unknown
JX153858	U3b2a1	Denmark	B-49	U3c	France
IRQ35	U3b2a1	Unknown	HM852797	U3c	Azerbaijan
TURATb25	U3b2a1	Unknown	IRQ236	U3c	Iraq
HQ257369	U3b2a1a	Armenia	KT779195	U3c	Lebanon
LK26	U3b2a1a	Cyprus	HM852803	U3c	Azerbaijan
JX153055	U3b2a1a	Greece	TURATc10	U3c	Turkey
IRQ34	U3b2a1a	Iraq	ALP112	U3c	Italy
MF362918	U3b2a1a	Armenia	ALP197	U3c	Italy
TURAT50	U3b2a1a	Turkey	GFM110	U3c	Cyprus
261	U3b2a1a	Turkey	LK29	U3c	Cyprus
TURATb33	U3b2a1a	Turkey	csct_004255_sard	U3c	Italy
62	U3b2a1a	Turkey	csct_000316_sard	U3c	Italy
TURAT79	U3b2a1a	Turkey	csct_000318_sard	U3c	Italy
JQ704981	U3b2b	France	csct_000751_sard	U3c	Italy
KC250336	U3b2b	Unknown	1113002489_S87	U4a	Unknown
KC911459	U3b2c	Iran	1113001591_S73	U4a	Unknown
KC911486	U3b2c	Iran	1113002495_S51	U4a	Unknown
HM852773	U3b2c	Armenia	ALP025	U4a	Italy
KX458252	U3b3	Turkey	1113000746_S7	U4a	Unknown

Table 1 | Complete dataset analysed for mtDNA studies. Information regarding haplogroup and country is also provided (continuation).

SampleID	Haplogroup	Country	SampleID	Haplogroup	Country
1113000524_S5	U4a	Unknown	KF161073	U4a1	Denmark
GP2_B8	U4a	Germany	KF161522	U4a1	Denmark
1113001122_S44	U4a	Unknown	TR06	U4a1	Czech Republic
1113000905_S37	U4a	Unknown	1113001707_S29	U4a1	Unknown
1113000882_S4	U4a	Unknown	KF161335	U4a1	Denmark
1113001589_S21	U4a	Unknown	JQ704215	U4a1	British Isles
1113000078_S19	U4a	Unknown	HM852776	U4a1	Armenia
1113001011_S83	U4a	Unknown	HQ659692	U4a1a	United States
OL83	U4a	Italy	KM101812	U4a1a	United States
1113002694_S48	U4a	Unknown	JX153156	U4a1a	Denmark
1113002252_S21	U4a	Unknown	JX153794	U4a1a	Denmark
SICTO526	U4a	Italy: Sicily	1113001629_S42	U4a1a	Unknown
1113000638_S9	U4a	Unknown	VIKI5082	U4a1a	Shetlands
ESP0927	U4a	Spain	VIKI5179	U4a1a	Shetlands
KF162833	U4a	Denmark	VIKI5321	U4a1a	Shetlands
ESP0808	U4a	Spain	VIKI5358	U4a1a	Shetlands
HG00247	U4a	British Isles	VIKI5426	U4a1a	Shetlands
KF162727	U4a	Denmark	VIKI5503	U4a1a	Shetlands
1113001218_S46	U4a	Unknown	VIKI5517	U4a1a	Shetlands
1113002220_S70	U4a	Unknown	VIKI5653	U4a1a	Shetlands
1113000864_S72	U4a	Unknown	VIKI5766	U4a1a	Shetlands
1113002245_S76	U4a	Unknown	VIKI5823	U4a1a	Shetlands
ESP0683	U4a	Spain	VIKI6010	U4a1a	Shetlands
1113001230_S10	U4a	Unknown	VIKI6161	U4a1a	Shetlands
FJ493507	U4a	Siberia	VIKI6509	U4a1a	Shetlands
FJ493505	U4a	Siberia	VIKI6532	U4a1a	Shetlands
KF161730	U4a1	Denmark	VIKI6597	U4a1a	Shetlands
JQ703947	U4a1	Czech Republic	VIKI6730	U4a1a	Shetlands
KF161338	U4a1	Denmark	VIKI6811	U4a1a	Shetlands
KF162533	U4a1	Denmark	VIKI6841	U4a1a	Shetlands
YEM3	U4a1	Yemen	VIKI6844	U4a1a	Shetlands
JQ703903	U4a1	Germany	VIKI7036	U4a1a	Shetlands
KJ445957	U4a1	Pakistan	VIKI7142	U4a1a	Shetlands
KP733895	U4a1	Germany	ESP0333	U4a1a	Spain
KJ445965	U4a1	Italy	LP6008116-DNA_B01	U4a1a	Ireland
KJ856729	U4a1	Russia	1113001654_S27	U4a1a	Unknown
KJ445964	U4a1	Pakistan	gonl-14b	U4a1a	Unknown
JX462724	U4a1	India	ALP572	U4a1a	Italy
KJ445958	U4a1	Pakistan	M7870	U4a1a	United Kingdom
KJ445959	U4a1	Pakistan	LP6008114-DNA_G01	U4a1a	Ireland
KA3	U4a1	Pakistan	JX153959	U4a1a	Denmark
KJ445960	U4a1	Pakistan	KF161938	U4a1a	Denmark
KJ445961	U4a1	Pakistan	KF162692	U4a1a	Denmark
KJ445962	U4a1	Pakistan	KF162848	U4a1a	Denmark
1113000548_S48	U4a1	Unknown	PS20	U4a1a	Czech Republic

Table 1 | Complete dataset analysed for mtDNA studies. Information regarding haplogroup and country is also provided (continuation).

SampleID	Haplogroup	Country	SampleID	Haplogroup	Country
JN561303	U4a1a	Unknown	EU545431	U4a1a1	Belarus
FCP	U4a1a	Portugal	EU545451	U4a1a1	Russia
JQ705591	U4a1a	Unknown	1113000768_S13	U4a1a1	Unknown
JQ706005	U4a1a	Unknown	1113000942_S25	U4a1a1	Unknown
KJ856791	U4a1a	Czech Republic	EU545433	U4a1a1	Poland
KF163033	U4a1a	Denmark	JQ703887	U4a1a2	British Isles
KJ445966	U4a1a	France(Basque)	JQ705687	U4a1a2	Unknown
KF163005	U4a1a	Denmark	LP6008116-DNA_E11	U4a1a2	Ireland
JX152805	U4a1a	Denmark	KF162672	U4a1a3	Denmark
KF162834	U4a1a	Denmark	JQ704345	U4a1a3	Unknown
KF161396	U4a1a	Denmark	JQ703977	U4a1a3	Netherlands
KF162892	U4a1a	Denmark	1113001820_S2	U4a1b	Unknown
KF161276	U4a1a	Denmark	LP6008115-DNA_A01	U4a1b	Ireland
JQ704069	U4a1a	Unknown	JQ702270	U4a1b	Unknown
JQ705833	U4a1a	Unknown	GP3_F2	U4a1b1	Germany
JQ703929	U4a1a	Unknown	P10D2	U4a1b1	Germany
KF161780	U4a1a	Denmark	M5161	U4a1b1	United Kingdom
JQ705553	U4a1a	British Isles	VIKI5709	U4a1b1	Shetlands
JQ705547	U4a1a	Unknown	1113002528_S42	U4a1b1	Unknown
M7887_Wales_N	U4a1a	United Kingdom	GFMB	U4a1b1	Scotland
MIR08	U4a1a	Ireland	EU545459	U4a1b1	Slovakia
KM101778	U4a1a	United States	JQ705409	U4a1b1	Unknown
KF162572	U4a1a	Denmark	GU562438	U4a1b1	United States
JX153747	U4a1a	Denmark	JQ705729	U4a1b1	Unknown
KP860337	U4a1a	Bulgaria	EU545418	U4a1b1	Poland
KF161827	U4a1a	Denmark	1113002917_S88	U4a1b1	Unknown
1113000583_S11	U4a1a1	Unknown	GU252762	U4a1b1a	Switzerland
1113000846_S70	U4a1a1	Unknown	EU428753	U4a1b1a	Unknown
1113001439_S15	U4a1a1	Unknown	KF162857	U4a1b2	Denmark
1113002250_S59	U4a1a1	Unknown	EU545429	U4a1b2	Poland
gonl-140a	U4a1a1	Unknown	EU545432	U4a1b2	Poland
1113001423_S92	U4a1a1	Unknown	1113002849_S36	U4a1c	Unknown
1113002652_S58	U4a1a1	Unknown	1113003024_S5	U4a1c	Unknown
1113000940_S23	U4a1a1	Unknown	gonl-125a	U4a1c	Unknown
1113000818_S30	U4a1a1	Unknown	GP2_F1	U4a1c	Germany
1113000760_S24	U4a1a1	Unknown	EU545427	U4a1c	Czech Republic
1113001897_S28	U4a1a1	Unknown	KF161869	U4a1c	Denmark
1113000708_S53	U4a1a1	Unknown	EU545428	U4a1c	Poland
1113002282_S22	U4a1a1	Unknown	M7888	U4a1d	United Kingdom
KU535696	U4a1a1	British Isles	JX021503	U4a1d	British Isles
EU545417	U4a1a1	Poland	FJ493506	U4a1d	Siberia
HM625687	U4a1a1	Unknown	FJ147312	U4a1d	Siberia
AY882386	U4a1a1	Spain	GU123031	U4a1d	Siberia
EF660965	U4a1a1	Italy	GU123034	U4a1d	Siberia
EU545416	U4a1a1	Poland	KJ856757	U4a1e	Siberia

Table 1 | Complete dataset analysed for mtDNA studies. Information regarding haplogroup and country is also provided (continuation).

SampleID	Haplogroup	Country	SampleID	Haplogroup	Country
KF148090	U4a1e	Siberia	KM047234	U4a2a	Poland
VIKI5018	U4a1e	Shetlands	EU545458	U4a2a	Slovakia
JQ702125	U4a1e	Norway	JQ702403	U4a2a	Lithuania
JX021669	U4a1e	Unknown	JQ702942	U4a2a	Unknown
gonl-15b	U4a2	Unknown	EU545425	U4a2a	Czech Republic
217	U4a2	Turkey	KM047229	U4a2a	Poland
PALAO965	U4a2	Palestine	EU545450	U4a2a	Russia
KJ445967	U4a2	Russia	JQ705907	U4a2a	Unknown
DQ156209	U4a2	Spain	EU545440	U4a2a	Russia
EU545430	U4a2	Belarus	CZE388	U4a2a	Czechia
HG01757	U4a2	Spain	1113002411_S2	U4a2a1	Unknown
KF161089	U4a2	Denmark	EF222236	U4a2a1	Poland
KP835773	U4a2	Unknown	KF162134	U4a2a1	Denmark
HM852885	U4a2	Georgia	JQ702094	U4a2a1	Sweden
JX153114	U4a2	Italy	KM096774	U4a2a1	Serbia
KF161939	U4a2	Denmark	EF222250	U4a2a1	Poland
KC911382	U4a2	Iran	EF222237	U4a2a1	Poland
KC911285	U4a2	Iran	KJ445968	U4a2a1	China
JQ704052	U4a2	Estonia	SWE1	U4a2a1	Sweden
JQ705919	U4a2	British Isles	EU545461	U4a2a2	Slovakia
KJ716337	U4a2	Germany	KF162342	U4a2a2	Denmark
HG00109	U4a2	British Isles	JQ705566	U4a2a2	Denmark
KJ856813	U4a2	Poland	JQ704321	U4a2a2	Germany
ESP0301	U4a2	Spain	EF222238	U4a2a2	Poland
JQ705655	U4a2	Unknown	JX154043	U4a2a2	Denmark
JQ701841	U4a2	Unknown	EU545446	U4a2a3	Russia
KP835774	U4a2	Unknown	EF222239	U4a2a3	Poland
KJ856818	U4a2	Poland	1113000785_S93	U4a2b	Unknown
EU545455	U4a2	Slovakia	1113000662_S84	U4a2b	Unknown
JQ705609	U4a2	Finland	GP2_C4	U4a2b	Germany
HM453049	U4a2	Austria	1113000317_S45	U4a2b	Unknown
EU545453	U4a2	Slovakia	AT87	U4a2b	Turkey
KP688571	U4a2	Finland	KF162652	U4a2b	Denmark
KP756961	U4a2	Finland	NA20512	U4a2b	Italy
HG00267	U4a2	Finland	GU123033	U4a2b	Siberia
HG00321	U4a2	Finland	JQ703385	U4a2b	British Isles
HELT040	U4a2	Unknown	EF222240	U4a2b	Unknown
JQ705363	U4a2a	Sweden	JX239772	U4a2b	United States
AY882387	U4a2a	Italy	KF162177	U4a2b	Denmark
KM096779	U4a2a	Serbia	JQ705121	U4a2b	Germany
KJ856718	U4a2a	Kazakhstan	AY339550	U4a2b	Finland
HM852769	U4a2a	Armenia	EF222241	U4a2b	Poland
JX153621	U4a2a	Finland	JX153535	U4a2b	Denmark
KJ856727	U4a2a	Kazakhstan	TURAT87	U4a2b	Unknown
EF222249	U4a2a	Poland	LP6008116-DNA_F09	U4a2c	Ireland

Table 1 | Complete dataset analysed for mtDNA studies. Information regarding haplogroup and country is also provided (continuation).

SampleID	Haplogroup	Country	SampleID	Haplogroup	Country
EU545464	U4a2c	Belarus	1113001057_S43	U4a3a	Unknown
CZE413	U4a2c	Czechia	1113002373_S23	U4a3a	Unknown
KM096781	U4a2c	Serbia	1113002683_S81	U4a3a	Unknown
EF222252	U4a2c1	Poland	1113001697_S1	U4a3a	Unknown
GU122975	U4a2c1	Siberia	1113003056_S65	U4a3a	Unknown
EF222242	U4a2c1	Ukraine	P10H2	U4a3a	Germany
EU545421	U4a2d	Czech Republic	1113000722_S79	U4a3a	Unknown
JQ702351	U4a2d	British Isles	1113001992_S17	U4a3a	Unknown
JQ705152	U4a2d	Germany	ESP0643	U4a3a	Spain
1113000891_S12	U4a2e	Unknown	ESP0632	U4a3a	Spain
EU545442	U4a2e	Russia	GQ200592	U4a3a	United States
EU545456	U4a2e	Slovakia	HM102317	U4a3a	United States
JQ702862	U4a2e	Unknown	EU545423	U4a3a	Czech Republic
JQ704772	U4a2e	Unknown	JX153448	U4a3a	Denmark
ESP0686	U4a2f	Spain	JQ702280	U4a3a	Unknown
KF162665	U4a2f	Denmark	KF938935	U4a3a	United States
JQ705828	U4a2f	Unknown	JQ705428	U4a3a	Unknown
KM233203	U4a2f	Sweden	ROMMA35	U4b	Romania
JQ704811	U4a2f	Spain	1113001777_S68	U4b	Unknown
HG01612	U4a2f	Spain	AZB17	U4b	Azerbaijan
KM047227	U4a2g	Poland	KX675281	U4b	Unknown
JX154049	U4a2g	Denmark	JQ705130	U4b	Portugal
KJ445963	U4a2g	Pakistan	KC911585	U4b	Iran
JQ480650	U4a2g	Russia	JQ702211	U4b	Unknown
KM096773	U4a2g	Serbia	KF162547	U4b	Denmark
KP691018	U4a2g	Russia	EU545444	U4b	Russia
EU545434	U4a2g	Russia	IRQ237	U4b	Iraq
SICTR55	U4a2g	Unknown	KX675293	U4b	Unknown
1113000015_S58	U4a2h	Unknown	IRQ11	U4b	Iraq
EF222235	U4a2h	Poland	1113000182_S37	U4b	Unknown
KF161329	U4a2h	Denmark	1113001876_S56	U4b	Unknown
JX289843	U4a2h	United States	FJ147315	U4b1+146+152	Siberia
JQ702549	U4a2h1	Netherlands	CATSP24	U4b1a	Spain
JX152824	U4a2h1	Denmark	1113000184_S57	U4b1a	Unknown
JX153725	U4a2h1	Denmark	A-55	U4b1a	France
KF162167	U4a2h1	Denmark	ALP154	U4b1a	Italy
KF162318	U4a2h1	Denmark	HM044301	U4b1a1	United States
KF161509	U4a2h1	Denmark	1113001024_S37	U4b1a1	Unknown
EF060364	U4a3	Italy	1113000087_S12	U4b1a1	Unknown
1113001112_S21	U4a3	Unknown	JQ705255	U4b1a1a	British Isles
1113001301_S2	U4a3	Unknown	JQ705865	U4b1a1a	Unknown
1113000484_S82	U4a3a	Unknown	1113002844_S86	U4b1a1a	Unknown
1113000755_S85	U4a3a	Unknown	BG128	U4b1a1a	Italy
1113001514_S74	U4a3a	Unknown	BG84	U4b1a1a	Italy
1113002056_S75	U4a3a	Unknown	JQ703912	U4b1a1a	Unknown

Table 1 | Complete dataset analysed for mtDNA studies. Information regarding haplogroup and country is also provided (continuation).

SampleID	Haplogroup	Country	SampleID	Haplogroup	Country
KJ856687	U4b1a1a	Ukraine	1113000095_S51	U4b1a3a	Unknown
1113001349_S22	U4b1a1a1	Unknown	1113000490_S85	U4b1a3a	Unknown
1113000115_S87	U4b1a1a1	Unknown	1113000955_S18	U4b1a3a	Unknown
BGD24	U4b1a1a1	Italy	1113002259_S55	U4b1a3a	Unknown
1113002941_S90	U4b1a1a1	Unknown	1113001956_S96	U4b1a3a	Unknown
gonl-69a	U4b1a1a1	Unknown	M7948	U4b1a4	United Kingdom
LP6008115-DNA_H11	U4b1a1a1	Ireland	ESP0622	U4b1a4	Spain
AY882388	U4b1a1a1	Adygea	KAB1	U4b1a4	Kabardia
KJ445953	U4b1a1a1	Adygea	FJ147313	U4b1a4	Siberia
FJ460530	U4b1a1a1	Tunisia	KA21	U4b1a4	Pakistan
NA06985	U4b1a1a1	United States	KA51B	U4b1a4	Pakistan
EF660983	U4b1a1a1	Italy	KJ445955	U4b1a4	Pakistan
KJ445952	U4b1a1a1	Pakistan	FJ147314	U4b1a4	Siberia
JX152963	U4b1a1a1	Greece	FJ147316	U4b1a4	Siberia
KC911524	U4b1a1a1	Iran	KC911400	U4b1a4	Iran
TURAT40	U4b1a1a1	Turkey	csct_000435_sard	U4b1b1	Italy Sardinia
KL41	U4b1a1a1	Czech Republic	JQ701911	U4b1b1	Unknown
M3067	U4b1a2	United Kingdom	JQ705342	U4b1b1	Unknown
1113001511_S15	U4b1a2	Unknown	EU545463	U4b1b1	Slovakia
T-45	U4b1a2	France	JQ705560	U4b1b1	Unknown
HM041972	U4b1a2	United States	KR105198	U4b1b1	British Isles
JQ702446	U4b1a2	Unknown	JQ704021	U4b1b1	Unknown
EU545415	U4b1a2a	Belarus	HG01168	U4b1b1	Puerto Rico
HG00250	U4b1a2a	British Isles	AT60	U4b1b1	Turkey
JX153652	U4b1a2a	Denmark	ATc5	U4b1b1	Turkey
KF163023	U4b1a2a	Denmark	JN647925	U4b1b1	Armenia
KF162643	U4b1a2a	Denmark	HM852897	U4b1b1	Georgia
JQ704098	U4b1a2a	Unknown	HM852884	U4b1b1	Georgia
EF660921	U4b1a2a	Italy	GQ859272	U4b1b1	Unknown
JQ701876	U4b1a2b	British Isles	1113001389_S40	U4b1b1	Unknown
JX153376	U4b1a2b	Denmark	VIKI5390	U4b1b1	Shetlands
HG00255	U4b1a2b	British Isles	VIKI6585	U4b1b1	Shetlands
JQ701990	U4b1a2b	Unknown	VIKI7195	U4b1b1	Shetlands
EU545419	U4b1a3	Poland	LP6008114-DNA_E01	U4b1b1	Ireland
EU571946	U4b1a3a	Hungary	1113001927_S75	U4b1b1	Unknown
FJ858802	U4b1a3a	United States	ESP0127	U4b1b1	Spain
HM625699	U4b1a3a	Unknown	1113001851_S82	U4b1b1	Unknown
KF161233	U4b1a3a	Denmark	1113000028_S77	U4b1b1	Unknown
KF161791	U4b1a3a	Denmark	1113000809_S48	U4b1b1	Unknown
KF162688	U4b1a3a	Denmark	gonl-63b	U4b1b1	Unknown
KF161444	U4b1a3a	Denmark	1113000316_S35	U4b1b1	Unknown
KF161265	U4b1a3a	Denmark	gonl-157b	U4b1b1	Unknown
1113002290_S62	U4b1a3a	Unknown	gonl-61a	U4b1b1	Unknown
1113003063_S36	U4b1a3a	Unknown	PU90	U4b1b1	Italy
1113002808_S16	U4b1a3a	Unknown	KJ856738	U4b1b1+16311	Siberia

Table 1 | Complete dataset analysed for mtDNA studies. Information regarding haplogroup and country is also provided (continuation).

SampleID	Haplogroup	Country	SampleID	Haplogroup	Country
KJ856687	U4b1a1a	Ukraine	1113000095_S51	U4b1a3a	Unknown
1113001349_S22	U4b1a1a1	Unknown	1113000490_S85	U4b1a3a	Unknown
1113000115_S87	U4b1a1a1	Unknown	1113000955_S18	U4b1a3a	Unknown
BGD24	U4b1a1a1	Italy	1113002259_S55	U4b1a3a	Unknown
1113002941_S90	U4b1a1a1	Unknown	1113001956_S96	U4b1a3a	Unknown
gonl-69a	U4b1a1a1	Unknown	M7948_Scotland_C	U4b1a4	United Kingdom
LP6008115-DNA_H11	U4b1a1a1	Ireland	ESP0622	U4b1a4	Spain
AY882388	U4b1a1a1	Adygea	KAB1	U4b1a4	Kabardia
KJ445953	U4b1a1a1	Adygea	FJ147313	U4b1a4	Siberia
FJ460530	U4b1a1a1	Tunisia	KA21	U4b1a4	Pakistan
NA06985	U4b1a1a1	United States	KA51B	U4b1a4	Pakistan
EF660983	U4b1a1a1	Italy	KJ445955	U4b1a4	Pakistan
KJ445952	U4b1a1a1	Pakistan	FJ147314	U4b1a4	Siberia
JX152963	U4b1a1a1	Greece	FJ147316	U4b1a4	Siberia
KC911524	U4b1a1a1	Iran	KC911400	U4b1a4	Iran
TURAT40	U4b1a1a1	Turkey	csct_000435_sard	U4b1b1	Italy Sardinia
KL41	U4b1a1a1	Czech Republic	JQ701911	U4b1b1	Unknown
M3067_Ireland_Ulster	U4b1a2	United Kingdom	JQ705342	U4b1b1	Unknown
1113001511_S15	U4b1a2	Unknown	EU545463	U4b1b1	Slovakia
T-45	U4b1a2	France	JQ705560	U4b1b1	Unknown
HM041972	U4b1a2	United States	KR105198	U4b1b1	British Isles
JQ702446	U4b1a2	Unknown	JQ704021	U4b1b1	Unknown
EU545415	U4b1a2a	Belarus	HG01168	U4b1b1	Puerto Rico
HG00250	U4b1a2a	British Isles	AT60	U4b1b1	Turkey
JX153652	U4b1a2a	Denmark	ATc5	U4b1b1	Turkey
KF163023	U4b1a2a	Denmark	JN647925	U4b1b1	Armenia
KF162643	U4b1a2a	Denmark	HM852897	U4b1b1	Georgia
JQ704098	U4b1a2a	Unknown	HM852884	U4b1b1	Georgia
EF660921	U4b1a2a	Italy	GQ859272	U4b1b1	Unknown
JQ701876	U4b1a2b	British Isles	1113001389_S40	U4b1b1	Unknown
JX153376	U4b1a2b	Denmark	VIKI5390	U4b1b1	Shetlands
HG00255	U4b1a2b	British Isles	VIKI6585	U4b1b1	Shetlands
JQ701990	U4b1a2b	Unknown	VIKI7195	U4b1b1	Shetlands
EU545419	U4b1a3	Poland	LP6008114-DNA_E01	U4b1b1	Ireland
EU571946	U4b1a3a	Hungary	1113001927_S75	U4b1b1	Unknown
FJ858802	U4b1a3a	United States	ESP0127	U4b1b1	Spain
HM625699	U4b1a3a	Unknown	1113001851_S82	U4b1b1	Unknown
KF161233	U4b1a3a	Denmark	1113000028_S77	U4b1b1	Unknown
KF161791	U4b1a3a	Denmark	1113000809_S48	U4b1b1	Unknown
KF162688	U4b1a3a	Denmark	gonl-63b	U4b1b1	Unknown
KF161444	U4b1a3a	Denmark	1113000316_S35	U4b1b1	Unknown
KF161265	U4b1a3a	Denmark	gonl-157b	U4b1b1	Unknown
1113002290_S62	U4b1a3a	Unknown	gonl-61a	U4b1b1	Unknown
1113003063_S36	U4b1a3a	Unknown	PU90	U4b1b1	Italy
1113002808_S16	U4b1a3a	Unknown	KJ856738	U4b1b1+16311	Siberia

Table 1 | Complete dataset analysed for mtDNA studies. Information regarding haplogroup and country is also provided (continuation).

SampleID	Haplogroup	Country	SampleID	Haplogroup	Country
FJ858877	U4b1b1+16311	Siberia	LP6008117-DNA_B03	U4b3	Ireland
KJ856683	U4b1b1+16311	Siberia	GU727823	U4b3	United States
KJ856794	U4b1b1+16311	Siberia	FJ147322	U4b3	Siberia
FRACE8	U4b1b1a	France	KJ856783	U4b3	Siberia
HM535647	U4b1b1a	British Isles	EU007874	U4b3	Siberia
GU797476	U4b1b1a	British Isles	JX152874	U4b3	Denmark
JQ703886	U4b1b1a	Unknown	JX152951	U4b3	Denmark
LP6008117-DNA_C03	U4b1b1a	Ireland	JX152952	U4b3	Denmark
M7973	U4b1b1a	United Kingdom	KF161430	U4b3	Denmark
VIKI5231	U4b1b1a	Shetlands	KF162145	U4b3	Denmark
VIKI5300	U4b1b1a	Shetlands	1113001203_S86	U4b3	Unknown
VIKI5384	U4b1b1a	Shetlands	1113001450_S75	U4b3	Unknown
B-38	U4b1b1a	France	OL28	U4c1	Italy
VIKI5279	U4b1b1b	Shetlands	ESP0555	U4c1	Spain
VIKI5399	U4b1b1b	Shetlands	1113000091_S93	U4c1	Unknown
VIKI6142	U4b1b1b	Shetlands	1113001238_S45	U4c1	Unknown
VIKI6996	U4b1b1b	Shetlands	1113001254_S40	U4c1	Unknown
VIKI5614	U4b1b1b	Shetlands	1113002316_S7	U4c1	Unknown
JQ704155	U4b1b1b	Unknown	1113002394_S79	U4c1	Unknown
JX153717	U4b1b1b	Denmark	1113002684_S33	U4c1	Unknown
FRACE7	U4b1b1b	France	A-51	U4c1	France
1113000371_S63	U4b1b1b	Unknown	EU545465	U4c1	Belarus
KM101946	U4b1b1b	United States	GU471242	U4c1	United States
JQ702864	U4b1b1b	Unknown	HQ591466	U4c1	Poland
GU123041	U4b1b1c	Siberia	KP406603	U4c1	Romania
KC911460	U4b1b1c	Iran	EF222248	U4c1	Poland
GU123039	U4b1b1c	Siberia	HG01669	U4c1	Spain
NA12156	U4b1b1d	United States	KJ856792	U4c1	Czech Republic
JX153693	U4b1b1d	Denmark	KF162433	U4c1	Denmark
JQ704676	U4b1b2	Unknown	KC911396	U4c1	Iran
1113000180_S24	U4b1b2	Unknown	KC911453	U4c1	Iran
HG00155	U4b1b2	British Isles	KM047213	U4c1	Poland
EU140898	U4b2	Unknown	EU545462	U4c1	Slovakia
KJ445954	U4b2	Pakistan	KF162508	U4c1	Denmark
SJS20	U4b2a	Syria	JQ704993	U4c1	British Isles
KM101964	U4b2a	United States	HM003577	U4c1	United States
JQ701937	U4b2a	Unknown	1113000319_S69	U4c1	Unknown
JQ702783	U4b2a	Unknown	JQ704181	U4c1	Unknown
KF161555	U4b2a1	Denmark	X5587	U4c1	Portugal
GQ891957	U4b2a1	United States	JQ704675	U4c1	British Isles
HQ190906	U4b2a1a	Germany	KC911375	U4c1	Iran
HM856584	U4b2a1a	United States	1113002502_S50	U4c1	Unknown
EF452295	U4b2a1a	Unknown	JQ703900	U4c1	British Isles
GU365881	U4b2a1a	United States	JQ702777	U4c1	British Isles
HG01707	U4b3	Spain	1113000512_S26	U4c1	Unknown

Table 1 | Complete dataset analysed for mtDNA studies. Information regarding haplogroup and country is also provided (continuation).

SampleID	Haplogroup	Country	SampleID	Haplogroup	Country
1113002863_S4	U4c1	Unknown	JX153870	U4c1a	Denmark
1113001678_S67	U4c1	Unknown	KF161599	U4c1a	Denmark
ALP004	U4c1	Italy	KF162998	U4c1a	Denmark
ESP0117	U4c1	Spain	KL45	U4c1a	Czech Republic
GP2_E7	U4c1	Germany	LP6008116-DNA_H02	U4c1a	Ireland
M7989_Scotland_C	U4c1	United Kingdom	1113000988_S96	U4c1a	Unknown
1113000320_S25	U4c1	Unknown	LP6008116-DNA_F07	U4c1a	Ireland
1113001104_S96	U4c1	Unknown	1113000717_S68	U4c1a	Unknown
JQ704661	U4c1	British Isles	1113002830_S24	U4c1a	Unknown
KM101758	U4c1	United States	1113001426_S18	U4c1a	Unknown
EU135973	U4c1	Unknown	1113000964_S67	U4c1a	Unknown
HG01670	U4c1	Spain	1113000968_S50	U4c1a	Unknown
JQ704326	U4c1	Netherlands	1113002628_S9	U4c1a	Unknown
HQ286589	U4c1	Hungary	1113002769_S41	U4c1a	Unknown
KF161794	U4c1	Denmark	1113000801_S8	U4c1a	Unknown
KU552334	U4c1	Sweden	1113001001_S72	U4c1a	Unknown
KJ675742	U4c1	Sweden	1113001195_S55	U4c1a	Unknown
JX153153	U4c1	Denmark	1113000208_S23	U4c1a	Unknown
KF161404	U4c1	Denmark	HQ418462	U4c2	British Isles
KF162738	U4c1	Denmark	gonl-22b	U4c2	Unknown
X5092	U4c1	Portugal	KJ856793	U4c2a	Czech Republic
JQ704121	U4c1	British Isles	EU545460	U4c2a	Slovakia
KF161597	U4c1	Denmark	JQ702690	U4c2a	Unknown
KF161305	U4c1	Denmark	KY514166	U4c2a	Ireland
KF161496	U4c1	Denmark	1113001634_S85	U4d1	Unknown
FJ348178	U4c1	Italy	1113000637_S2	U4d1	Unknown
JX153069	U4c1	Italy	1113002258_S85	U4d1	Unknown
KP733896	U4c1	Bulgaria	HQ167735	U4d1	Netherlands
JX153455	U4c1	Italy	GU123021	U4d1a	Siberia
AZB2	U4c1	Azerbaijan	HG00181	U4d1a1	Finland
363	U4c1	Turkey	JQ702154	U4d1a1	Unknown
CHE8	U4c1	Chechnya	AY339549	U4d1a1	Finland
1113002855_S57	U4c1	Unknown	JQ702267	U4d1a1	Finland
1113000380_S53	U4c1	Unknown	KJ445956	U4d1a1	Russia
1113001689_S48	U4c1	Unknown	JX153233	U4d1a1a	Finland
1113002433_S36	U4c1	Unknown	JQ704741	U4d1a1a	Unknown
1113000002_S15	U4c1	Unknown	HG00186	U4d1a1a	Finland
1113000413_S86	U4c1	Unknown	HG00339	U4d1a1a	Finland
1113000658_S83	U4c1	Unknown	EU545438	U4d1b	Russia
1113000692_S30	U4c1	Unknown	EU545448	U4d1b	Russia
T-116	U4c1	France	GU122982	U4d1b	Siberia
T-71	U4c1	France	GU122985	U4d2	Siberia
1113001196_S33	U4c1	Unknown	GU122988	U4d2	Siberia
T-43	U4c1	France	KJ445950	U4d2	Palestine
gonl-121a	U4c1	Unknown	EU007891	U4d2	Mongolia

Table 1 | Complete dataset analysed for mtDNA studies. Information regarding haplogroup and country is also provided (continuation).

SampleID	Haplogroup	Country	SampleID	Haplogroup	Country
1113001222_S81	U4d2	Unknown	ESP0802	U5a1+16192	Spain
JQ655422	U4d2	Poland	AZB27	U5a1+16192	Azerbaijan
KJ445951	U4d2	Russia	MF278019	U5a1a1	Sweden
KJ856699	U4d2	Russia	1113001053_S70	U5a1a1	Unknown
KJ856735	U4d2	Siberia	gonl-196a	U5a1a1	Unknown
EU545426	U4d2	Czech Republic	LP6008113-DNA_H08	U5a1a1	Ireland
csct_005714_sard	U4d2	Italy Sardinia	LP6008114-DNA_E12	U5a1a1	Ireland
KF148381	U4d2	Siberia	LP6008114-DNA_F04	U5a1a1	Ireland
FJ230891	U4d2	Siberia	LP6008114-DNA_G10	U5a1a1	Ireland
KJ856788	U4d2	Siberia	LP6008115-DNA_G07	U5a1a1	Ireland
KX675286	U4d2	Unknown	M8039_Scotland_C	U5a1a1	United Kingdom
1113002283_S83	U4d3	Unknown	1825_sard	U5a1a1	Sardinia
1113000467_S58	U4d3	Unknown	EU523128	U5a1a1	Unknown
1113000147_S90	U4d3	Unknown	JQ704708	U5a1a1	United Kingdom
1113002894_S24	U4d3	Unknown	1113001279_S24	U5a1a1	Unknown
1113000875_S69	U4d3	Unknown	EU698951	U5a1a1	Unknown
gonl-64a	U4d3	Unknown	KF161166	U5a1a1	Denmark
GU244374	U4d3	British Isles	KJ868086	U5a1a1	United Kingdom
KF162695	U4d3	Denmark	KF161767	U5a1a1	Denmark
GU727822	U4d3	United States	KM101774	U5a1a1	North Europe
JQ705926	U4d3	Unknown	JQ702339	U5a1a1	Unknown
DQ156212	U5a	Spain	JQ703614	U5a1a1	Unknown
1113001322_S21	U5a	Unknown	M8058	U5a1a1	United Kingdom
KF162065	U5a	Denmark	ESP0540	U5a1a1	Spain
GU296570	U5a1	Czechia	MF035493	U5a1a1	Sweden
OL48	U5a1	Italy	JQ705617	U5a1a1	United Kingdom
KC911576	U5a1	Iran	KT364276	U5a1a1	Unknown
KF451754	U5a1	China	HM852852	U5a1a1	Turkey
KJ446105	U5a1	China	JX297175	U5a1a1	Basque
FJ348174	U5a1	Italy	GU296583	U5a1a1	Belarus
FJ348215	U5a1	Italy	M8080_ESW	U5a1a1	United Kingdom
AY882399	U5a1	Italy	LP6008116-DNA_C02	U5a1a1	Ireland
JN714123	U5a1	Unknown	1113000838_S65	U5a1a1	Unknown
KT366045	U5a1	Finland	MF152679	U5a1a1	Ireland
JX152785	U5a1	Finland	JQ705132	U5a1a1	Unknown
ROMMA74	U5a1	Romania	K101	U5a1a1	Turkey (Kurd)
KT372901	U5a1+16192	United Kingdom	1113002595_S23	U5a1a1	Unknown
KF161787	U5a1+16192	Denmark	ESP0486	U5a1a1	Spain
KF933042	U5a1+16192	North Europe	218	U5a1a1	Turkey
ALP305	U5a1+16192	Italy	1113002201_S80	U5a1a1	Unknown
1113002661_S51	U5a1+16192	Unknown	JQ705430	U5a1a1	Unknown
ESP0678	U5a1+16192	Spain	NA20854	U5a1a1	India
gonl-8b	U5a1+16192	Unknown	ESP0433	U5a1a1	Spain
A-44	U5a1+16192	France	ESP0152	U5a1a1	Spain
HG01610	U5a1+16192	Spain	KC911582	U5a1a1	Iran

Table 1 | Complete dataset analysed for mtDNA studies. Information regarding haplogroup and country is also provided (continuation).

SampleID	Haplogroup	Country	SampleID	Haplogroup	Country
JQ704823	U5a1a1	United Kingdom	1113002211_S71	U5a1a1	Unknown
NA06984	U5a1a1	United Kingdom	DQ785296	U5a1a1	Unknown
JX153779	U5a1a1	Denmark	JQ702078	U5a1a1	Unknown
KF161131	U5a1a1	Denmark	KF451199	U5a1a1	Palestine
KF162174	U5a1a1	Denmark	KJ446103	U5a1a1	Palestine
KF162717	U5a1a1	Denmark	1113000476_S78	U5a1a1	Unknown
1113001043_S22	U5a1a1	Unknown	1113002030_S86	U5a1a1	Unknown
155	U5a1a1	Turkey	JQ701869	U5a1a1	Spain
1113000060_S72	U5a1a1	Unknown	x2898	U5a1a1	Portugal
1113002431_S64	U5a1a1	Unknown	1113000122_S4	U5a1a1	Unknown
DQ489510	U5a1a1	Netherlands	1113000648_S91	U5a1a1	Unknown
BRI167	U5a1a1	England	C-59	U5a1a1	France
2855_sard	U5a1a1	Sardinia	KC763419	U5a1a1+152	Finland
csct_000591_sard	U5a1a1	Unknown	GU296594	U5a1a1+152	Russia
JQ701913	U5a1a1	United Kingdom	JQ704590	U5a1a1+152	Unknown
JQ703965	U5a1a1	Unknown	GU296601	U5a1a1+152	Russia
KP735165	U5a1a1	Czech Republic	KC763424	U5a1a1+152	Finland
JQ702730	U5a1a1	Unknown	KJ446101	U5a1a1+152	Pakistan
KM101910	U5a1a1	North Europe	KF450864	U5a1a1+152	Pakistan
KF451262	U5a1a1	Palestine	JH18	U5a1a1+152	Czech Republic
KJ446102	U5a1a1	Palestine	GU296595	U5a1a1+152	Russia
JQ704915	U5a1a1	Unknown	LP6008115-DNA_B10	U5a1a1+152	Ireland
JQ702038	U5a1a1	Germany	JQ704084	U5a1a1+152	Unknown
1113002035_S73	U5a1a1	Unknown	GU296573	U5a1a1+152	Poland
1113001229_S89	U5a1a1	Unknown	JX152809	U5a1a1+152	Unknown
1113000020_S93	U5a1a1	Unknown	KF161341	U5a1a1+152	Denmark
gonl-59b	U5a1a1	Unknown	KF161903	U5a1a1+152	Denmark
SICTR57	U5a1a1	Italy-Sicily	M7906	U5a1a1+152	United Kingdom
KY656559	U5a1a1	Finland	GU296636	U5a1a1+152	Poland
66	U5a1a1	Turkey	JQ703866	U5a1a1+152	Unknown
282	U5a1a1	Turkey	gonl-77a	U5a1a1+152	Unknown
C-100	U5a1a1	France	GP2_C10	U5a1a1+152	Germany
KC911503	U5a1a1	Iran	gonl-89a	U5a1a1+152	Unknown
1113002660_S64	U5a1a1	Unknown	JX153722	U5a1a1+152	Denmark
ESP0462	U5a1a1	Spain	KF161673	U5a1a1+152	Denmark
JQ705065	U5a1a1	Unknown	KF161191	U5a1a1+152	Denmark
KF162155	U5a1a1	Denmark	JX153131	U5a1a1+152	Unknown
1113002123_S22	U5a1a1	Unknown	JX153802	U5a1a1+152	Denmark
1113000543_S57	U5a1a1	Unknown	JX153888	U5a1a1+152	Denmark
csct_000559_sard	U5a1a1	Unknown	KF163045	U5a1a1+152	Denmark
csct_000823_sard	U5a1a1	Unknown	JX153762	U5a1a1+152	Denmark
GP3_B5	U5a1a1	Germany	KF161162	U5a1a1+152	Denmark
KC286591	U5a1a1	Unknown	JX152792	U5a1a1+152	Unknown
1113001438_S79	U5a1a1	Unknown	HM852873	U5a1a1+16362	Turkey
gonl-43a	U5a1a1	Unknown	1113002965_S65	U5a1a1+16362	Unknown

Table 1 | Complete dataset analysed for mtDNA studies. Information regarding haplogroup and country is also provided (continuation).

SampleID	Haplogroup	Country	SampleID	Haplogroup	Country
JQ704920	U5a1a1+16362	Unknown	JQ704658	U5a1a1c	Unknown
GU296581	U5a1a1a	Belarus	KF161107	U5a1a1c	Denmark
GU296564	U5a1a1a	Czechia	KF161545	U5a1a1c	Denmark
DQ904330	U5a1a1a	Russia	KF162861	U5a1a1c	Denmark
1113002991_S41	U5a1a1a	Unknown	KF162395	U5a1a1c	Denmark
1113002105_S2	U5a1a1a	Unknown	KF162003	U5a1a1c	Denmark
JQ701834	U5a1a1a	Unknown	KF162424	U5a1a1c	Denmark
1113001226_S68	U5a1a1a	Unknown	JX441882	U5a1a1d	Czechia
JQ703906	U5a1a1a	Croatia	JX153912	U5a1a1d	Denmark
1113002900_S54	U5a1a1a	Unknown	JX152822	U5a1a1d	Denmark
1113002200_S5	U5a1a1a	Unknown	JQ704961	U5a1a1d	Unknown
GU296558	U5a1a1a	Siberia	GU459066	U5a1a1d	United Kingdom
1113001964_S26	U5a1a1a	Unknown	1113000784_S20	U5a1a1d	Unknown
csct_007693_sard	U5a1a1a	Sardinia	JQ705479	U5a1a1d	United Kingdom
KF161221	U5a1a1a	Denmark	gonl-112a	U5a1a1d	Unknown
JQ702085	U5a1a1a	Unknown	gonl-90a	U5a1a1d	Unknown
GP3_F5	U5a1a1b	Germany	GP2_C8	U5a1a1d	Germany
KM220890	U5a1a1b	Ukraine	1113001471_S65	U5a1a1d	Unknown
KR809713	U5a1a1b	Sweden	gonl-73a	U5a1a1d	Unknown
NA20812	U5a1a1b	Italy	KF161640	U5a1a1d	Denmark
GU296652	U5a1a1b	Belarus	1113002856_S10	U5a1a1d	Unknown
JQ704725	U5a1a1b	United Kingdom	X4110	U5a1a1d	Portugal
JQ703937	U5a1a1b	Unknown	JQ703297	U5a1a1d	Unknown
KF162175	U5a1a1b	Denmark	JQ701958	U5a1a1d	Germany
KF162148	U5a1a1b	Denmark	1113003057_S72	U5a1a1d	Unknown
KF161380	U5a1a1b	Denmark	1113001217_S43	U5a1a1d	Unknown
KF161103	U5a1a1b	Denmark	1113000625_S70	U5a1a1d	Unknown
KF162072	U5a1a1b	Denmark	GQ160809	U5a1a1d	United Kingdom
KF162108	U5a1a1b	Denmark	KR858869	U5a1a1d	United Kingdom
GU206811	U5a1a1b	Finland	M4015	U5a1a1d	United Kingdom
JQ704723	U5a1a1b	Finland	M8111	U5a1a1d	United Kingdom
JQ702696	U5a1a1c	Russia	M8117	U5a1a1d	United Kingdom
JQ703590	U5a1a1c	Slovenia	M8132	U5a1a1d	United Kingdom
JQ702437	U5a1a1c	Unknown	KF161882	U5a1a1d1	Denmark
1113001358_S35	U5a1a1c	Unknown	JQ702809	U5a1a1d1	Unknown
1113001402_S80	U5a1a1c	Unknown	ADY43	U5a1a1d1	Adygei
1113001572_S54	U5a1a1c	Unknown	JQ701866	U5a1a1d1	Unknown
1113002470_S93	U5a1a1c	Unknown	UKN145	U5a1a1d1	Turkey
T-22	U5a1a1c	France	JQ701903	U5a1a1d1	Unknown
C-41	U5a1a1c	France	JQ705318	U5a1a1d1	United Kingdom
LIE026	U5a1a1c	Belgium	KC257387	U5a1a1d1	North Europe
BRI180	U5a1a1c	England	KF161993	U5a1a1d1	Denmark
1113000582_S46	U5a1a1c	Unknown	JX154024	U5a1a1d1	Denmark
KF162704	U5a1a1c	Denmark	KF162217	U5a1a1d1	Denmark
JQ704022	U5a1a1c	Unknown	JX171110	U5a1a1e	Finland

Table 1 | Complete dataset analysed for mtDNA studies. Information regarding haplogroup and country is also provided (continuation).

SampleID	Haplogroup	Country	SampleID	Haplogroup	Country
JQ704658	U5a1a1c	Unknown	JQ705621	U5a1a1e	Unknown
KF161107	U5a1a1c	Denmark	LP6008116-DNA_G03	U5a1a1e	Ireland
KF161545	U5a1a1c	Denmark	LP6008117-DNA_D03	U5a1a1e	Ireland
KF162861	U5a1a1c	Denmark	JQ704796	U5a1a1e	Unknown
KF162395	U5a1a1c	Denmark	MIR21	U5a1a1g	Ireland
KF162003	U5a1a1c	Denmark	JQ705243	U5a1a1g	Unknown
KF162424	U5a1a1c	Denmark	HG00145	U5a1a1g	United Kingdom
JX441882	U5a1a1d	Czechia	KP128017	U5a1a1g	United Kingdom
JX153912	U5a1a1d	Denmark	KT779180	U5a1a1g	Lebanon
JX152822	U5a1a1d	Denmark	KM378619	U5a1a1h	Russia
JQ704961	U5a1a1d	Unknown	JQ702122	U5a1a1h	Unknown
GU459066	U5a1a1d	United Kingdom	JX153217	U5a1a1h	
1113000784_S20	U5a1a1d	Unknown	GQ368895	U5a1a1h	Poland: Lodz
JQ705479	U5a1a1d	United Kingdom	KF162056	U5a1a1h	Denmark
gonl-112a	U5a1a1d	Unknown	JX153282	U5a1a1i	Italy
gonl-90a	U5a1a1d	Unknown	JQ582984	U5a1a1i	United Kingdom
GP2_C8	U5a1a1d	Germany	KF451396	U5a1a2a	Russia
1113001471_S65	U5a1a1d	Unknown	KJ446097	U5a1a2a	Russia
gonl-73a	U5a1a1d	Unknown	GU296557	U5a1a2a	Siberia
KF161640	U5a1a1d	Denmark	JQ702806	U5a1a2a	Unknown
1113002856_S10	U5a1a1d	Unknown	JQ705855	U5a1a2a	Germany
X4110	U5a1a1d	Portugal	M8152_SNW	U5a1a2a	United Kingdom
JQ703297	U5a1a1d	Unknown	1113002381_S80	U5a1a2a	Unknown
JQ701958	U5a1a1d	Germany	ESP0434	U5a1a2a	Spain
1113003057_S72	U5a1a1d	Unknown	GU123037	U5a1a2a	Siberia
1113001217_S43	U5a1a1d	Unknown	HQ588904	U5a1a2a	Armenia
1113000625_S70	U5a1a1d	Unknown	1113000916_S82	U5a1a2a	Unknown
GQ160809	U5a1a1d	United Kingdom	1113000108_S94	U5a1a2a	Unknown
KR858869	U5a1a1d	United Kingdom	HM852836	U5a1a2a	Iran
M4015_England_E	U5a1a1d	United Kingdom	JQ703717	U5a1a2a	Unknown
M8111_Scotland_SW	U5a1a1d	United Kingdom	JQ702871	U5a1a2a	Turkey
M8117_Scotland_NE	U5a1a1d	United Kingdom	HELT064	U5a1a2a	Greece
M8132	U5a1a1d	United Kingdom	GU296620	U5a1a2a	Russia
KF161882	U5a1a1d1	Denmark	GU296623	U5a1a2a	Russia
JQ702809	U5a1a1d1	Unknown	JQ704990	U5a1a2a	Unknown
ADY43	U5a1a1d1	Adygei	LP6008115-DNA_H07	U5a1a2a	Ireland
JQ701866	U5a1a1d1	Unknown	LP6008114-DNA_B01	U5a1a2a	Ireland
UKN145	U5a1a1d1	Turkey	KF161948	U5a1a2a	Denmark
JQ701903	U5a1a1d1	Unknown	KF161215	U5a1a2a	Denmark
JQ705318	U5a1a1d1	United Kingdom	KF161506	U5a1a2a	Denmark
KC257387	U5a1a1d1	North Europe	gonl-138b	U5a1a2a	Unknown
KF161993	U5a1a1d1	Denmark	KR349268	U5a1a2a1	North Europe
JX154024	U5a1a1d1	Denmark	CZE404	U5a1a2a1	Czechia
KF162217	U5a1a1d1	Denmark	1113001482_S24	U5a1a2a1	Unknown
JX171110	U5a1a1e	Finland	JQ703926	U5a1a2a1	Poland

Table 1 | Complete dataset analysed for mtDNA studies. Information regarding haplogroup and country is also provided (continuation).

SampleID	Haplogroup	Country	SampleID	Haplogroup	Country
JQ705621	U5a1a1e	Unknown	JX153678	U5a1a2a1	Denmark
LP6008116-DNA_G03	U5a1a1e	Ireland	JQ705849	U5a1a2a1	Unknown
LP6008117-DNA_D03	U5a1a1e	Ireland	JQ702568	U5a1a2a1a	Unknown
JQ704796	U5a1a1e	Unknown	KC862290	U5a1a2a1a	United Kingdom
MIR21	U5a1a1g	Ireland	KC602499	U5a1a2a1a	Sweden
JQ705243	U5a1a1g	Unknown	KC175644	U5a1a2a1a	United Kingdom
HG00145	U5a1a1g	United Kingdom	gonl-91b	U5a1a2b	Unknown
KP128017	U5a1a1g	United Kingdom	NA20822	U5a1a2b	Italy
KT779180	U5a1a1g	Lebanon	1113001253_S75	U5a1a2b	Unknown
KM378619	U5a1a1h	Russia	KT002149	U5a1a2b	Unknown
JQ702122	U5a1a1h	Unknown	JQ704701	U5a1a2b	Unknown
JX153217	U5a1a1h	Unknown	1113001643_S67	U5a1a2b	Unknown
GQ368895	U5a1a1h	Poland: Lodz	1113001265_S16	U5a1a2b	Unknown
KF162056	U5a1a1h	Denmark	1113000232_S61	U5a1a2b	Unknown
JX153282	U5a1a1i	Italy	NA12751	U5a1a2b	North Europe
JQ582984	U5a1a1i	United Kingdom	DNK264	U5a1a2b	Denmark
KF451396	U5a1a2a	Russia	JX153647	U5a1a2b	Denmark
KJ446097	U5a1a2a	Russia	GU296543	U5a1a2b	Poland
GU296557	U5a1a2a	Siberia	JQ705777	U5a1a2b	Unknown
JQ702806	U5a1a2a	Unknown	KF161386	U5a1a2b	Denmark
JQ705855	U5a1a2a	Germany	KF162935	U5a1a2b	Denmark
M8152_SNW	U5a1a2a	United Kingdom	KC018458	U5a1a2b	Denmark
1113002381_S80	U5a1a2a	Unknown	KF161758	U5a1a2b	Denmark
ESP0434	U5a1a2a	Spain	KF162265	U5a1a2b	Denmark
GU123037	U5a1a2a	Siberia	KF162908	U5a1a2b	Denmark
HQ588904	U5a1a2a	Armenia	S350	U5a1a2b1	Unknown
1113000916_S82	U5a1a2a	Unknown	M6602_WN	U5a1a2b1	United Kingdom
1113000108_S94	U5a1a2a	Unknown	JQ702496	U5a1a2b1	Unknown
HM852836	U5a1a2a	Iran	JQ705279	U5a1a2b1	United Kingdom
JQ703717	U5a1a2a	Unknown	JQ705886	U5a1a2b1	United Kingdom
JQ702871	U5a1a2a	Turkey	JQ702030	U5a1a2b1	Unknown
HELT064	U5a1a2a	Greece	JQ702053	U5a1a2b1	Unknown
GU296620	U5a1a2a	Russia	JQ704991	U5a1a2b1	Unknown
GU296623	U5a1a2a	Russia	JX141361	U5a1b	North Europe
JQ704990	U5a1a2a	Unknown	JQ704271	U5a1b	Germany
LP6008115-DNA_H07	U5a1a2a	Ireland	A-18	U5a1b	France
LP6008114-DNA_B01	U5a1a2a	Ireland	1113001682_S14	U5a1b	Unknown
KF161948	U5a1a2a	Denmark	1113002944_S78	U5a1b	Unknown
KF161215	U5a1a2a	Denmark	JQ705398	U5a1b	Unknown
KF161506	U5a1a2a	Denmark	KF161983	U5a1b	Denmark
gonl-138b	U5a1a2a	Unknown	KX675282	U5a1b	Kyrgyzstan
KR349268	U5a1a2a1	North Europe	JX153668	U5a1b	Denmark
CZE404	U5a1a2a1	Czechia	MF362860	U5a1b	Armenia
1113001482_S24	U5a1a2a1	Unknown	A-40	U5a1b	France
JQ703926	U5a1a2a1	Poland	1113000925_S36	U5a1b	Unknown

Table 1 | Complete dataset analysed for mtDNA studies. Information regarding haplogroup and country is also provided (continuation).

SampleID	Haplogroup	Country	SampleID	Haplogroup	Country
1113001136_S80	U5a1b	Unknown	JQ704734	U5a1b1	Unknown
KM101751	U5a1b	North Europe	EU140744	U5a1b1	Unknown
JQ703927	U5a1b	Unknown	VY34	U5a1b1	Czech Republic
T-107	U5a1b	France	ALP255	U5a1b1	Italy
JQ702331	U5a1b	Unknown	GU936107	U5a1b1	United Kingdom
JQ702347	U5a1b	Unknown	KF162179	U5a1b1	Denmark
HG00142	U5a1b	United Kingdom	KC763414	U5a1b1	Finland
JX153226	U5a1b	Finland	B-36	U5a1b1	France
gonl-52b	U5a1b	Unknown	B-64	U5a1b1	France
1113001121_S56	U5a1b	Unknown	T-15	U5a1b1	France
KF161956	U5a1b	Denmark	KM101990	U5a1b1	North Europe
JX153375	U5a1b	Denmark	X5689	U5a1b1	Portugal
LIE082	U5a1b	Belgium	1113001632_S7	U5a1b1	Unknown
LP6008115-DNA_D09	U5a1b	Ireland	ADY48	U5a1b1	Adygei
KF450874	U5a1b	Pakistan	JQ703945	U5a1b1	Poland
KJ446106	U5a1b	Pakistan	B-58	U5a1b1	France
KF162701	U5a1b	Denmark	JQ702790	U5a1b1	Poland
JQ703114	U5a1b	Unknown	M8216_Wales_S	U5a1b1	United Kingdom
HELT061	U5a1b	Greece	JQ704035	U5a1b1	Unknown
GU296604	U5a1b	Russia	1113000129_S45	U5a1b1	Unknown
GU296616	U5a1b	Russia	AT75	U5a1b1	Turkey
FRACE15	U5a1b	France	FRACE6	U5a1b1	France
EU597499	U5a1b	France	KJ446104	U5a1b1	France
gonl-97a	U5a1b	Unknown	KF451049	U5a1b1	Pakistan
JQ703412	U5a1b	Unknown	KF162934	U5a1b1	Denmark
KF162905	U5a1b+16362	Denmark	GU296576	U5a1b1	Siberia
JQ704045	U5a1b+16362	Unknown	KF161438	U5a1b1	Denmark
M8178_England_N	U5a1b+16362	United Kingdom	KJ767787	U5a1b1	North Europe
1113001641_S23	U5a1b+16362	Unknown	JQ703963	U5a1b1a	United Kingdom
gonl-85a	U5a1b+16362	Unknown	LIE121	U5a1b1a	Germany
KF162958	U5a1b+16362	Denmark	NA20774	U5a1b1a	Italy
JQ705935	U5a1b+16362	Unknown	JQ702195	U5a1b1a	Unknown
GFM038	U5a1b1	Greece	NA20515	U5a1b1a	Italy
1113002745_S84	U5a1b1	Unknown	JQ705220	U5a1b1a	Unknown
1113001286_S85	U5a1b1	Unknown	EU915477	U5a1b1a	Italy
1113001463_S64	U5a1b1	Unknown	1113000742_S45	U5a1b1a	Unknown
KF162852	U5a1b1	Denmark	1113001288_S74	U5a1b1a	Unknown
JQ704046	U5a1b1	Unknown	LP6008113-DNA_C05	U5a1b1a	Ireland
gonl-58b	U5a1b1	Unknown	JQ704941	U5a1b1a	United Kingdom
NA12718	U5a1b1	North Europe	JQ691414	U5a1b1a	United Kingdom
KF451063	U5a1b1	France	LP6008115-DNA_B11	U5a1b1a	Ireland
KJ446107	U5a1b1	France	MIR13	U5a1b1a	Ireland
1113001074_S50	U5a1b1	Unknown	LP6008115-DNA_E10	U5a1b1a	Ireland
JN982470	U5a1b1	United Kingdom	JQ703624	U5a1b1a	United Kingdom
JQ702775	U5a1b1	Unknown	KM411957	U5a1b1a	United Kingdom

Table 1 | Complete dataset analysed for mtDNA studies. Information regarding haplogroup and country is also provided (continuation).

SampleID	Haplogroup	Country	SampleID	Haplogroup	Country
JQ705245	U5a1b1a1	Unknown	1113000188_S76	U5a1b1d1	Unknown
JQ706015	U5a1b1a1	Unknown	GU296575	U5a1b1d1	Poland
NA12814	U5a1b1a2	North Europe	1113000616_S50	U5a1b1d1	Unknown
M8234	U5a1b1a2	United Kingdom	1113000621_S43	U5a1b1d1	Unknown
JQ703074	U5a1b1a2	Unknown	KF162669	U5a1b1d1	Denmark
LP6008117-DNA_F02	U5a1b1a2	Ireland	JX153853	U5a1b1d1	Finland
JQ703928	U5a1b1a2	United Kingdom	JX153991	U5a1b1d1	Denmark
KF161863	U5a1b1b	Denmark	JX153169	U5a1b1d1	Denmark
KF162797	U5a1b1b	Denmark	JX153770	U5a1b1e	Denmark
GU296614	U5a1b1b	Russia	LP6008116-DNA_B04	U5a1b1e	Ireland
AZB46	U5a1b1b	Azerbaijan	1113001914_S85	U5a1b1e	Unknown
HQ336051	U5a1b1b	Russia	GP3_D12	U5a1b1e	Germany
KC222211	U5a1b1b	Unknown	KJ481932	U5a1b1e	Unknown
GU296619	U5a1b1b1	Russia	JQ704679	U5a1b1e	Unknown
GU296608	U5a1b1b1	Russia	ESP0818	U5a1b1e	Spain
GU296649	U5a1b1b1	Belarus	GU296550	U5a1b1e	Poland
EU140330	U5a1b1c	Unknown	gonl-203b	U5a1b1e	Unknown
GU296610	U5a1b1c	Russia	KJ446108	U5a1b1e	United Kingdom
FJ493508	U5a1b1c1	Siberia	KF451322	U5a1b1e	United Kingdom
HM775995	U5a1b1c1	Denmark	KF161190	U5a1b1e	Denmark
GU296584	U5a1b1c1	Poland	JQ705211	U5a1b1e	United Kingdom
JQ705297	U5a1b1c1	Finland	LP6008117-DNA_D01	U5a1b1e	Ireland
JX153252	U5a1b1c1	Finland	LP6008182-DNA_D01	U5a1b1e	Ireland
KF162255	U5a1b1c2	Denmark	AY714003	U5a1b1f	India
KF161156	U5a1b1c2	Denmark	JQ702552	U5a1b1f	Unknown
JQ704028	U5a1b1c2	Russia	gonl-235b	U5a1b1g	Unknown
1113000830_S24	U5a1b1c2	Unknown	V5665	U5a1b1g	Europe NW
KF162650	U5a1b1c2	Denmark	HG00104	U5a1b1g	United Kingdom
GU296628	U5a1b1c2	Russia	LP6008115-DNA_E08	U5a1b1g	Ireland
JQ702400	U5a1b1d	United Kingdom	1113002614_S38	U5a1b1g	Unknown
1113001869_S51	U5a1b1d	Unknown	M8201	U5a1b1g	United Kingdom
JX152788	U5a1b1d+16093	Denmark	KF161868	U5a1b1g	Denmark
GP3_C5	U5a1b1d+16093	Germany	JN809915	U5a1b1g	United Kingdom
1113000092_S59	U5a1b1d+16093	Unknown	JQ701970	U5a1b1g	England
GU296555	U5a1b1d+16093	Poland	HG00288	U5a1b1h	Finland
1113000088_S6	U5a1b1d+16093	Unknown	JQ702714	U5a1b1h	Finland
1113000650_S67	U5a1b1d+16093	Unknown	JX153227	U5a1b1h	Finland
KF161196	U5a1b1d+16093	Denmark	JX153238	U5a1b1h	Finland
JQ705693	U5a1b1d1	United Kingdom	JX153626	U5a1b1h	Finland
JQ703227	U5a1b1d1	Unknown	KR864755	U5a1b1h	Finland
1113002588_S42	U5a1b1d1	Unknown	JQ703748	U5a1b1h	Finland
1113002583_S33	U5a1b1d1	Unknown	HG00367	U5a1b1h	Finland
1113002276_S95	U5a1b1d1	Unknown	MF070509	U5a1b1h	Finland
LIE170	U5a1b1d1	Belgium	KT764936	U5a1b1h	Sweden
1113000709_S92	U5a1b1d1	Unknown	JX153196	U5a1b1h	Finland

Table 1 | Complete dataset analysed for mtDNA studies. Information regarding haplogroup and country is also provided (continuation).

SampleID	Haplogroup	Country	SampleID	Haplogroup	Country
KP698513	U5a1b1h	Finland	1113002313_S22	U5a1c1	Unknown
JX153606	U5a1b1h	Finland	1113000731_S64	U5a1c1	Unknown
KF161251	U5a1b1h	Denmark	JX297176	U5a1c1a	Spain
CZE335	U5a1b2	Czechia	JQ705573	U5a1c1a	Unknown
GU296562	U5a1b2	Czechia	KC533468	U5a1c1a	North Europe
GU296569	U5a1b2	Czechia	ESP0977	U5a1c1a	Spain
KC257369	U5a1b3	North Europe	gonl-10b	U5a1c1a	Unknown
JX153799	U5a1b3	Denmark	C-42	U5a1c1a	France
JQ703331	U5a1b3	Unknown	JQ702836	U5a1c1a	Unknown
LIE096	U5a1b3	Belgium	GU296589	U5a1c2	Poland
HM804487	U5a1b3	North Europe	1113001675_S93	U5a1c2a	Unknown
GU296592	U5a1b3	Russia	1113002180_S76	U5a1c2a	Unknown
DQ862536	U5a1b3	Unknown	JQ704555	U5a1c2a	United Kingdom
1113002407_S75	U5a1b3	Unknown	T-25	U5a1c2a	France
KM925144	U5a1b3a	Finland	KF161274	U5a1c2a	Denmark
KC763411	U5a1b3a1	Finland	ESP0154	U5a1c2a1	Spain
JQ705101	U5a1b3a1	United Kingdom	NA07357	U5a1c2a1	North Europe
AY339529	U5a1b3a1	Finland	JX153721	U5a1c2a1	Denmark
JX153622	U5a1b3a1	Finland	JX152958	U5a1c2a1	Denmark
KC763408	U5a1b3a1	Finland	KF162385	U5a1c2a1	Denmark
KC763423	U5a1b3a1	Finland	KF162403	U5a1c2a1	Denmark
KC763446	U5a1b3a1	Finland	1113000500_S15	U5a1c2a1	Unknown
AY339528	U5a1b3a1	Finland	1113001451_S12	U5a1c2a1	Unknown
JX171114	U5a1b3a1	Finland	1113002285_S34	U5a1c2a1	Unknown
JX171115	U5a1b3a1	Finland	1113002794_S90	U5a1c2a1	Unknown
M4569	U5a1b4	United Kingdom	1113002328_S25	U5a1c2a1	Unknown
JN897375	U5a1b4	North Europe	1113000572_S56	U5a1c2a1	Unknown
KC257373	U5a1b4	North Europe	JX152954	U5a1c2a1	Denmark
KF161290	U5a1b4	Denmark	JX153655	U5a1c2a1	Denmark
KF163031	U5a1b4	Denmark	KF162600	U5a1c2a1	Denmark
HM171295	U5a1b4	North Europe	JX152955	U5a1c2a1	Denmark
JX153938	U5a1b4	Denmark	KF161514	U5a1c2a1	Denmark
M8022_SSW	U5a1c	United Kingdom	KF162506	U5a1c2a1	Denmark
1113001606_S69	U5a1c	Unknown	KF161587	U5a1c2a1	Denmark
HG01615	U5a1c	Spain	KF161870	U5a1c2a1	Denmark
1113001847_S17	U5a1c	Unknown	GU296546	U5a1c2a1	Poland
163	U5a1c	Turkey	JX153340	U5a1c2a1	Denmark
GU296606	U5a1c1	Russia	1113001762_S16	U5a1c2a1	Unknown
GU296588	U5a1c1	Poland	KF161712	U5a1c2a1	Denmark
GP3_D5	U5a1c1	Germany	JQ705908	U5a1c2a1	Estonia
GU296617	U5a1c1	Russia	KM101818	U5a1d1	North Europe
GU296572	U5a1c1	Czechia	X93334	U5a1d1	Portugal
JQ705290	U5a1c1	Unknown	V5791	U5a1d1	Europe NW
LP6008116-DNA_H08	U5a1c1	Ireland	CEU29	U5a1d1	Unknown
GU296638	U5a1c1	Poland	1113001986_S10	U5a1d1	Unknown

Table 1 | Complete dataset analysed for mtDNA studies. Information regarding haplogroup and country is also provided (continuation).

SampleID	Haplogroup	Country	SampleID	Haplogroup	Country
KR080704	U5a1d1	Ukraine	JQ702231	U5a1e	Unknown
GU296612	U5a1d1	Russia	1113001981_S6	U5a1e	Unknown
GU296542	U5a1d1	Poland	A-22	U5a1e	France
1113001385_S69	U5a1d1	Unknown	M8306	U5a1e	United Kingdom
JQ702404	U5a1d1	United Kingdom	GU296625	U5a1e	Russia
EU140332	U5a1d1	Unknown	1113002109_S48	U5a1e	Unknown
KF451809	U5a1d1	Basque	1113000430_S35	U5a1e	Unknown
KJ446100	U5a1d1	Basque	185	U5a1f	Turkey
HM173090	U5a1d2a	United Kingdom	1113000052_S14	U5a1f1	Unknown
JQ704001	U5a1d2a	Unknown	HM852900	U5a1f1	Georgia
1113001656_S87	U5a1d2a	Unknown	AZB23	U5a1f1	Azerbaijan
B-67	U5a1d2a	France	KM101753	U5a1f1	North Europe
KC533459	U5a1d2a	North Europe	KM101902	U5a1f1	North Europe
JQ704700	U5a1d2a	Unknown	JQ702160	U5a1f1	Switzerland
KF161078	U5a1d2a	Denmark	1113001545_S82	U5a1f1a	Unknown
LP6008117-DNA_E02	U5a1d2a	Ireland	ADY12	U5a1f1a	Adygei
LP6008113-DNA_E12	U5a1d2a	Ireland	AY882398	U5a1f1a	North Caucasus
KF451053	U5a1d2a	France	KAB33	U5a1f1a	Kabardia
KJ446094	U5a1d2a	France	NOS15	U5a1f1a	North Ossetia
gonl-25a	U5a1d2a	Unknown	ADY15	U5a1f1a	Adygei
KF162030	U5a1d2a	Denmark	JQ704962	U5a1f1a	Hungary
KJ801919	U5a1d2a	Unknown	FRANF316	U5a1f1a	France
KF161187	U5a1d2a	Denmark	M1431_SC	U5a1f1a1	United Kingdom
gonl-126a	U5a1d2a	Unknown	V5667	U5a1f1a1	Europe NW
gonl-95b	U5a1d2a	Unknown	V6440	U5a1f1a1	Europe NW
GU296655	U5a1d2a1	Belarus	V7231	U5a1f1a1	Europe NW
KT897695	U5a1d2a1	Finland	JQ702735	U5a1f1a1	Unknown
CZE444	U5a1d2a1	Czechia	KF451314	U5a1f1a1	British Isles
JH41	U5a1d2a1	Czech Republic	KJ446098	U5a1f1a1	United Kingdom
JQ705498	U5a1d2a1	Sweden	KJ446099	U5a1f1a1	United Kingdom
1113001142_S9	U5a1d2a1	Unknown	KF451321	U5a1f1a1	British Isles
GP2_B4	U5a1d2a1	Germany	M8315	U5a1f1a1	United Kingdom
P10A2	U5a1d2a1	Germany	JQ704616	U5a1f1a1	Unknown
GU296599	U5a1d2a1	Russia	JQ702225	U5a1f1a1	United Kingdom
GU296556	U5a1d2a1	Siberia	KF921965	U5a1f2	Unknown
GU123032	U5a1d2b	Siberia	GU296603	U5a1f2	Russia
FJ147317	U5a1d2b	Siberia	KF161822	U5a1f2	Denmark
JQ705737	U5a1d2b	Unknown	KF162925	U5a1f2	Denmark
KC911432	U5a1d2b	Iran	JX153290	U5a1f2	Denmark
NOS21	U5a1d2b	North Ossetia	KF161411	U5a1f2	Denmark
KC257307	U5a1d2b	North Europe	KF161507	U5a1f2	Denmark
1113000894_S78	U5a1d2b	Unknown	KT779166	U5a1g	Lebanon
1113001331_S89	U5a1d2b	Unknown	KC911581	U5a1g	Iran
KF161373	U5a1e	Denmark	NA20827	U5a1g	Italy
GU296547	U5a1e	Poland	NA20805	U5a1g	Italy

Table 1 | Complete dataset analysed for mtDNA studies. Information regarding haplogroup and country is also provided (continuation).

SampleID	Haplogroup	Country	SampleID	Haplogroup	Country
1113001943_S95	U5a1g	Unknown	1113001386_S25	U5a1i1	Unknown
1113000563_S54	U5a1g	Unknown	HQ384205	U5a1i1	Iberia
HM765468	U5a1g	Unknown	JQ705326	U5a1i1	Norway
PALAO714	U5a1g	Palestine	gonl-27a	U5a1i1	Unknown
KT779187	U5a1g	Lebanon	C-99	U5a1i1	France
GU296640	U5a1g	Slovakia	gonl-101b	U5a1i1	Unknown
PU16	U5a1g	Italy	gonl-224a	U5a1i1	Unknown
ROMMA46	U5a1g	Romania	1113001683_S83	U5a1i1	Unknown
KF162031	U5a1g	Denmark	KX467281	U5a1i1	India
KF162850	U5a1g	Denmark	HG03897	U5a1i1	Sri Lanka
JX153436	U5a1g	Denmark	KJ843286	U5a1i1	North Europe
KF162491	U5a1g	Denmark	KF179064	U5a1i1	Unknown
KF162719	U5a1g	Denmark	KJ716340	U5a1i1	North Europe
HM852782	U5a1g1	Armenia	KF161323	U5a1i1	Denmark
YEM1	U5a1g1	Yemen	KM101944	U5a1i1	North Europe
JQ702913	U5a1g1	Unknown	KC569552	U5a1i1	North Europe
HG04159	U5a1g1	Bangladesh	KF262460	U5a1j	Italy
JN412063	U5a1g1	United Kingdom	KF647698	U5a1j	Czechia
KR260479	U5a1g1	France	NA12348	U5a1j	North Europe
KC911532	U5a1g1	Iran	ESP1009	U5a2	Spain
KC911325	U5a1g2	Iran	KF162804	U5a2	Denmark
KC911409	U5a1g2	Iran	KU375201	U5a2	United Kingdom
IRQ110	U5a1g2	Iraq	KUR75	U5a2	Turkey (Kurd)
1113002231_S35	U5a1g2	Unknown	K74	U5a2	Turkey (Kurd)
KF161226	U5a1h	Denmark	JX153018	U5a2+16294	Italy
KF161886	U5a1h	Denmark	KF163049	U5a2+16294	Denmark
KF162918	U5a1h	Denmark	ESP0795	U5a2+16294	Spain
JX153519	U5a1h	Denmark	HG01530	U5a2+16294	Spain
HG01603	U5a1h	Spain	JQ702310	U5a2+16294	Unknown
JQ704026	U5a1h	Unknown	GP2_E10	U5a2+16294	Germany
KY662469	U5a1h	United States	P10A9	U5a2+16294	Germany
V7182	U5a1h	Europe NW	JQ705111	U5a2+16362	Unknown
JQ704918	U5a1h	Unknown	B-13	U5a2+16362	France
KF161529	U5a1h	Denmark	JN707685	U5a2a	Unknown
JQ702970	U5a1h	United Kingdom	18	U5a2a	Turkey
LP6008115-DNA_F08	U5a1h	Ireland	1113002190_S31	U5a2a	Unknown
JQ705272	U5a1h	United Kingdom	KF162074	U5a2a	Denmark
JX154011	U5a1h	Denmark	HM142902	U5a2a1	Germany
KP271999	U5a1h	United Kingdom	KF161325	U5a2a1	Denmark
JQ705910	U5a1h	Unknown	GU296615	U5a2a1	Russia
JQ702878	U5a1h	United Kingdom	JQ702072	U5a2a1	Unknown
JX152796	U5a1i	Denmark	LP6008115-DNA_E04	U5a2a1	Ireland
CHV43	U5a1i	Russia	HM144108	U5a2a1	Germany
ESP0243	U5a1i	Spain	T-75	U5a2a1	France
KU057167	U5a1i1	Norway	JX462730	U5a2a1	India

Table 1 | Complete dataset analysed for mtDNA studies. Information regarding haplogroup and country is also provided (continuation).

SampleID	Haplogroup	Country	SampleID	Haplogroup	Country
GU296574	U5a2a1	Poland	HG00268	U5a2a1a	Finland
1113002070_S59	U5a2a1	Unknown	JX171111	U5a2a1a	Finland
1113000161_S82	U5a2a1	Unknown	JX171112	U5a2a1a	Finland
GQ214520	U5a2a1	North Europe	AY339524	U5a2a1a	Finland
EU007851	U5a2a1	Siberia	AY339525	U5a2a1a	Finland
JQ703936	U5a2a1	Unknown	AY339526	U5a2a1a	Finland
JQ623486	U5a2a1	North Europe	HG00290	U5a2a1a	Finland
GU296548	U5a2a1	Poland	JQ703626	U5a2a1a	Finland
KJ856684	U5a2a1	Siberia	JX153214	U5a2a1a	Finland
JX153651	U5a2a1	Denmark	JX153562	U5a2a1a	Finland
KF162602	U5a2a1	Denmark	JX153566	U5a2a1a	Finland
JX152838	U5a2a1	Denmark	GU391321	U5a2a1a	Finland
KF161088	U5a2a1	Denmark	KU953390	U5a2a1a	Finland
KF162814	U5a2a1	Denmark	KC763421	U5a2a1a	Finland
X5594	U5a2a1	Portugal	JX153215	U5a2a1a	Finland
EF177408	U5a2a1	Portugal	GU296596	U5a2a1b	Russia
KM101864	U5a2a1	North Europe	GU296626	U5a2a1b	Russia
KF451626	U5a2a1	Italy	HM246245	U5a2a1b	North Europe
KJ446095	U5a2a1	Italy	1113000404_S2	U5a2a1b	Unknown
KF161317	U5a2a1	Denmark	KM047217	U5a2a1b	Poland
NA12813	U5a2a1	North Europe	1113002603_S26	U5a2a1b	Unknown
KL13	U5a2a1	Czech Republic	GU296634	U5a2a1b	Russia
JQ702244	U5a2a1	Unknown	1113000990_S94	U5a2a1b	Unknown
GP3_D9	U5a2a1	Germany	1113002484_S81	U5a2a1b	Unknown
GU296580	U5a2a1	Belarus	KM101793	U5a2a1b	North Europe
GU296605	U5a2a1	Russia	370	U5a2a1b	Turkey
GU296635	U5a2a1	Russia	HM765474	U5a2a1b1	Unknown
GU797137	U5a2a1	Germany	JQ702355	U5a2a1b1	Unknown
GU296602	U5a2a1	Russia	HM229344	U5a2a1b1	North Europe
JQ704247	U5a2a1	Unknown	GU296650	U5a2a1c	Belarus
ESP0707	U5a2a1	Spain	GU296597	U5a2a1c	Russia
A-76	U5a2a1	France	GU296613	U5a2a1c	Russia
JQ704074	U5a2a1+152	Switzerland	EU124886	U5a2a1d	Unknown
JQ705359	U5a2a1+152	United Kingdom	KM102054	U5a2a1d	North Europe
JX152920	U5a2a1+152	Denmark	JQ704645	U5a2a1d	Unknown
JX152921	U5a2a1+152	Denmark	M8381_England_E	U5a2a1d	United Kingdom
KF162670	U5a2a1+152	Denmark	JQ703988	U5a2a1d	Unknown
KF161112	U5a2a1+152	Denmark	EF363686	U5a2a1d	Unknown
JQ703335	U5a2a1+152	United Kingdom	HG00351	U5a2a1e	Finland
EU215455	U5a2a1+152	Unknown	AY339527	U5a2a1e	Finland
LP6008113-DNA_A10	U5a2a1+152	Ireland	JQ703642	U5a2a1e	Finland
LP6008116-DNA_C10	U5a2a1+152	Ireland	KC763415	U5a2a1e	Finland
GU122993	U5a2a1+152	Siberia	JX171113	U5a2a1e	Finland
KF161330	U5a2a1a	Denmark	JQ705530	U5a2a2	Unknown
CHV12	U5a2a1a	Russia	ESP0997	U5a2a2	Spain

Table 1 | Complete dataset analysed for mtDNA studies. Information regarding haplogroup and country is also provided (continuation).

SampleID	Haplogroup	Country	SampleID	Haplogroup	Country
KF162015	U5a2a2a	Denmark	GFM043	U5a2b	Greece
KF162728	U5a2a2a	Denmark	262	U5a2b	Turkey
1113001082_S37	U5a2a2a	Unknown	GU296578	U5a2b	Belarus
JX153572	U5a2a2a	Finland	1113002028_S32	U5a2b	Unknown
JX153225	U5a2a2a	Finland	KF162779	U5a2b	Denmark
KF161733	U5a2a2a	Denmark	GU296622	U5a2b	Russia
KF163016	U5a2a2a	Denmark	1113001747_S69	U5a2b	Unknown
JX153731	U5a2a2a	Denmark	1113000255_S8	U5a2b	Unknown
KU727896	U5a2b	Bulgaria	C-20	U5a2b	France
GU296653	U5a2b	Belarus	GU296651	U5a2b	Belarus
KF161711	U5a2b	Denmark	1113000602_S6	U5a2b	Unknown
KF161858	U5a2b	Denmark	LP6008182-DNA_A01	U5a2b	Ireland
KM047194	U5a2b	Poland	1113003050_S51	U5a2b	Unknown
GU296624	U5a2b	Russia	GU296607	U5a2b	Russia
GU296632	U5a2b	Russia	JQ704044	U5a2b	Germany
1113002357_S92	U5a2b	Unknown	GU296560	U5a2b	Czechia
1113002230_S16	U5a2b	Unknown	1113002680_S26	U5a2b	Unknown
1113001045_S66	U5a2b	Unknown	JQ655176	U5a2b1a	Italy
GU296593	U5a2b	Russia	gonl-206b	U5a2b1a	Unknown
GU296549	U5a2b	Poland	1113002068_S5	U5a2b1a	Unknown
JH64	U5a2b	Czech Republic	CZE234	U5a2b1a	Czechia
JQ702392	U5a2b	Unknown	KF161578	U5a2b1a	Denmark
HG00306	U5a2b	Finland	1113000321_S79	U5a2b1a	Unknown
GU371930	U5a2b	Ukraine	KP266547	U5a2b1a	United Kingdom
x2970	U5a2b	Portugal	KP877127	U5a2b1a	Italy
GU296559	U5a2b	Siberia	M8392	U5a2b1a	United Kingdom
GU296577	U5a2b	Siberia	gonl-176b	U5a2b1a	Unknown
KJ856766	U5a2b	Siberia	JX153861	U5a2b1a	Denmark
KJ856782	U5a2b	Siberia	JX153363	U5a2b1a	Denmark
KT900258	U5a2b	Portugal	1113002731_S42	U5a2b1a	Unknown
JQ702746	U5a2b	Germany	CZE261	U5a2b1a	Czechia
EF660930	U5a2b	Italy	1113002374_S62	U5a2b1a	Unknown
KF161453	U5a2b	Denmark	1113002744_S4	U5a2b1a	Unknown
FJ460552	U5a2b	Tunisia	JQ705696	U5a2b1a	Poland
UKN289	U5a2b	Unknown	1113002693_S9	U5a2b1a	Unknown
KF162973	U5a2b	Denmark	AZB14	U5a2b1a	Azerbaijan
JQ702917	U5a2b	Unknown	GU296633	U5a2b1a	Russia
gonl-136b	U5a2b	Unknown	GU296629	U5a2b1c	Russia
GU296618	U5a2b	Russia	GU296600	U5a2b1c	Russia
1113000815_S6	U5a2b	Unknown	KL03	U5a2b1c	Czech Republic
1113002878_S76	U5a2b	Unknown	KP726908	U5a2b1c	Czech Republic
1113000156_S53	U5a2b	Unknown	KM101983	U5a2b1c	North Europe
KT779196	U5a2b	Lebanon	GU296656	U5a2b1d	Belarus
GFM040	U5a2b	Greece	JQ703087	U5a2b1d	Greece
GFM041	U5a2b	Greece	KP189245	U5a2b2	Austria

Table 1 | Complete dataset analysed for mtDNA studies. Information regarding haplogroup and country is also provided (continuation).

SampleID	Haplogroup	Country	SampleID	Haplogroup	Country
NA20765	U5a2b2	Italy	ESP0812	U5a2c	Spain
KC246057	U5a2b2	Italy	FJ460558	U5a2c1	Tunisia
HG00160	U5a2b2	United Kingdom	KU867626	U5a2c1	Spain
JQ702184	U5a2b2a	Unknown	1113001916_S46	U5a2c1	Unknown
GU296646	U5a2b2a	Slovakia	ESP0236	U5a2c1	Spain
GU296587	U5a2b2a	Poland	JQ703979	U5a2c1	United Kingdom
DNK345	U5a2b3	Denmark	JQ702165	U5a2c1	Unknown
M8040_England_E	U5a2b3	United Kingdom	HM536179	U5a2c1	Sweden
KC661077	U5a2b3	Unknown	JQ705817	U5a2c1	Unknown
1113002427_S25	U5a2b3a	Unknown	EU151864	U5a2c1	Unknown
1113002183_S49	U5a2b3a	Unknown	JQ703831	U5a2c1	Unknown
1113000642_S30	U5a2b3a	Unknown	ALP280	U5a2c1	Italy
KU867601	U5a2b3a	Spain	1113002177_S93	U5a2c1	Unknown
JX153580	U5a2b3a	Finland	1113002217_S96	U5a2c1	Unknown
M8397_England_C	U5a2b3a	United Kingdom	KJ735672	U5a2c1	United Kingdom
KF161294	U5a2b3a	Denmark	JX152806	U5a2c1	Denmark
KF161415	U5a2b3a	Denmark	KF161127	U5a2c1	Denmark
KF161321	U5a2b3a	Denmark	LP6008114-DNA_F12	U5a2c1	Ireland
KM102007	U5a2b3a	North Europe	KF161848	U5a2c1	Denmark
JQ702847	U5a2b3a	Unknown	M8415_England_E	U5a2c1	United Kingdom
1113000288_S27	U5a2b3a	Unknown	M8419_EE	U5a2c1	United Kingdom
1113001243_S23	U5a2b3a	Unknown	1113002074_S60	U5a2c1	Unknown
1113002057_S96	U5a2b3a	Unknown	1113001534_S21	U5a2c1	Unknown
1113000228_S45	U5a2b3a	Unknown	1113002707_S34	U5a2c1	Unknown
1113001523_S94	U5a2b3a	Unknown	1113002756_S26	U5a2c1	Unknown
JN899603	U5a2b3a1	United Kingdom	JQ704067	U5a2c2	Unknown
1113000479_S81	U5a2b3a1	Unknown	EF660950	U5a2c2	Italy
JQ702230	U5a2b3a1	Italy	FRANF9	U5a2c3	France
1113000381_S11	U5a2b3a1	Unknown	JQ701922	U5a2c3	United Kingdom
gonl-238b	U5a2b4	Unknown	JX101637	U5a2c3	Unknown
gonl-155a	U5a2b4	Unknown	g-207a	U5a2c3a	Netherlands
JQ702320	U5a2b4	Unknown	g-175a	U5a2c3a	Netherlands
KF162213	U5a2b4	Denmark	LIE103	U5a2c3a	Belgium
M8413	U5a2b4a	United Kingdom	LP6008113-DNA_G09	U5a2c3a	Ireland
JX153863	U5a2b4a	Denmark	JF487827	U5a2c3a	Unknown
JQ704895	U5a2b4a	Unknown	KC286611	U5a2c3a	Austria
LP6008116-DNA_F06	U5a2b4a	Ireland	FRACE5	U5a2c3a	France
KC146708	U5a2b4a	Unknown	EU049814	U5a2c3a	Unknown
NA20760	U5a2b5	Italy	NA12843	U5a2c3a	North Europe
KF451611	U5a2b5	Italy	GU296637	U5a2c3a	Poland
KJ446096	U5a2b5	Italy	KR902533	U5a2c3a	Sweden
JQ703187	U5a2c	Italy	KM101759	U5a2c3a	North Europe
GU012633	U5a2c	France	KJ198895	U5a2c3a	North Europe
HG01775	U5a2c	Spain	KJ194456	U5a2c3a	United Kingdom
ESP0502	U5a2c	Spain	KF162334	U5a2c4	Denmark

Table 1 | Complete dataset analysed for mtDNA studies. Information regarding haplogroup and country is also provided (continuation).

SampleID	Haplogroup	Country	SampleID	Haplogroup	Country
JQ705779	U5a2c4	Unknown	75	U5b1	Turkey
JQ705627	U5a2c4	United Kingdom	ESP0334	U5b1	Spain
KM101917	U5a2c4	North Europe	1113001059_S83	U5b1	Unknown
GU296611	U5a2c4	Russia	1113002822_S27	U5b1	Unknown
KF161240	U5a2c4	Denmark	1113000636_S80	U5b1	Unknown
JX153680	U5a2c4	Denmark	1113001441_S83	U5b1	Unknown
JQ703280	U5a2d	Unknown	1113000010_S57	U5b1	Unknown
1113000902_S21	U5a2d	Unknown	1113000233_S78	U5b1	Unknown
JQ702144	U5a2d	Portugal	1113000880_S86	U5b1	Unknown
JX153104	U5a2d	Italy	KU953389	U5b1	North Europe
HM490393	U5a2d1	United Kingdom	JQ704112	U5b1	United Kingdom
EF397754	U5a2d1	Unknown	KF162837	U5b1	Denmark
ESP0478	U5a2d1	Spain	EF420876	U5b1+16189	Unknown
AY339523	U5a2d1	Finland	JX153103	U5b1+16189	Italy
JN604831	U5a2d1a	North Europe	1113002026_S38	U5b1+16189	Unknown
KM101913	U5a2d1a	North Europe	DQ156214	U5b1+16189	Spain
NA11992	U5a2d1a	North Europe	KU867609	U5b1+16189	Spain
JX153171	U5a2d1a	Finland	x5627	U5b1+16189	Portugal
1113002827_S63	U5a2d1a	Unknown	JQ705355	U5b1+16189	United Kingdom
KM101924	U5a2d1a	North Europe	JQ704984	U5b1+16189+16192	Germany
JQ705228	U5a2d1a	Unknown	KF162315	U5b1+16189+16192	Denmark
1113002524_S13	U5a2d1a	Unknown	NA20540	U5b1+16189+16192	Italy
JQ705123	U5a2d1a	Unknown	ESP0695	U5b1+16189+16192	Spain
KF161206	U5a2d1a	Denmark	JQ702743	U5b1+16189+16192	Unknown
KF161071	U5a2d1a	Denmark	JQ702054	U5b1+16189+16192	Unknown
JN819535	U5a2e	Finland	HQ675040	U5b1+16189+16192	Unknown
KF161969	U5a2e	Denmark	JQ704598	U5b1+16189+16192	Unknown
KM047223	U5a2e	Poland	ALP195	U5b1+16189+16192	Italy
LIE086	U5a2e	Belgium	KT956911	U5b1+16189+16192	France
GU296561	U5a2e	Czechia	KM101862	U5b1+16189+16192	North Europe
JH49	U5a2e	Czech Republic	1113002945_S46	U5b1+16189+16192	Unknown
JQ703962	U5a2e	Slovenia	ESP0524	U5b1+16189+16192	Spain
GU296648	U5a2e	Belarus	1113001807_S85	U5b1+16189+16192	Unknown
HM625679	U5a2e	Unknown	ESP0342	U5b1+16189+16192	Spain
1113002596_S55	U5a2e	Unknown	csct_000094_sard	U5b1+16189+16192	
KM047233	U5a2e	Poland	ESP0032	U5b1+16189+16192	Spain
HG01746	U5b	Spain	GU296582	U5b1+16189+16192	Belarus
KC890792	U5b1	Unknown	AK15	U5b1+16189+16192	Greece
1113001201_S46	U5b1	Unknown	1113001172_S88	U5b1+16189+16192	Unknown
1113001431_S81	U5b1	Unknown	gonl-236a	U5b1+16189+16192	Unknown
1113001713_S59	U5b1	Unknown	ESP0381	U5b1+16189+16192	Spain
1113002203_S86	U5b1	Unknown	1113001378_S73	U5b1+16189+16192	Unknown
1113002924_S71	U5b1	Unknown	1113001479_S51	U5b1+16189+16192	Unknown
M8653_SSE	U5b1	United Kingdom	gonl-46b	U5b1+16189+16192	Unknown
1113000538_S7	U5b1	Unknown	KF451059	U5b1+16189+16192	France

Table 1 | Complete dataset analysed for mtDNA studies. Information regarding haplogroup and country is also provided (continuation).

SampleID	Haplogroup	Country	SampleID	Haplogroup	Country
KJ446109	U5b1+16189+16192	France	AY339535	U5b1b1a	Finland
JQ704875	U5b1a	Unknown	AY339533	U5b1b1a	Finland
FJ194437	U5b1a	Unknown	KY606940	U5b1b1a	Finland
JN544933	U5b1a	United Kingdom	KY771076	U5b1b1a	Finland
GU296590	U5b1a	Russia	MF110609	U5b1b1a	Sweden
JQ703849	U5b1a	Poland	CZE376	U5b1b1a	Czechia
MF362365	U5b1a	Unknown	FRANF227	U5b1b1a	France
365	U5b1a	Turkey	MF356207	U5b1b1a	Sweden
GU296644	U5b1b	Russia	KY656561	U5b1b1a	Finland
ANA	U5b1b	Portugal	HG00270	U5b1b1a	Finland
MF362926	U5b1b	Armenia	KC763410	U5b1b1a	Finland
JX171118	U5b1b1	Finland	AY882403	U5b1b1a	Finland
GU296566	U5b1b1	Czechia	KU954498	U5b1b1a	Finland
1113002867_S45	U5b1b1	Unknown	JX152967	U5b1b1a	Finland
TR44	U5b1b1	Czech Republic	AY339532	U5b1b1a	Finland
VS38	U5b1b1	Czech Republic	JX153578	U5b1b1a	Finland
C-82	U5b1b1+16192	France	HG00188	U5b1b1a	Finland
X263	U5b1b1+16192	Portugal	JX153605	U5b1b1a	Finland
JN897374	U5b1b1+16192	Algeria	KP824812	U5b1b1a	Poland
JQ704778	U5b1b1+16192	Unknown	GU296643	U5b1b1a	Slovakia
1113002725_S24	U5b1b1+16192	Unknown	JQ702384	U5b1b1a	Unknown
1113001622_S6	U5b1b1+16192	Unknown	M8491	U5b1b1a	United Kingdom
JQ664544	U5b1b1+16192	Croatia	JQ702524	U5b1b1a	Unknown
JN639531	U5b1b1+16192	North Europe	AY882405	U5b1b1a	Siberia
1113000923_S9	U5b1b1+16192	Unknown	JQ703958	U5b1b1a	Finland
1113000447_S6	U5b1b1+16192	Unknown	JX153195	U5b1b1a	Finland
PU59	U5b1b1+16192	Italy	GU296579	U5b1b1a	Belarus
1113000554_S76	U5b1b1+16192	Unknown	GU296654	U5b1b1a	Belarus
KM101867	U5b1b1+16192	North Europe	JX153579	U5b1b1a	Finland
AY882400	U5b1b1+16192	Italy	JQ702837	U5b1b1a	Finland
JQ702587	U5b1b1+16192	Unknown	JQ704065	U5b1b1a	Finland
JQ703959	U5b1b1+16192	Unknown	JQ664531	U5b1b1a	Northeastern Croatia
AL61	U5b1b1+16192	Italy	JX153602	U5b1b1a	Finland
LIE097	U5b1b1+16192	Belgium	HG00358	U5b1b1a	Finland
KJ890388	U5b1b1+16192	Serbia	HG00384	U5b1b1a	Finland
JN807323	U5b1b1+16192	Slovenia	JX171117	U5b1b1a	Finland
gonl-210b	U5b1b1+16192	Unknown	JQ705613	U5b1b1a	Unknown
gonl-247a	U5b1b1+16192	Unknown	KJ856703	U5b1b1a	Siberia
GU296553	U5b1b1+16192	Poland	KJ856787	U5b1b1a	Siberia
JQ705675	U5b1b1+16192	Unknown	DQ902697	U5b1b1a	Sweden
GU815340	U5b1b1+16192	Norway	HG00376	U5b1b1a	Finland
KJ198893	U5b1b1+16192	Sweden	JX153197	U5b1b1a	Finland
KC763412	U5b1b1+16192	Finland	KM047195	U5b1b1a	Poland
AF381989	U5b1b1+152	Morocco	KM047236	U5b1b1a	Poland
AY339534	U5b1b1a	Finland	KC763413	U5b1b1a1	Finland

Table 1 | Complete dataset analysed for mtDNA studies. Information regarding haplogroup and country is also provided (continuation).

SampleID	Haplogroup	Country	SampleID	Haplogroup	Country
KU954490	U5b1b1a1	Finland	AY882408	U5b1b1e	Morocco
DQ902696	U5b1b1a1	Sweden	JQ701803	U5b1b1e	Sweden
DQ902705	U5b1b1a1	Sweden	DQ781338	U5b1b1e	Unknown
AY882404	U5b1b1a1	Finland	JH15	U5b1b1f	Czech Republic
MF152681	U5b1b1a1	Sweden	JQ705418	U5b1b1f	Poland
AY339530	U5b1b1a1	Finland	GU296591	U5b1b1f	Russia
AY339531	U5b1b1a1	Finland	GU296565	U5b1b1f	Czechia
JQ702500	U5b1b1a1a	Unknown	PS32	U5b1b1f	Czech Republic
KP782041	U5b1b1a1a	Finland	KRG1	U5b1b1f	Unknown
HG00277	U5b1b1a1a	Finland	NLD5	U5b1b1f	Netherlands
GU296598	U5b1b1a1a	Russia	KC479033	U5b1b1g	North Europe
JX153190	U5b1b1a1a	Finland	ESP0144	U5b1b1g	Spain
JX153609	U5b1b1a1a	Finland	ESP0741	U5b1b1g	Spain
JX154060	U5b1b1a1a	Finland	KP688570	U5b1b1g1	Sweden
JX153627	U5b1b1a1a	Finland	KT372903	U5b1b1g1	Germany
HM116534	U5b1b1a1a	Finland	gonl-47b	U5b1b1g1	Unknown
JX153079	U5b1b1a1a	Finland	1113001468_S80	U5b1b1g1	Unknown
KC763406	U5b1b1a1a	Finland	HM046248	U5b1b1g1a	Spain
JX153854	U5b1b1a1a1	Finland	1113001618_S96	U5b1b1g1a	Unknown
KF466256	U5b1b1a1a1	Finland	KP835772	U5b1b1g1a	Germany
JQ702845	U5b1b1a1a1	Finland	HG00173	U5b1b2	Finland
JX153598	U5b1b1a1a1	Finland	AY339537	U5b1b2	Finland
JQ705184	U5b1b1a1a1	Finland	AY339539	U5b1b2	Finland
JX153557	U5b1b1a1a1	Finland	AY339540	U5b1b2	Finland
KF631316	U5b1b1a1a1	Finland	KY615260	U5b1b2	Finland
JQ703600	U5b1b1a1b	Unknown	AY339541	U5b1b2	Finland
HG00373	U5b1b1a1b	Basque	KR779775	U5b1b2	Finland
JX153265	U5b1b1a1b	Finland	HG00174	U5b1b2	Finland
KC763420	U5b1b1a2	Finland	HQ840516	U5b1b2	Finland
KC763422	U5b1b1a2	Finland	JX153251	U5b1b2	Finland
JX171120	U5b1b1a2	Finland	AY339536	U5b1b2	Finland
EF420877	U5b1b1a2	Unknown	HG00330	U5b1b2	Finland
JX171119	U5b1b1a2	Finland	HG00368	U5b1b2	Finland
JX153170	U5b1b1a3	Finland	AY339543	U5b1b2	Finland
AY882406	U5b1b1a3	Finland	HG00275	U5b1b2	Finland
DQ902700	U5b1b1a3	Sweden	HG00285	U5b1b2	Finland
FJ842500	U5b1b1b	North Europe	AY339542	U5b1b2	Finland
DQ282508	U5b1b1b	North Europe	JQ705105	U5b1b2	Finland
DQ282509	U5b1b1b	North Europe	EU367993	U5b1b2	Unknown
DQ282510	U5b1b1b	North Europe	AY339538	U5b1b2	Finland
DQ282511	U5b1b1b	North Europe	JX154065	U5b1b2	Finland
AY882407	U5b1b1b	Cameroon	KC763450	U5b1b2	Finland
AY882401	U5b1b1d	Spain	JQ702152	U5b1b2	United Kingdom
AY882402	U5b1b1d	Italy	JX026063	U5b1b2	Sweden
JQ704517	U5b1b1e	Unknown	JX171123	U5b1b2	Finland

Table 1 | Complete dataset analysed for mtDNA studies. Information regarding haplogroup and country is also provided (continuation).

SampleID	Haplogroup	Country	SampleID	Haplogroup	Country
KC763417	U5b1b2	Finland	JX297153	U5b1c1a1	Basque
KY606917	U5b1b2	Finland	HG00238	U5b1c1a1	United Kingdom
JX171116	U5b1b2	Finland	HG00240	U5b1c1a1	United Kingdom
JX171122	U5b1b2	Finland	gonl-173a	U5b1c2	Unknown
KF162429	U5b1b2	Denmark	gonl-250a	U5b1c2	Unknown
KF162959	U5b1b2	Denmark	KF161125	U5b1c2	Denmark
KF161244	U5b1b2	Denmark	JQ703983	U5b1c2	Unknown
KY674521	U5b1b2a	Finland	ALP576	U5b1c2	Italy
HG00271	U5b1b2a	Finland	UKN379	U5b1c2	Unknown
HG00341	U5b1b2a	Finland	ESP0994	U5b1c2	Spain
HG00364	U5b1b2a	Finland	DQ661681	U5b1c2	North Europe
JX153585	U5b1b2a	Finland	KM102017	U5b1c2	North Europe
JX153184	U5b1b2a	Finland	EU597535	U5b1c2a	Unknown
HG00357	U5b1b2a	Finland	GU296554	U5b1c2a	Poland
HG00187	U5b1b2a	Finland	1113001125_S84	U5b1c2a	Unknown
KC763407	U5b1b2a	Finland	JQ703944	U5b1c2a	Unknown
JX171121	U5b1b2a	Finland	JQ705473	U5b1c2b	Unknown
HG00274	U5b1b2a	Finland	KM102073	U5b1c2b	North Europe
HG00273	U5b1b2a	Finland	KF162904	U5b1c2b	Denmark
HG00311	U5b1b2a	Finland	JQ704043	U5b1c2b	Unknown
JX153220	U5b1b2b	Finland	KF161231	U5b1c2b	Denmark
JX152982	U5b1b2b	Finland	KF162700	U5b1c2b	Denmark
1113001625_S44	U5b1c	Unknown	M5253_WN	U5b1c2b	United Kingdom
AY882409	U5b1c	Italy	MIR34	U5b1c2b	Ireland
ESP0298	U5b1c	Spain	A-10	U5b1c2b	France
KM101881	U5b1c	North Europe	csct_000088_sard	U5b1d1	Unknown
HQ384208	U5b1c	Iberia	JQ702807	U5b1d1	Unknown
ESP1029	U5b1c	Spain	JX153303	U5b1d1a	Denmark
ESP0063	U5b1c	Spain	AY882412	U5b1d1a	Egypt
ESP0126	U5b1c	Spain	JQ702376	U5b1d1a	Unknown
JX297172	U5b1c	Unknown	LP6008114-DNA_A10	U5b1d1a	Ireland
ESP0534	U5b1c	Spain	LP6008115-DNA_G09	U5b1d1a	Ireland
KM101752	U5b1c1	North Europe	M4608_WN	U5b1d1a	United Kingdom
JQ705870	U5b1c1	United Kingdom	JQ704335	U5b1d1a	United Kingdom
LP6008115-DNA_F12	U5b1c1	Ireland	AY882411	U5b1d1b	Italy
M8509_England_N	U5b1c1	United Kingdom	JX156641	U5b1d1b	United Kingdom
LP6008116-DNA_A12	U5b1c1	Ireland	1113002860_S74	U5b1d1b	Unknown
KJ863728	U5b1c1a	United Kingdom	1113003071_S86	U5b1d1b	Unknown
JQ408439	U5b1c1a	Unknown	HQ287879	U5b1d1b	United Kingdom
KF451068	U5b1c1a	Unknown	LP6008113-DNA_G02	U5b1d1b	Ireland
KJ446112	U5b1c1a	Unknown	LP6008115-DNA_D11	U5b1d1b	Ireland
JQ705095	U5b1c1a1	Spain	M8535	U5b1d1b	United Kingdom
AY882410	U5b1c1a1	Italy	GU977214	U5b1d1c	United Kingdom
ESP0785	U5b1c1a1	Spain	JX982769	U5b1d1c	North Europe
JX297173	U5b1c1a1	Basque	JQ704568	U5b1d1c	Unknown

Table 1 | Complete dataset analysed for mtDNA studies. Information regarding haplogroup and country is also provided (continuation).

SampleID	Haplogroup	Country	SampleID	Haplogroup	Country
M7823_WS	U5b1d1c	United Kingdom	KF161292	U5b1e1	Denmark
KF921964	U5b1d1c	United Kingdom	JX153868	U5b1e1	Denmark
HQ287878	U5b1d1c	United Kingdom	BUL3853	U5b1e1	Bulgaria
KY967268	U5b1d1c	United States	KY499950	U5b1e1	Finland
HM043711	U5b1d2	North Europe	KY580834	U5b1e1	Finland
Pedro	U5b1d2	Portugal- North	KY606241	U5b1e1	Finland
B-8	U5b1d2	France	GU296571	U5b1e1a	Czechia
KF161963	U5b1d2	Denmark	GU296585	U5b1e1a	Poland
KF162575	U5b1d2	Denmark	FJ499497	U5b1e1a	Russia
JF436855	U5b1d2	United Kingdom	GU296631	U5b1e1a	Russia
ESP0918	U5b1e	Spain	TR34/44	U5b1e1a	Czech Republic
KT372902	U5b1e	United Kingdom	TURAT66	U5b1e1a	Turkey
JX677560	U5b1e	North Europe	KJ690073	U5b1f	Sweden
NA12761	U5b1e	North Europe	KT277304	U5b1f	Sweden
ESP0394	U5b1e	Spain	KY452024	U5b1f	Sweden
ESP0549	U5b1e	Spain	KY452021	U5b1f	Sweden
1113002936_S40	U5b1e1	Unknown	1113000005_S90	U5b1f	Unknown
GU296630	U5b1e1	Russia	1113001628_S87	U5b1f	Unknown
1113002758_S47	U5b1e1	Unknown	1113001892_S39	U5b1f	Unknown
KC286610	U5b1e1	Austria	ESP0986	U5b1f1	Spain
JQ705742	U5b1e1	Unknown	ESP1037	U5b1f1	Spain
1113001858_S27	U5b1e1	Unknown	HQ675036	U5b1f1	Unknown
JQ704302	U5b1e1	Germany	C-70	U5b1f1	France
KC257380	U5b1e1	North Europe	JX297148	U5b1f1a	Basque
JQ705267	U5b1e1	Unknown	JX297174	U5b1f1a	Basque
1113002246-WDH_S32	U5b1e1	Unknown	KJ446116	U5b1f1a	Basque
1113001462_S47	U5b1e1	Unknown	JX297131	U5b1f1a	Basque
GU296645	U5b1e1	Slovakia	KF451819	U5b1f1a	Basque
1113001269_S20	U5b1e1	Unknown	NA19679	U5b1f1a	Mexico
FJ493517	U5b1e1	Siberia	KJ742711	U5b1f1a	Unknown
GU296647	U5b1e1	Slovakia	ESP0360	U5b1f1a	Spain
JQ705405	U5b1e1	United Kingdom	ESP0715	U5b1f1a	Spain
GU295665	U5b1e1	North Europe	ESP1000	U5b1f1a	Spain
KF451217	U5b1e1	Palestine	T-18	U5b1f1a	France
KF451218	U5b1e1	Palestine	ESP0710	U5b1f1a	Spain
KJ446113	U5b1e1	Palestine	FRANF320	U5b1f1a	France
GU122991	U5b1e1	Siberia	JX297128	U5b1f1a	Basque
KJ446114	U5b1e1	Palestine	JX297171	U5b1f1a	Basque
KF162515	U5b1e1	Denmark	ESP1038	U5b1f1a	Spain
JX153815	U5b1e1	Finland	HG01673	U5b1f1a	Spain
JX153824	U5b1e1	Finland	JX297152	U5b1f1a	Basque
JX152975	U5b1e1	Finland	JX286537	U5b1f1a	Germany
GU296639	U5b1e1	Slovakia	JX297146	U5b1f1a	Basque
JQ705608	U5b1e1	Unknown	ESP0002	U5b1f1a	Spain
JX153826	U5b1e1	Finland	T-100	U5b1f1a	France

Table 1 | Complete dataset analysed for mtDNA studies. Information regarding haplogroup and country is also provided (continuation).

SampleID	Haplogroup	Country	SampleID	Haplogroup	Country
T-99	U5b1f1a	France	gonl-79a	U5b2a1a+16311	Unknown
JX297142	U5b1f1a	Basque	gonl-71b	U5b2a1a+16311	Unknown
JX297130	U5b1f1a	Basque	IRQ10	U5b2a1a+16311	Iraq
JX297201	U5b1f1a	Basque	346	U5b2a1a+16311	Turkey
KF451811	U5b1f1a	Basque	1113002620_S25	U5b2a1a+16311	Unknown
KJ446115	U5b1f1a	Basque	BG94	U5b2a1a+16311	Italy
ESP0149	U5b1g	Spain	KT193618	U5b2a1a1	Finland
ESP0713	U5b1g	Spain	EU784076	U5b2a1a1	Finland
HQ384206	U5b1g	Iberia	JX153595	U5b2a1a1	Finland
JF330199	U5b1g	North Europe	KC763418	U5b2a1a1	Finland
HQ384207	U5b1g	Iberia	1113000023_S54	U5b2a1a1	Unknown
HQ675038	U5b1g	Unknown	1113002186_S93	U5b2a1a1	Unknown
JQ703755	U5b1h	Unknown	GP3_F1	U5b2a1a1	Germany
JQ705183	U5b1h	Unknown	KM101849	U5b2a1a1	North Europe
1113000937_S29	U5b1h	Unknown	JX153434	U5b2a1a1	Denmark
JQ704053	U5b1h	Unknown	GQ853200	U5b2a1a1	United Kingdom
B-43	U5b1h	France	JQ703984	U5b2a1a1	Sweden
V6276	U5b1h	Europe NW	JQ702964	U5b2a1a1	Unknown
V6632	U5b1h	Europe NW	JQ702588	U5b2a1a1	Germany
V7042	U5b1h	Europe NW	GU296568	U5b2a1a1	Czechia
X5645	U5b1i	Portugal	JQ703899	U5b2a1a1	United Kingdom
ESP0638	U5b1i	Spain	LP6008116-DNA_G06	U5b2a1a1	Ireland
JQ681270	U5b1i	Germany	gonl-21b	U5b2a1a1	Unknown
ESP0283	U5b1i	Spain	GU296642	U5b2a1a1	Slovakia
KF631318	U5b1i	United Kingdom	AT42	U5b2a1a1	Turkey
KF631319	U5b1i	United Kingdom	TURAT42	U5b2a1a1	Turkey
KF451588	U5b1i	Sardinia	KF161447	U5b2a1a1	Denmark
KJ446091	U5b1i	Sardinia	JQ704921	U5b2a1a1	Unknown
KF451576	U5b1i	Sardinia	KT359914	U5b2a1a1	Germany
DQ523645	U5b1i	Sardinia	1113002365_S4	U5b2a1a1	Unknown
KJ446092	U5b1i	Sardinia	1113000304_S57	U5b2a1a1	Unknown
KJ446093	U5b1i	Sardinia	1113001021_S79	U5b2a1a1	Unknown
KF451583	U5b1i	Sardinia	1113001397_S23	U5b2a1a1	Unknown
JF906114	U5b2	India	1113001845_S67	U5b2a1a1	Unknown
JQ705429	U5b2	United Kingdom	1113000245_S41	U5b2a1a1	Unknown
KP974688	U5b2	Unknown	1113001289_S56	U5b2a1a1	Unknown
ESP0851	U5b2	Spain	1113001841_S20	U5b2a1a1	Unknown
DQ156210	U5b2a	Spain	KF161091	U5b2a1a1	Denmark
FIN\48	U5b2a+16192	Unknown	HQ698894	U5b2a1a1	Norway
X4123	U5b2a+16192	Portugal	M8588_England_N	U5b2a1a1	United Kingdom
JQ703964	U5b2a1a	Unknown	M8586_WS	U5b2a1a1	United Kingdom
GP2_G8	U5b2a1a	Germany	LIE227	U5b2a1a1	Belgium
JQ704726	U5b2a1a+16311	Unknown	JX153751	U5b2a1a1	Denmark
AK20	U5b2a1a+16311	Greece	KF161611	U5b2a1a1	Denmark
AY339544	U5b2a1a+16311	Finland	NA11830	U5b2a1a1	North Europe

Table 1 | Complete dataset analysed for mtDNA studies. Information regarding haplogroup and country is also provided (continuation).

SampleID	Haplogroup	Country	SampleID	Haplogroup	Country
KM101859	U5b2a1a1	North Europe	FJ887848	U5b2a1b	United Kingdom
JQ702387	U5b2a1a1	Unknown	JQ702711	U5b2a1b	United Kingdom
JQ703896	U5b2a1a1	Luxembourg	JQ705502	U5b2a1b	Unknown
GU296544	U5b2a1a1	Poland	JQ704862	U5b2a1b	United Kingdom
KF162208	U5b2a1a1	Denmark	SWE2	U5b2a1b	Sweden
KF162866	U5b2a1a1	Denmark	ROMVR217	U5b2a1b	Romania
KC257377	U5b2a1a1	North Europe	GU296541	U5b2a2	Poland
JQ703942	U5b2a1a1	United Kingdom	1113001259_S7	U5b2a2	Unknown
KF161860	U5b2a1a1	Denmark	1113001549_S1	U5b2a2	Unknown
KF162068	U5b2a1a1	Denmark	1113002984_S41	U5b2a2	Unknown
GP3_F12	U5b2a1a1	Germany	JQ705158	U5b2a2a	Unknown
JQ702510	U5b2a1a1a	Unknown	AY882415	U5b2a2a1	Italy
JQ701915	U5b2a1a1a	Germany	1113002600_S84	U5b2a2a1	Unknown
gonl-133a	U5b2a1a1a	Unknown	1113002240_S18	U5b2a2a1	Unknown
gonl-74a	U5b2a1a1a	Unknown	JX153657	U5b2a2a1	Denmark
JQ702021	U5b2a1a1a	United Kingdom	JQ703946	U5b2a2a1	United Kingdom
GFM042	U5b2a1a1d	Greece	KF161376	U5b2a2a1	Denmark
EU244000	U5b2a1a1d	United Kingdom	KF162789	U5b2a2a1	Denmark
JN969087	U5b2a1a1d	North Europe	KF161379	U5b2a2a1	Denmark
HG00284	U5b2a1a1d	Finland	GU296552	U5b2a2a1	Poland
JQ702190	U5b2a1a2	United Kingdom	1113002137_S82	U5b2a2a1	Unknown
AY882414	U5b2a1a2	Spain	1113002648_S50	U5b2a2a1	Unknown
JN411082	U5b2a1a2	Finland	KF162083	U5b2a2a1	Denmark
KC911564	U5b2a1a2	Iran	GU296551	U5b2a2a1	Poland
GU296621	U5b2a1a2	Russia	M7520_WN	U5b2a2a1	United Kingdom
KJ923841	U5b2a1a2	Siberia	JQ702167	U5b2a2a2	Unknown
JQ702712	U5b2a1a2	United Kingdom	M2748_England_E	U5b2a2a2	United Kingdom
JQ705240	U5b2a1a2	Unknown	V5827	U5b2a2b	Europe NW
ITA65	U5b2a1a2	Italy	V5994	U5b2a2b	Europe NW
JX462731	U5b2a1a2	India	V5965	U5b2a2b	Europe NW
ESP0187	U5b2a1a2	Spain	V6842	U5b2a2b	Europe NW
ESP0700	U5b2a1a2	Spain	JX153955	U5b2a2b	Denmark
LP6008115-DNA_E07	U5b2a1a2	Ireland	S360	U5b2a2b	British Isles
ESP0984	U5b2a1a2	Spain	JN969984	U5b2a2b	North Europe
ESP0327	U5b2a1a2	Spain	1113000423_S64	U5b2a2b	Unknown
ESP0506	U5b2a1b	Spain	AT25	U5b2a2b	Turkey
1113003066_S28	U5b2a1b	Unknown	KF161397	U5b2a2b	Denmark
GP2_G9	U5b2a1b	Germany	GP2_F6	U5b2a2b	Germany
1113001216_S29	U5b2a1b	Unknown	KF162528	U5b2a2b	Denmark
HG00242	U5b2a1b	United Kingdom	60	U5b2a2b	Turkey
EU182656	U5b2a1b	Unknown	GU296657	U5b2a2b	Belarus
JQ705007	U5b2a1b	Unknown	M8645_England_York	U5b2a2b	United Kingdom
GU296545	U5b2a1b	Poland	EF459670	U5b2a2b	Unknown
JQ702235	U5b2a1b	United Kingdom	GP2_C5	U5b2a2b	Germany
GU296609	U5b2a1b	Russia	1113000810_S5	U5b2a2b	Unknown

Table 1 | Complete dataset analysed for mtDNA studies. Information regarding haplogroup and country is also provided (continuation).

SampleID	Haplogroup	Country	SampleID	Haplogroup	Country
1113000397_S81	U5b2a2b	Unknown	1113002469_S55	U5b2a3	Unknown
1113000604_S75	U5b2a2b	Unknown	1113001014_S33	U5b2a3	Unknown
JX152829	U5b2a2b	Denmark	JQ702815	U5b2a3	United Kingdom
C-5	U5b2a2b	France	EU682506	U5b2a3	North Europe
JX153665	U5b2a2b	Denmark	gonl-182b	U5b2a3	Unknown
KF161777	U5b2a2b	Denmark	gonl-209b	U5b2a3	Unknown
KJ486161	U5b2a2b1	United Kingdom	gonl-231a	U5b2a3	Unknown
1113000948_S49	U5b2a2b1	Unknown	JX153147	U5b2a3a	Denmark
1113001907_S73	U5b2a2b1	Unknown	1113000674_S95	U5b2a3a	Unknown
1113002358_S71	U5b2a2b1	Unknown	BGD21	U5b2a3a	Italy
1113002464_S5	U5b2a2b1	Unknown	NA20517	U5b2a3a	Italy
KF162546	U5b2a2b1	Denmark	JQ705337	U5b2a4	Unknown
JQ703628	U5b2a2b1	Unknown	KF162007	U5b2a4a	Denmark
JQ703999	U5b2a2b1	Unknown	JQ705419	U5b2a4a	Unknown
JQ014004	U5b2a2b1	Germany	LP6008113-DNA_A11	U5b2a4a	Ireland
JQ704029	U5b2a2b1	Unknown	JQ705298	U5b2a4a	United Kingdom
1113000557_S84	U5b2a2b1	Unknown	KF161463	U5b2a4a	Denmark
1113001708_S8	U5b2a2b1	Unknown	CZE389	U5b2a5	Czechia
HM130562	U5b2a2b1	Germany	MF166856	U5b2a5	Belarus
GU296586	U5b2a2b1	Poland	LP6008115-DNA_B06	U5b2a5	Ireland
GU296567	U5b2a2b1	Czechia	JQ290366	U5b2a5	United Kingdom
1113002152_S37	U5b2a2b1	Unknown	KF162777	U5b2a5	Denmark
1113002213_S41	U5b2a2b1	Unknown	JQ705316	U5b2a5	Unknown
1113001069_S71	U5b2a2b1	Unknown	FJ664616	U5b2a5	North Europe
1113000355_S5	U5b2a2b1	Unknown	EU233797	U5b2a5	Unknown
KF161978	U5b2a2b1	Denmark	JX153565	U5b2a5a	Finland
KM101938	U5b2a2b1	North Europe	JX152979	U5b2a5a	Finland
KF161115	U5b2a2b1	Denmark	JQ704771	U5b2a6	Unknown
1113000001_S81	U5b2a2c	Unknown	JQ703796	U5b2a6	Unknown
M8657_WN	U5b2a2c	United Kingdom	JX154045	U5b2a6	Denmark
HG00260	U5b2a2c	United Kingdom	LP6008117-DNA_D02	U5b2a6	Ireland
KP940982	U5b2a2c	England: Barnet	HG01524	U5b2a6	Spain
1113000148_S81	U5b2a2c	Unknown	KF451067	U5b2a6	France
1113001307_S24	U5b2a2c	Unknown	KJ446110	U5b2a6	France
JQ705688	U5b2a2c	Germany	KJ446111	U5b2a6	France
DEU418	U5b2a2c	Germany	KF451046	U5b2a6	Pakistan
1113000959_S53	U5b2a2c	Unknown	KM102021	U5b2b	North Europe
1113002638_S35	U5b2a2c	Unknown	1113000171_S35	U5b2b	Unknown
gonl-243a	U5b2a2c	Unknown	ESP0277	U5b2b	Spain
GP3_D11	U5b2a2c	Germany	1113002442_S62	U5b2b	Unknown
KF162151	U5b2a2c	Denmark	1113001536_S25	U5b2b	Unknown
1113000929_S19	U5b2a2c	Unknown	KF162764	U5b2b	Denmark
JQ702431	U5b2a2c	United Kingdom	JN584175	U5b2b	North Europe
JQ703027	U5b2a2c	Unknown	1113001873_S14	U5b2b	Unknown
EF420249	U5b2a3	Unknown	JQ702713	U5b2b	Germany

Table 1 | Complete dataset analysed for mtDNA studies. Information regarding haplogroup and country is also provided (continuation).

SampleID	Haplogroup	Country	SampleID	Haplogroup	Country
JQ706019	U5b2b	Unknown	KJ742709	U5b2b3	Unknown
DQ489511	U5b2b	Netherlands	ESP0289	U5b2b3	Spain
GQ891609	U5b2b1a	Unknown	ESP0999	U5b2b3	Spain
KF161560	U5b2b1a	Denmark	JF812598	U5b2b3	Unknown
JQ702720	U5b2b1a1	Unknown	ESP0438	U5b2b3	Spain
KC337071	U5b2b1a1	North Europe	KM101892	U5b2b3	North Europe
JQ703905	U5b2b1a1	Unknown	JQ705577	U5b2b3	Unknown
LP6008116-DNA_G08	U5b2b1a1	Ireland	LIE042	U5b2b3	Belgium
JQ702543	U5b2b1a1	Unknown	VDS10	U5b2b3	Italy
MF172950	U5b2b1a1	Sweden	VDS46	U5b2b3	Italy
EU594543	U5b2b1a1	Unknown	LP6008113-DNA_H05	U5b2b3a	Ireland
LP6008116-DNA_E05	U5b2b1a1	Ireland	JQ702843	U5b2b3a	Spain
gonl-67b	U5b2b1a1	Unknown	HG01055	U5b2b3a	Unknown
A-65	U5b2b1a1	France	HG01197	U5b2b3a	Unknown
JQ703741	U5b2b1a1	United Kingdom	JQ702046	U5b2b3a1	Unknown
M8684_EY	U5b2b1a1	United Kingdom	MIR03	U5b2b3a1	Ireland
GU296627	U5b2b1a2	Russia	KF150177	U5b2b3a1a	North Europe
JQ703780	U5b2b1a2	Unknown	KM101750	U5b2b3a1a	North Europe
JQ702927	U5b2b1b	United Kingdom	JQ703790	U5b2b3a1a	Unknown
GU296641	U5b2b1b	Slovakia	LP6008115-DNA_E01	U5b2b3a1a	Ireland
V5114	U5b2b2	Europe NW	FJ916904	U5b2b3a1a	Denmark
V5248	U5b2b2	Europe NW	JQ705070	U5b2b3a1a	Unknown
V5263	U5b2b2	Europe NW	KC851802	U5b2b3b	Unknown
V5338	U5b2b2	Europe NW	M8696_Scotland_N& W	U5b2b3b	United Kingdom
V5340	U5b2b2	Europe NW	JQ702136	U5b2b3b	Unknown
V5518	U5b2b2	Europe NW	LP6008114-DNA_B04	U5b2b3b	Ireland
V5662	U5b2b2	Europe NW	JQ702585	U5b2b4	United Kingdom
V5678	U5b2b2	Europe NW	KF161738	U5b2b4	Denmark
V5788	U5b2b2	Europe NW	LIE089	U5b2b4	Belgium
V5847	U5b2b2	Europe NW	JQ702531	U5b2b4	United Kingdom
V5966	U5b2b2	Europe NW	JQ705180	U5b2b4	Unknown
V6127	U5b2b2	Europe NW	KF161550	U5b2b4	Denmark
V6151	U5b2b2	Europe NW	KF162538	U5b2b4	Denmark
V6292	U5b2b2	Europe NW	1113002716_S37	U5b2b4	Unknown
V6436	U5b2b2	Europe NW	1113002973_S21	U5b2b4	Unknown
V6620	U5b2b2	Europe NW	1113002193_S15	U5b2b4	Unknown
V7002	U5b2b2	Europe NW	1113000688_S92	U5b2b4	Unknown
V7089	U5b2b2	Europe NW	KR011273	U5b2b4a	Germany
V7168	U5b2b2	Europe NW	JQ705877	U5b2b4a	Unknown
V7219	U5b2b2	Europe NW	1113001084_S12	U5b2b4a	Unknown
KU961661	U5b2b2	North Europe	1113001312_S6	U5b2b4a	Unknown
GQ132188	U5b2b2	Unknown	1113001483_S4	U5b2b4a	Unknown
EF419891	U5b2b2	Unknown	1113002786_S60	U5b2b4a	Unknown
KF451317	U5b2b2	United Kingdom	gonl-229b	U5b2b4a	Unknown
KJ445922	U5b2b2	British Isles	ESP0597	U5b2b4a	Spain

Table 1 | Complete dataset analysed for mtDNA studies. Information regarding haplogroup and country is also provided (continuation).

SampleID	Haplogroup	Country	SampleID	Haplogroup	Country
KJ801425	U5b2b4a	Sweden	V5498	U5b2c2b	Europe NW
JX153152	U5b2b4a	Denmark	V5544	U5b2c2b	Europe NW
JQ703914	U5b2b4a	United Kingdom	V6651	U5b2c2b	Europe NW
KF161607	U5b2b4a	Denmark	V7114	U5b2c2b	Europe NW
1113002618_S95	U5b2b4a	Unknown	1113002824_S16	U5b2c2b	Unknown
M8715	U5b2b4a	United Kingdom	KF162785	U5b2c2b	Denmark
LIE027	U5b2b4a	Belgium	V5159	U5b2c2b	Europe NW
JQ702209	U5b2b4a	Switzerland	M3960_SNE	U5b2c2b	United Kingdom
KF162677	U5b2b4a	Denmark	M8751	U5b2c2b	United Kingdom
M8719_ESE	U5b2b4a	United Kingdom	JQ704820	U5b2c2b	Unknown
KF162245	U5b2b4a	Denmark	KC211183	U5b2c2b	North Europe
JX152891	U5b2b4a	Denmark	JQ703980	U5b2c2b	United Kingdom
JN210894	U5b2b4a	United Kingdom	EU490797	U5b2c2b	United Kingdom
KT779192	U5b2b5	Lebanon	EU694385	U5b2c2b	United Kingdom
JX153076	U5b2b5	Italy	KM047212	U5b2c2b	Poland
M8678	U5b2b5	United Kingdom	HG00122	U5b2c2b	United Kingdom
csct_003773_sard	U5b2b5	Sardinia	LP6008113-DNA_C11	U5b2c2b	Ireland
DQ523650	U5b2b5	Sardinia	JQ702688	U5b2c2b	Sweden
DQ523656	U5b2b5	Sardinia	HG00114	U5b2c2b	United Kingdom
JQ704572	U5b2b5	United Kingdom	HG00116	U5b2c2b	United Kingdom
ESP0068	U5b2b5	Spain	JQ705968	U5b3	United Kingdom
ESP0427	U5b2b5	Spain	GQ129148	U5b3	Italy
1113000596_S49	U5b2c	Unknown	ESP0409	U5b3	Spain
KU587510	U5b2c	North Europe	HG01762	U5b3	Spain
KC847158	U5b2c	Germany	GQ129147	U5b3	Spain
ESP0587	U5b2c	Spain	ESP0365	U5b3	Spain
KT760574	U5b2c1	Tunisia	GQ129145	U5b3	Bosnia and Herzegovina
JQ702406	U5b2c1	Unknown	GQ129144	U5b3	Southern France
GU997135	U5b2c1	North Europe	1113002387_S43	U5b3	Unknown
1113002634_S14	U5b2c1	Unknown	ESP0302	U5b3	Spain
JQ704054	U5b2c1	Germany	GQ129146	U5b3	Croatia
JQ702468	U5b2c1	United Kingdom	KM102022	U5b3	North Europe
HQ435320	U5b2c1	North Europe	ESP0097	U5b3	Spain
JF265240	U5b2c2	North Europe	ESP0663	U5b3	Spain
KM101907	U5b2c2	North Europe	GU296563	U5b3	Czechia
KM101956	U5b2c2	North Europe	KF451584	U5b3a1a	Sardinia
JQ702791	U5b2c2	Unknown	DQ523655	U5b3a1a	Sardinia
JQ703904	U5b2c2	Unknown	DQ523658	U5b3a1a	Sardinia
EKD010	U5b2c2	United Kingdom	DQ523664	U5b3a1a	Sardinia
JQ705500	U5b2c2	United Kingdom	GQ129150	U5b3a1a	Sardinia
KU867614	U5b2c2	Spain	GQ129151	U5b3a1a	Sardinia
JQ705947	U5b2c2a	United Kingdom	GQ129155	U5b3a1a	Sardinia
JQ702625	U5b2c2a	Unknown	KJ446118	U5b3a1a	Sardinia
V4993	U5b2c2b	Europe NW	DQ523628	U5b3a1a	Sardinia
V5037	U5b2c2b	Europe NW	DQ523624	U5b3a1a	Sardinia

Table 1 | Complete dataset analysed for mtDNA studies. Information regarding haplogroup and country is also provided (continuation).

SampleID	Haplogroup	Country	SampleID	Haplogroup	Country
GQ129154	U5b3a1a	Sardinia	GQ129174	U5b3d	Iraq
37420_sard	U5b3a1a	Sardinia	GQ129173	U5b3d	Spain
GQ129149	U5b3a1a	Sardinia	JQ702295	U5b3e	Czechia
AF346988	U5b3a1a	Italy	gonl-110a	U5b3e	Unknown
GQ129156	U5b3a1a	Sardinia	gonl-181b	U5b3e	Unknown
GQ129152	U5b3a1a	Sardinia	gonl-190b	U5b3e	Unknown
GQ129153	U5b3a1a	Sardinia	gonl-36b	U5b3e	Unknown
1065_sard	U5b3a1a	Sardinia	gonl-11b	U5b3e	Unknown
DQ523644	U5b3a1a	Sardinia	gonl-146a	U5b3e	Unknown
DQ523669	U5b3a1a	Sardinia	GQ129175	U5b3e	Germany
KF451190	U5b3a1a	Sardinia	HQ658737	U5b3e	Netherlands
KJ446117	U5b3a1a	Sardinia	GQ129178	U5b3e	Bulgaria
GQ129157	U5b3a1b	France	1113001114_S51	U5b3e	Unknown
GQ129158	U5b3a1b	North Europe	KF162843	U5b3e	Denmark
X5187	U5b3a2	Portugal	1113002116_S38	U5b3e	Unknown
ALP161	U5b3a2	Italy	1113000197_S57	U5b3e	Unknown
GQ129163	U5b3a2	North Europe	GQ129176	U5b3e	United Kingdom
EU926618	U5b3a2	United Kingdom	GQ129177	U5b3e	Poland
JQ702792	U5b3a2	United Kingdom	1113002170_S40	U5b3e	Unknown
KM101745	U5b3a2	North Europe	GQ129179	U5b3f	North Europe
GQ129164	U5b3a2	Estonia	GQ129183	U5b3f	Italy
KT779174	U5b3a2	Lebanon	ALP486	U5b3f	Italy
GQ129161	U5b3a2	Italy	GQ129180	U5b3f	Italy
GQ129162	U5b3a2	Italy	GQ129182	U5b3f	Spain
GQ129159	U5b3a2	Italy	GQ129181	U5b3f	Italy
GQ129160	U5b3a2	Morocco	GQ129143	U5b3g	Italy
JQ074232	U5b3a2	Greece	JQ689453	U5b3g	United Kingdom
JQ704971	U5b3b	United Kingdom	KM101984	U5b3g	North Europe
GQ129168	U5b3b	Italy	JX154014	U5b3h	Denmark
KC890793	U5b3b1	Unknown	KF161350	U5b3h	Denmark
GQ129166	U5b3b1	Spain	JX153636	U5b3h	Denmark
GQ129165	U5b3b1	Greece	JN315868	U5b3h	Germany
GQ129167	U5b3b1	Czechia	EF064317	U6a	Morocco
KT445932	U5b3b1	United Kingdom	HQ651707	U6a+16189	Russia
JQ702146	U5b3b1	Unknown	HQ651694	U6a1	Portugal
M8779_WN	U5b3b1	United Kingdom	LP6008115-DNA_F02	U6a1a1	Ireland
LP6008114-DNA_C03	U5b3b1	Ireland	ESP0919	U6a1a1	Spain
GQ129169	U5b3b2	Germany	ALP029	U6a1a1	Italy
JX153697	U5b3b2	Denmark	ESP0173	U6a1a1	Spain
EU130681	U5b3b2	Unknown	ESP0091	U6a1a1	Spain
JQ703971	U5b3b2	Unknown	EU597562	U6a1a1	Algeria
A-56	U5b3b2	France	JX120711	U6a1a1	Spain
GQ129170	U5b3c	Sardinia	JQ702612	U6a1a1	Unknown
GQ129171	U5b3c	Spain	HQ651688	U6a1a1	Portugal
GQ129172	U5b3c	Italy	HQ651695	U6a1a1	Portugal

Table 1 | Complete dataset analysed for mtDNA studies. Information regarding haplogroup and country is also provided (continuation).

SampleID	Haplogroup	Country	SampleID	Haplogroup	Country
HQ651700	U6a1a1	Portugal	JX120715	U6a2b1	Ethiopia
HQ651692	U6a1a1	Portugal	JX120714	U6a2b1	Ethiopia
EF064319	U6a1a1	Italy	KC152589	U6a2b1	Kuwait
EF064318	U6a1a1	Italy	KC152569	U6a2c	Egypt
HM776585	U6a1a1	Germany	SJSb4	U6a2c	Syria
JX120749	U6a1a1	United States	HQ651702	U6a2c	Portugal
JQ705277	U6a1a1	United Kingdom	HG03060	U6a3	Pakistan
JX120748	U6a1a1	United States	HQ651714	U6a3	BulgariaGARIA
KT819214	U6a1a1	Spain	HQ651713	U6a3a	Bulgaria
KT819215	U6a1a1	Spain	HQ651686	U6a3a1	Portugal
AY275534	U6a1a1	Morocco	ALP266	U6a3a1	Italy
KT819213	U6a1a1	Spain	ESP0965	U6a3a1	Spain
JX120710	U6a1a1	Spain	JQ704800	U6a3a1	Russia
HG01628	U6a1a1	Spain	JX120772	U6a3a1	Finland
FJ460539	U6a1a1	Tunisia	HQ585390	U6a3a1a	Unknown
JQ704749	U6a1a2	Portugal	JX120761	U6a3a1a	United States
JQ704539	U6a1a2	Netherlands	KC152538	U6a3a1a	Morocco
HQ651685	U6a1b1a	Portugal	ESP0716	U6a3a1a	Spain
HQ651690	U6a1b1a	Portugal	KC152549	U6a3a2	Tunisia
HQ651691	U6a1b1a	Portugal	ESP0281	U6a3a2a	Spain
HM775953	U6a1b1a	Portugal	JX297143	U6a3a2a	Spain
EF064321	U6a1b1a	Algeria	JX120708	U6a3a2a	Spain
JX153040	U6a1b1b	Italy	1113001817_S2	U6a3a2a	Unknown
JX120712	U6a1b1b	Spain	JQ704099	U6a3a2a	Unknown
HQ651693	U6a1b1b	Portugal	ESP0351	U6a3b	Spain
JQ702816	U6a1b2	Algeria	JX120717	U6a3b	Morocco
KT819233	U6a1b2	Spain	HQ651704	U6a3b	Turkey
HQ651696	U6a1b2	Portugal	HQ651699	U6a3b	Portugal
ESP0966	U6a1b3	Spain	KT819234	U6a3b	Spain
JX120709	U6a1b3	Spain	KT819216	U6a3b	Spain
HQ651705	U6a1b3	Morocco	KT819217	U6a3b	Spain
HQ651708	U6a1b3	Morocco	HQ651697	U6a3b1	Portugal
EF064320	U6a1b4	Italy	HQ651698	U6a3b1	Portugal
JX153033	U6a1b4	Italy	HQ651701	U6a3b1	Portugal
EF064322	U6a2	Italy	KT819218	U6a3b1	Spain
KC152590	U6a2+195	Armenia	KT819219	U6a3b1	Spain
HQ286322	U6a2+195	Sweden	EF064325	U6a3b1	Morocco
JX120713	U6a2a1	Ethiopia	HQ651703	U6a3b1	Morocco
EF064323	U6a2a1	Ethiopia	JQ044946	U6a3c	Burkina-Faso
KC152577	U6a2a1	Ethiopia	NA19179	U6a3c	Nigeria
HQ651710	U6a2a2	Ethiopia	JX120769	U6a3c	United States
KC152576	U6a2a2	Ethiopia	JX120768	U6a3c	United States
JX120776	U6a2a2a	Ethiopia	JX120719	U6a3c	Ghana
AY882416	U6a2a2a	Ethiopia	JX120718	U6a3c	Ghana
JX120716	U6a2b	Ethiopia	SJSb46	U6a3d1	Syria

Table 1 | Complete dataset analysed for mtDNA studies. Information regarding haplogroup and country is also provided (continuation).

SampleID	Haplogroup	Country	SampleID	Haplogroup	Country
HQ651711	U6a3d1a	Palestine	EF064333	U6a6b2	Tunisia
KC152574	U6a3d1a	Egypt	KC152555	U6a7	Tunisia
EF064326	U6a3e	Morocco	AY275531	U6a7a1	Mauritania
JX120720	U6a3e	Spain	KT819265	U6a7a1	Morocco
JQ045007	U6a3f	Burkina	HM804485	U6a7a1	United Kingdom
HG02621	U6a3f	Pakistan	JX120760	U6a7a1	United Kingdom
KC152584	U6a3f1	Guinea	PALAO727	U6a7a1	Palestine
EF064324	U6a3f1	Nigeria	HQ025914	U6a7a1	United States
JQ044807	U6a3f2	Burkina Faso	KT819235	U6a7a1	Spain
KC152585	U6a3f2	Guinea	AY275532	U6a7a1	Spain
EF064328	U6a4	Italy	HQ651689	U6a7a1	Portugal
EF064327	U6a4	Iraq	KT819243	U6a7a1	Morocco
IRQ184	U6a4	Iraq	HQ651709	U6a7a1	Tunisia
HG03258	U6a5	Pakistan	FJ979865	U6a7a1	France
JQ703902	U6a5	Unknown	EF064336	U6a7a1	Italy
HG02763	U6a5	Pakistan	1113000357_S74	U6a7a1	Unknown
HG02884	U6a5	Pakistan	EF064335	U6a7a1+152	Italy
HG03538	U6a5	Pakistan	HQ287880	U6a7a1a	Unknown
NA20356	U6a5	United States	JX120766	U6a7a1a	France
JX120721	U6a5	Chad	JX120771	U6a7a1a	Canada
EF064329	U6a5	Italy	JX120754	U6a7a1a	France
EF064330	U6a5a	Nigeria	JX120758	U6a7a1a	France
HQ592783	U6a5a1	United States	JX120759	U6a7a1a	France
EF064331	U6a5a1	Tunisia	JX120767	U6a7a1a	France
KC152553	U6a5a1	Tunisia	JX120774	U6a7a1a	France
JX120723	U6a5b	Nigeria	JX120773	U6a7a1a	Canada
JX120722	U6a5b	Cambodia	GU967378	U6a7a1a	Canada
JQ045003	U6a5b	Burkina	GU433197	U6a7a1a	Canada
ALP129	U6a5c	Italy	HM804488	U6a7a1a	United States
JX153102	U6a5c	Italy	JX120757	U6a7a1b	Cuba
JX153008	U6a5c	Italy	JX120753	U6a7a1b	Poland
EF064332	U6a5c	Italy	JX120727	U6a7a1b	Algeria
KC152579	U6a5c	Italy	DQ856317	U6a7a1b	Italy
JX120756	U6a5c	Italy	EF064337	U6a7a1b	Italy
KC152565	U6a6a	Morocco	HQ651706	U6a7a1b	Poland
KC152562	U6a6a1	Morocco	JX120750	U6a7a1b	Germany
1113002343_S91	U6a6a1	Unknown	KT819220	U6a7a1b	Spain
JX120725	U6a6a1	Spain	JX120751	U6a7a1b	Spain
JX120726	U6a6a1	Morocco	JX120752	U6a7a1b	Mexico
JX120724	U6a6b1	Morocco	HQ848079	U6a7a1b	United Kingdom
KC152550	U6a6b1	Tunisia	KC152580	U6a7a1b	Ukraine
KT819232	U6a6b1	Spain	ESP0749	U6a7a1b	Spain
ESP0584	U6a6b1	Spain	ESP0536	U6a7a1b	Spain
KC152559	U6a6b1	Morocco	HQ843176	U6a7a1c	United States
EF064334	U6a6b2	Morocco	EF064338	U6a7a1c	Italy

Table 1 | Complete dataset analysed for mtDNA studies. Information regarding haplogroup and country is also provided (continuation).

SampleID	Haplogroup	Country	SampleID	Haplogroup	Country
AF382008	U6a7a2	Morocco	JQ704030	U6b1a	Unknown
JX120730	U6a7a2	United States	HQ651680	U6b1a	Spain
JX120762	U6a7a2a	United Kingdom	HQ651678	U6b1a	Spain
JX120729	U6a7a2a	United States	JX120763	U6b1a	Spain
JX120728	U6a7a2a	United States	ESP0254	U6b1a	Spain
JX120732	U6a7b1	Spain	AY275528	U6b1a1	Spain
JX120731	U6a7b1	Algeria	HQ651679	U6b1a1	Spain
AY275533	U6a7b1	Spain	JX120733	U6b1a1	Spain
EF064339	U6a7b1	France	EF064340	U6b1a1	Unknown
HM641132	U6a7b1	France	KC152548	U6b1b	Tunisia
KC152581	U6a7b1	France	KC152567	U6b1b	Morocco
FJ939330	U6a7b1	Unknown	KC152539	U6b2	Morocco
JQ702118	U6a7c	Unknown	AY275527	U6b2	Morocco
ESP0238	U6a7c1	Spain	JX120775	U6b2	Poland
JX120765	U6a7c1	United States	JQ704008	U6b2	Spain
HQ651683	U6a7c1	Portugal	JX120734	U6b3	Ghana
KC152547	U6a7c1	Tunisia	FJ460538	U6b3a	Tunisia
KC152564	U6a7c1	Morocco	KC152543	U6b3a	Morocco
KT819266	U6a7c1	Morocco	JX120735	U6b3a	Morocco
1113001079_S53	U6a8a	Unknown	JX120745	U6c1	Spain
KC152552	U6a8a	Tunisia	JX120744	U6c1	Spain
KC152541	U6a8a	Morocco	KC152561	U6c1	Morocco
KT819250	U6a8a	Morocco	JX120770	U6c1	Italy
AY275535	U6a8a	Mauritania	EF064344	U6c1	Italy
JX120764	U6a8b	Spain	HQ161773	U6c1	Spain
JQ629405	U6a8b	Tunisia	AY275537	U6c1	Spain
HQ651712	U6a8b	Palestine	AY275536	U6c2	Morocco
KC152578	U6a8b	Morocco	KC152568	U6c2	Morocco
JX120740	U6b	Cambodia	HM775494	U6c2	France
JX120739	U6b	Chad	KT819221	U6c2	Spain
JX120738	U6b	Sudan	JX120746	U6c2	Algeria
JX120737	U6b	Arabia	JX120747	U6c2	Algeria
JX120736	U6b	Oman	JX120741	U6d	Morocco
AY275530	U6b	Spain	HQ651684	U6d1	Portugal
HQ651682	U6b	Portugal	GU366066	U6d1a	Unknown
HQ651687	U6b	Portugal	DQ523663	U6d1a	Italy
KT819236	U6b	Spain	JF734845	U6d1a	Ireland
ESP0933	U6b	Spain	EF064342	U6d1b	Morocco
KC152558	U6b	Morocco	EF064341	U6d1b	Italy
AY275529	U6b	Senegal	SICTR48	U6d1b	Italy
ESP0732	U6b	Spain	EF064343	U6d2	Ethiopia
AY882417	U6b1	Spain	KC152592	U6d2	Algeria
JQ704896	U6b1a	Spain	JX120743	U6d3	Morocco
JX120755	U6b1a	Spain	NA19652	U6d3a	United States
HQ651677	U6b1a	Spain	KT819223	U6d3a	Spain

Table 1 | Complete dataset analysed for mtDNA studies. Information regarding haplogroup and country is also provided (continuation).

SampleID	Haplogroup	Country	SampleID	Haplogroup	Country
KT819222	U6d3a	Spain	Iranian78	U7a	Iran
HQ651681	U6d3a	Portugal	KF450950	U7a	Pakistan
KC152540	U6d3a	Morocco	Gujjar37	U7a	India
JX120742	U6d3a	Spain	BrahminA365	U7a	India
GU213251	U7	India	HG02648	U7a	Unknown
GU480003	U7	India	Z242_LowCaste	U7a	India
TUR14	U7	Uzbekistan	KF450947	U7a	Pakistan
71FIF	U7	India	KJ445974	U7a	Pakistan
Raj8	U7	India	Brahmin188	U7a	India
GU213254	U7	India	GondA184	U7a	India
WA26	U7	India	Pashtun79	U7a	Afghanistan
152B	U7	India	KP763839	U7a	India
AY714004	U7	India	MeenaA125	U7a	India
HG02694	U7	Unknown	Kamboj11	U7a	India
GU213245	U7	India	MeenaA135	U7a	India
NA21113	U7	Gujarati Indian	MeenaA115	U7a	India
Uzbek1	U7	Afghanistan	GU213243	U7a	India
IrAz_E31	U7	Iran	Gujjar45	U7a	India
Arm366	U7	Armenia	Fr130	U7a	India
MF362838	U7	Armenia	Ingush142	U7a	North Caucasus
Arm177	U7	Armenia	Chechen36	U7a	North Caucasus
Bagvalal33	U7	North Caucasus	Iranian146	U7a	Iran
Kumyk80	U7	North Caucasus	Tor739	U7a	Iran
Andi63	U7	North Caucasus	Asur232	U7a	India
Chechen130	U7	North Caucasus	TDU32	U7a	Uzbekistan
Kumyk85	U7	North Caucasus	TDU14	U7a	Uzbekistan
Iranian177	U7	Iran	Azak53	U7a	Turkey
Iranian213	U7	Iran	Tajik16	U7a	Afghanistan
Iranian214	U7	Iran	Romanian22	U7a	Romania
IrAz_F112	U7	Iran	Rhodes29	U7a	Greece
Balkar118	U7	North Caucasus	Fr353CM	U7a	India
K51	U7a	Turkey (Kurd)	Bahraini136	U7a	Bahrain
K68	U7a	Turkey (Kurd)	Kuwaiti26	U7a	Kuwait
Lur1_L25	U7a	Iran	HM852801	U7a	Azerbaijan
Arm151	U7a	Armenia	KC911526	U7a	Iran
KaraNogay212	U7a	North Caucasus	Iranian353	U7a	Iran
Iranian144	U7a	Iran	Belarus106c	U7a	Belarus
Azak70	U7a	Turkey	NorthOsetian141	U7a	North Caucasus
IrAz_E95	U7a	Iran	TJA6	U7a	Uzbekistan
Azak37	U7a	Turkey	Iranian131	U7a	Iran
Qashqai601	U7a	Iran	Tajik33	U7a	Afghanistan
Tor727	U7a	Iran	TJY29	U7a	Tajikistan
KC911415	U7a	Iran	TJA8	U7a	Tajikistan
KC911287	U7a	Iran	TJR13	U7a	Tajikistan
IrAz_B12	U7a	Iran	Kazakh832	U7a	Kazakhstan

Table 1 | Complete dataset analysed for mtDNA studies. Information regarding haplogroup and country is also provided (continuation).

SampleID	Haplogroup	Country	SampleID	Haplogroup	Country
TJY24	U7a	Tajikistan	KJ445980	U7a2	Pakistan
TJY34	U7a	Tajikistan	Tor738	U7a2a	Iran
UZT13	U7a	Tajikistan	Tor728	U7a2a	Iran
Tor765	U7a	Iran	KJ445978	U7a2a	Israel
Tor753	U7a	Iraq	KC911509	U7a2a	Iran
JX153112	U7a	Italy	ChenchuD116	U7a3	India
Rhodes16	U7a	Greece	Kh134	U7a3	India
Tor722	U7a	Italy	JAS47	U7a3	India
Iranian183	U7a	Iran	Fr033	U7a3	India
EF556179	U7a	Unknown	BrahminAPBR015	U7a3	India
Jew515	U7a	Iran	MahaliAZ202	U7a3	India
Mazandarani163	U7a	Iran	Tor736	U7a3	India
KC911392	U7a	Iran	Uzbek27	U7a3	Afghanistan
Arm237	U7a	Armenia	GU327373	U7a3	Unknown
KC911615	U7a	Iran	Sc20_meghbhagat	U7a3	India
KC911622	U7a	Iran	YEM5	U7a3	Yemen
Turkmen774	U7a	Iran	Balouchi41	U7a3	Iran
IrAz_B11	U7a	Iran	TJU2	U7a3	Unknown
Iranian189	U7a	Iran	Uzbek18	U7a3	Afghanistan
PALAO871	U7a	Palestine	Tor733	U7a3a	Italy
TJN5	U7a	Tajikistan	Tor745	U7a3a	Iran
Gujjar9	U7a	India	Iranian314	U7a3a	Iran
Fr303CM	U7a	India	Iranian167	U7a3a	Iran
JX462721	U7a	India	GU213237	U7a3a	Russia
WA188	U7a	India	Jordanian1145	U7a3a	Jordania
KC911620	U7a1	Iran	Arm226	U7a3a	Armenia
Fr221	U7a1a	India	Tor757	U7a3a	Mongolia
Tor760	U7a1a	Kyrgyzstan	Iranian93	U7a3a	Iran
AY714013	U7a1a	India	MF362872	U7a3a	Armenia
AY714014	U7a1a	India	201	U7a3a	Turkey
Keer_D127	U7a1a	India	KC911448	U7a3a	Iran
BrahminG1	U7a1a	India	HM852853	U7a3a	Turkey
BengaliDil43	U7a1a	India	IrAz_E84	U7a3a	Iran
BrahminA341	U7a1a	India	Tor754	U7a3a	Iraq
KJ445977	U7a1a	Pakistan	TorBanII76	U7a3a	Iran
Balouchi32	U7a2	Iran	FrT13	U7a3a	India
Tor762	U7a2	Iran	Tor734	U7a3a	Kuwait
FJ858878	U7a2	Siberia	GU213250	U7a3a	India
KJ445975	U7a2	Pakistan	227JFIF	U7a3a	India
229B	U7a2	India	Fr017	U7a3a	India
GU213249	U7a2	India	Fr156	U7a3a	India
KJ445979	U7a2	Pakistan	Jas60	U7a3a	India
DharkarHA26	U7a2	India	Jas8	U7a3a	India
HG03681	U7a2	Unknown	HG03696	U7a3a	Unknown
HG03711	U7a2	Unknown	Tor748	U7a3a	India

Table 1 | Complete dataset analysed for mtDNA studies. Information regarding haplogroup and country is also provided (continuation).

SampleID	Haplogroup	Country	SampleID	Haplogroup	Country
Fr182	U7a3a	India	Gujjar11	U7a3b	India
PaniyaD37	U7a3a	India	Iranian498	U7a3b	Iran
SakilliD048	U7a3a	India	KF418766	U7a3b	India
Brahmin169	U7a3a	India	Asur229	U7a3b	India
JAS90	U7a3a	India	PALAO795	U7a3b	Palestine
306B	U7a3a	India	HG02731	U7a3b	Unknown
Fr097	U7a3a	India	Tor764	U7a3b	Iran
NA20889	U7a3a	Gujarati Indian	KC911553	U7a3b	Iran
NA21130	U7a3a	Gujarati Indian	KJ445973	U7a3b	Pakistan
NA21107	U7a3a	Gujarati Indian	KC911470	U7a3b	Iran
GU213252	U7a3a	India	KC911508	U7a3b	Iran
MV013	U7a3a	India	Hazara16	U7a3b	Afghanistan
LJ04	U7a3a	India	LambadiA318	U7a3b	India
BINK175	U7a3a	India	Savara103	U7a3b	India
BINK177	U7a3a	India	Rajput84	U7a3b	India
KR491937	U7a3a	India	BR60_GRC014966	U7a3b	Myanmar
NA20862	U7a3a	Gujarati Indian	HM852777	U7a4	Armenia
Brahmin111	U7a3a	India	Iranian198	U7a4	Iran
Fr038	U7a3a	India	Tor742	U7a4	Iran
KJ445976	U7a3a	Pakistan	IrAz_F10	U7a4	Iran
HG02494	U7a3a	Unknown	Jordanian1074	U7a4	Jordania
Arm396	U7a3a	Armenia	SaudiArab880	U7a4	Saudi Arabia
JQ705966	U7a3a	Unknown	Syrian521	U7a4	Syria
SICTR46	U7a3a	Italy	KJ445972	U7a4	Israel
Kumyk44	U7a3a	North Caucasus	Turkish192	U7a4	Turkey
Iranian5	U7a3a	Iran	Arab39	U7a4	Iran
KC911455	U7a3a	Iran	KJ856679	U7a4	Russia
KC911563	U7a3a	Iran	Jordanian743	U7a4a	Jordania
IrAz_F44	U7a3a	Iran	KC911299	U7a4a	Iran
Kurd41	U7a3a	Iran	Jordanian901	U7a4a	Jordania
Cretan194	U7a3a	Greece	Syrian1368	U7a4a	Syria
GU213240	U7a3a	Mongolia	Jew517	U7a4a	Iran
NA18130	U7a3a	Unknown	Jew523	U7a4a	Iran
SaudiArab1161	U7a3a	Saudi Arabia	Tor737	U7a4a1	Iraq
HG04134	U7a3a	Unknown	KC911402	U7a4a1	Iran
Pashtun85	U7a3a	Afghanistan	IrAz_B52	U7a4a1	Iran
Tor761	U7a3a	Nepal	HM852823	U7a4a1	Iran
352B	U7a3a	India	HM852791	U7a4a1	Azerbaijan
287b	U7a3a	India	IrAz_F59	U7a4a1	Iran
IrAz_B73	U7a3a	Iran	Tor726	U7a4a1	Iran
JQ701923	U7a3b	Unknown	Arm170	U7a4a1	Armenia
GU213246	U7a3b	India	Arm203	U7a4a1	Armenia
463	U7a3b	India	IrAz_E37	U7a4a1	Iran
BrahminKB027	U7a3b	India	Iranian1	U7a4a1	Iran
HG04056	U7a3b	Unknown	Tor763	U7a4a1	Iran

Table 1 | Complete dataset analysed for mtDNA studies. Information regarding haplogroup and country is also provided (continuation).

SampleID	Haplogroup	Country	SampleID	Haplogroup	Country
NA20778	U7a4a1	Italy	Tor756	U7b	Austria
MF362772	U7a4a1	Armenia	Tor721	U7b	Italy
MF362782	U7a4a1	Armenia	KR139750	U7b	Italy
168	U7a4a1a	Turkey	KT698020	U7b	Serbia
258	U7a4a1a	Turkey	JX152844	U7b	Denmark
Tor716	U7a4a1a	Iran	KF161502	U7b	Denmark
KC911288	U7a4a1a	Iran	Egyptian592	U7b	Egypt
Tor719	U7a4a1a	Iran	Egyptian635	U7b	Egypt
HM852788	U7a4a1a	Azerbaijan	HG02775	U7b	Unknown
KC911347	U7a4a1a	Iran	JX153191	U7b	Finland
Tor718	U7a4a1a	Iran	JQ704100	U7b	Unknown
Tor717	U7a4a1a	Iran	GQ176284	U7b	Finland
Tor724	U7a4a1a	Kuwait	JX153172	U7b	Finland
Tor766	U7a4a1a	Iran	Tor755	U7b	India
JQ703913	U7a5	Unknown	AY882391	U7b	Pakistan
JQ703978	U7a5	Poland	Iranian110	U7b	Iran
Andi26	U7b	North Caucasus	Tor740	U7b	Iran
Kumyk15	U7b	North Caucasus	HG02724	U7b	Unknown
Tor725	U7b	Italy	Egyptian1009	U7b	Egypt
1113001883-WDH_S50	U7b	Unknown	PALAO554	U7b	Palestine
ALP200	U7b	Italy	Tor723	U7b	Italy
PU35	U7b	Italy	Azak6	U7b	Turkey
Megrel39	U7b	Georgia	Adyghe77p	U7b	Adygei
Pashtun44	U7b	Afghanistan	Tor747	U7b	Germany
Iranian173	U7b	Iran	Cretan131	U7b	Greece
Iranian313	U7b	Iran	Greek167	U7b	Greece
240	U7b	Turkey	Tor735	U7b	Iran
KC911278	U7b	Iran	IrAz_F73	U7b	Iran
Cretan33	U7b	Greece	Tor752	U7b	Iraq
Kuwaiti40	U7b	Kuwait	Tor744	U7b	Iran
Tor751	U7b	Germany	Balouchi46	U7b	Iran
JQ705198	U7b	Unknown	SaudiArab1214	U7b	Saudi Arabia
AF382011	U7b	Spain	Kuwaiti261	U7b	Kuwait
Tor749	U7b	United States	Lur2_270	U7b	Iran
733_S9	U7b	Unknown	Tor750	U7b	Italy
KT359595	U7b	Germany	Cretan144	U7b	Greece
KY433578	U7b	Luxemburg	Cretan153	U7b	Greece
1113000677_S48	U7b	Unknown	GU213247	U7b	India
Tor731	U7b	Italy	Tor732	U7b	India
Tor720	U7b	Italy	Iranian55	U7b	Iran
Tor729	U7b	Italy	GU213244	U7b	India
Tor759	U7b	British Isles	GU213253	U7b	India
TURAT65	U7b	Turkey	Jew4622	U7b	Libya
Tor758	U7b	Germany	KT779177	U7b	Lebanon
Tor746	U7b	Ukraine	DRZ44	U7b	Israel

Table 1 | Complete dataset analysed for mtDNA studies. Information regarding haplogroup and country is also provided (continuation).

SampleID	Haplogroup	Country	SampleID	Haplogroup	Country
Tor743	U7b	Israel	AY882392	U8a1a1	Spain
DBK507	U7b	Croatia	M8810_Wales_S	U8a1a1	United Kingdom
Tor730	U7b	Italy	KF591127	U8a1a1	British Isles
SICTR25	U7b	Italy	GU123022	U8a1a1	Russia (Volga-Urals)
1113001727_S72	U7b	Unknown	1113003053_S50	U8a1a1	Unknown
Roma1	U7b	Slovakia	KJ856824	U8a1a1	Russia
KF161517	U7b	Denmark	JQ705653	U8a1a1	Czech Republic
KF162984	U7b	Denmark	JQ702748	U8a1a1	British Isles
350b	U7b	India	EU327782	U8a1a1	Ukraine
21jfif	U7b	India	ESP0615	U8a1a1a	Spain
Sikh119	U7b	India	1113003035_S39	U8a1a1a	Unknown
Iranian225	U7b	Iran	gonl-174a	U8a1a1a	Unknown
SouthOsetian13	U7b	North Caucasus	gonl-187b	U8a1a1a	Unknown
ALP123	U7b	Italy	KJ856801	U8a1a1a	Czech Republic
08_S56	U7b	Unknown	DQ200803	U8a1a1a	Basque Country
Kumyk6	U7b	North Caucasus	GU299344	U8a1a1a	British Isles
EU445683	U7b1	Italy	JQ705819	U8a1a1a	Sweden
EU445686	U7b1	Italy	41874_sard	U8a1a1a	Italy
EU445687	U7b1	Italy	JQ705281	U8a1a1a1	Switzerland
EU445689	U7b1	Italy	1113002066_S3	U8a1a1a1	Unknown
EU445690	U7b1	Italy	HM765458	U8a1a1a1	Unknown
EU445691	U7b1	Italy	KJ856804	U8a1a1b	Poland
EU445684	U7b1	Italy	JX273295	U8a1a1b	Russia
EU445688	U7b1	Italy	KJ856814	U8a1a1b	Poland
EU445685	U7b1	Italy	HG00176	U8a1a1b1	Finland
AY339547	U7b2	Finland	HQ022823	U8a1a1b1	Finland
AY339548	U7b2	Finland	JQ702203	U8a1a1b1	Russia
gonl-8a	U8a	Unknown	KJ856686	U8a1a1b1	Russia
LIE047	U8a	Belgium	KJ856839	U8a1a1b1	Russia
JQ702276	U8a	Unknown	KJ856756	U8a1a1b1	Russia
KJ856708	U8a1a	Russia	KC960691	U8a1a1b1	United States
MF370859	U8a1a	Finland	JQ703779	U8a1a1b1	Finland
JX153839	U8a1a	Finland	JQ705346	U8a1a1b1	Finland
KF162161	U8a1a	Denmark	HM008694	U8a1a1b1	Sweden
KF162933	U8a1a	Denmark	JX152972	U8a1a1b1	Finland
KF161334	U8a1a	Denmark	KX243271	U8a1a1b1	Finland
JQ702930	U8a1a	Unknown	JQ702812	U8a1a1b1	Finland
MIR06	U8a1a1	Ireland	JQ702761	U8a1a2	Switzerland
JX153092	U8a1a1	Italy	KM216990	U8a1a2	Germany
JQ704964	U8a1a1	Finland	HM113490	U8a1a2	British Isles
KR902537	U8a1a1	Finland	JQ703046	U8a1a2	Unknown
AY339551	U8a1a1	Finland	HQ336423	U8a1a3	France
AY339552	U8a1a1	Finland	JX297480	U8a1a3	Canada
AY339553	U8a1a1	Finland	gonl-107b	U8a1a3	Unknown
JQ704769	U8a1a1	Finland	gonl-46a	U8a1a3	Unknown

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SampleID	Haplogroup	Country	SampleID	Haplogroup	Country
KF162792	U8a1a4	Denmark	4786_sard	U8b1b	Italy
JX273297	U8a1a4	Basque Country	csct_003843_sard	U8b1b	Italy
DQ200802	U8a1a4	Basque Country	csct_005715_sard	U8b1b	Italy
ESP0875	U8a1a4	Spain	csct_007140_sard	U8b1b	Italy
LP6008113-DNA_D11	U8a1b	Ireland	JQ705831	U8b1b	Unknown
KF161519	U8a1b	Denmark	ESP0036	U8b1b1	Spain
HG00263	U8a1b	British Isles	1113002760_S25	U8b1b1	Unknown
KF162744	U8a1b	Denmark	1113000386_S56	U8b1b1	Unknown
JQ611709	U8a1b	United States	1113001842_S67	U8b1b1	Unknown
KJ856826	U8a2	Poland	MF362929	U8b1b1	Armenia
1113002613_S51	U8a2	Unknown	MF362935	U8b1b1	Armenia
HQ384210	U8a2	Iberia	JQ704970	U8b1b1	Norway
JQ702141	U8a2	British Isles	NA20786	U8b1b1	Italy
DQ200801	U8a2	Basque Country	JQ705815	U8b1b1	Germany
ESP0050	U8a2	Spain	GQ360037	U8b1b1	United States
KM047235	U8b1a1	Poland	HM050402	U8b1b1	Unknown
KC911451	U8b1a1	Iran	ESP0359	U8b1b1	Spain
JX153780	U8b1a1	Denmark	MF362768	U8b1b2	Armenia
JX153902	U8b1a1	Denmark	JX273243	U8b1b2	Iraq
JX153925	U8b1a1	Denmark	JX153058	U8b1b2	Greece
KF161759	U8b1a1	Denmark	KC521459	U8c	Unknown
HM852759	U8b1a1	Armenia	AY882389	U9a	Ethiopia
KY934477	U8b1a1	Turkey	KM986517	U9a	Yemen
AY882393	U8b1a1	Italy	IRQ97	U9a	Unknown
MF362882	U8b1a1	Armenia	HG03777	U9a1	India
HM590366	U8b1a1	Unknown	HG04118	U9a1	India
36	U8b1a1	Turkey	KM972771	U9a1	India
JX273294	U8b1a2+16311	Russia	KP763849	U9a1	India
DQ200805	U8b1a2a	Basque Country	GU170820	U9a1	India
KC911536	U8b1a2a	Iran	FJ770944	U9a1	India
JX153047	U8b1a2b	Greece	GU990521	U9b	United States
1113002665_S41	U8b1a2b	Unknown	HG03916	U9b1	Bangladesh
JX273296	U8b1a2b	Algeria	AY882390	U9b1	Pakistan
KJ445981	U8b1a2b	Algeria	KJ445949	U9b1	Pakistan
KJ445982	U8b1a2b	Algeria	NA21108	U9b1	India
ESP0098	U8b1b	Spain	KJ445948	U9b1	Pakistan
csct_000577_sard	U8b1b	Italy	KP763838	U9b1	India