Your Ancestral Journey

The origin of our species lies in Africa: It's where we first evolved and where we've spent the majority of our time on Earth. We have since migrated to every corner of the globe, a journey that is written in our DNA.

With the sample you sent us, we ran a comprehensive analysis to identify thousands of genetic markers—breadcrumbs—in your DNA, which are passed down from generation to generation. By looking at the order in which these markers occurred over time, we can trace the journey of your ancestors out of Africa. Furthermore, with these markers we have created a human family tree. Everyone alive today falls on a particular branch of this family tree. We have examined your markers to determine which branch you belong to. The results of our analysis—your personal journey—are outlined below.

Your Hominin Ancestry

(60,000 Years Ago and Older)

Your Hominin Ancestry

When our ancestors first migrated out of Africa around 60,000 years ago, they were not alone. At that time other species of hominin—our evolutionary cousins—walked the Eurasian landmass. One of these cousins was the Neanderthals. As our modern human ancestors migrated throughout Eurasia, they encountered these hominins and interbred, resulting in a small amount of Neanderthal DNA, for example, being introduced into the modern human gene pool.

Most non-Africans are about 1.1 percent Neanderthal. This percentage is calculated using a sophisticated analytical method that looks at parts of your DNA that you share with these hominin populations, as well as your complete regional ancestral components. The science around this calculation is new, and it is thanks to participation from citizens like you, that we continue to learn more and improve on this method. For this reason, your hominin result may change slightly over time as our accuracy and understanding improves.

NEANDERTHAL

*Out of a maximum of 5%

Your Deep Ancestry

(1,000 Years - 100,000 Years Ago)

Introduction to Your Story

We will now take you back through the stories of your distant ancestors and show how the movements of their descendants gave rise to your lineage.

Each segment on the map above represents the migratory path of successive groups that eventually coalesced to form your branch of the tree. We start with the marker for your oldest ancestor, and walk forward to more recent times, showing at each step the line of your ancestors who lived up to that point.

What is a marker? Each of us carries DNA that is a combination of genes passed from both our mother and father, giving us traits that range from eye color and height to athleticism and disease susceptibility. As part of this process, the Y-chromosome is passed directly from father to son, unchanged, from generation to generation down a purely male line. Mitochondrial DNA, on the other hand, is passed from mothers to their children, but only their daughters pass it on to the next generation. It traces a purely maternal line.

The DNA is passed on unchanged, unless a mutation—a random, naturally occurring, usually harmless change—occurs. The mutation, known as a marker, acts as a beacon; it can be mapped through generations because it will be passed down for thousands of years.

When geneticists identify such a marker, they try to figure out when it first occurred, and in which geographic region of the world. Each marker is essentially the beginning of a new lineage on the family tree of the human race. Tracking the lineages provides a picture of how small tribes of modern humans in Africa tens of thousands of years ago diversified and spread to populate the world.

By looking at the markers you carry, we can trace your lineage, ancestor by ancestor, to reveal the path they traveled as they moved out of Africa. Our story begins with your earliest ancestor. Who were they, where did they live, and what is their story? Click “Next” to begin.

Photograph by Claudia Wiens, Alamy

Branch: L3

Age: 67,000 Years Ago

Location of Origin: East Africa

This woman’s descendants would eventually account for both out-of-Africa maternal lineages, significant population migrations in Africa, and even take part in the Atlantic Slave Trade related dispersals from Africa.

The common direct maternal ancestor to all women alive today was born in East Africa around 180,000 years ago. Dubbed “Mitochondrial Eve” by the popular press, she represents the root of the human family tree. Eve gave rise to two descendant lineages known as L0 and L1’2’3’4’5’6, characterized by a different set of genetic mutations their members carry.

Current genetic data indicates that indigenous people belonging to these groups are found exclusively in Africa. This means that, because all humans have a common female ancestor, and because the genetic data shows that Africans are the oldest groups on the planet, we know our species originated there.

Eventually, L1’2’3’4’5’6 gave rise to L3 in East Africa. It is a similar story: an individual underwent a mutation to her mitochondrial DNA, which was passed onto her children. The children were successful, and their descendants ultimately broke away from L1’2’3’4’5’6, eventually separating into a new group called L3.

While L3 individuals are found all over Africa, L3 is important for its movements north. Your L3 ancestors were significant because they are the first modern humans to have left Africa, representing the deepest branches of the tree found outside of that continent.

From there, members of this group went in a few different directions. Many stayed on in Africa, dispersing to the west and south. Some L3 lineages are predominant in many Bantu-speaking groups who originated in west-central Africa, later dispersing throughout the continent and spreading this L3 lineage from Mali to South Africa. Today, L3 is also found in many African-Americans.

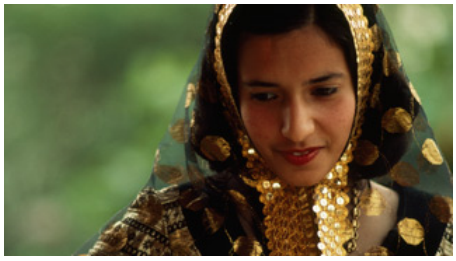
Other L3 individuals, your ancestors, kept moving northward, eventually leaving the African continent completely. These people gave rise to two important macro-haplogroups (M and N) that went on to populate the rest of the world.

Why would humans have first ventured out of the familiar African hunting grounds and into unexplored lands? It is likely that a fluctuation in climate may have provided the impetus for your ancestors’ exodus out of Africa.

The African Ice Age was characterized by drought rather than by cold. Around 50,000 years ago the ice sheets of northern Europe began to melt, introducing a period of warmer temperatures and moister climate in Africa. Parts of the inhospitable Sahara briefly became habitable. As the drought-ridden desert changed to savanna, the animals your ancestors hunted expanded their range and began moving through the newly emerging green corridor of grasslands. Your nomadic ancestors followed the good weather and plentiful game northward across this Saharan Gateway, although the exact route they followed remains to be determined.

Point of Interest

The L branch is shared by all women alive today, both in Africa and around the world. The L3 branch is the major maternal branch from which all mitochondrial DNA lineages outside of Africa arose.



Photograph by Steve Raymer, National Geographic

Branch: M

Age: About 50,000 Years Ago

Location of Origin: Asia or Africa

Your next signpost ancestor is the woman whose descendants formed haplogroup M. Haplogroup M comprises one of two groups that were created from L3.

One of these two groups, haplogroup N, moved north out of Africa and left the continent across the Sinai Peninsula, in present-day Egypt. Faced with the harsh desert conditions of the Sahara, their ancestors likely followed the Nile basin, which would have proved a reliable water and food supply in spite of the surrounding desert and its frequent sandstorms. The ancient members of haplogroup N spawned many sub-lineages that went on to populate much of the rest of the globe. They are found throughout Asia, Europe, India, and the Americas.

Your haplogroup, M, constitutes the other group that split off from L3, and gave rise to the first wave of modern humans to make a successful exodus from Africa. These people likely left the continent across the Horn of Africa, where a narrow span of water between the Red Sea and the Gulf of Aden separates the East African coastline from the Arabian Peninsula at Bab-el-Mandeb. The short ten miles would have been easily navigable for humans possessing early maritime technologies. This crossing constituted the start of a long coastal migration eastward across the Middle East and southern Eurasia, eventually reaching all the way to Australia and Polynesia.

Haplogroup M is considered an east Eurasian lineage, as it is found at high frequencies east of the Arabian Peninsula. Members of this group are virtually absent in the Levant (a coastal region in what is now Lebanon), though they are present at higher frequencies in the south-Arabian Peninsula at around 15 percent. Because its age is estimated to be around 50,000 years, members of this group were likely among the first humans to leave Africa, and they likely did it heading east. Haplogroup M is found in East Africa, though at much lower frequencies than its subgroup M1. It gives the appearance of a more recent age in eastern Africa than in Asia which is likely the result of smaller populations in Africa, which would have reduced genetic diversity and would therefore appear more recent.

Your haplogroup is prevalent among populations living in the southern parts of Pakistan and northwest India, where it constitutes around 30 to 50 percent of the mitochondrial gene pool, depending on the population. Conversely, the M haplogroup is absent or rarely found amongst people living west of the Indus Valley, and is found at low frequencies in the Central Asian populations, around 10 to 15 percent. The wide distribution and greater genetic diversity east of Indus Valley indicates that these haplogroup M-bearing individuals are the legacy of the first inhabitants of southwestern Asia. These people underwent important expansions during the Paleolithic, and the fact that some East Asian haplogroup M lineages match those found in Central Asia indicates much more recent (i.e., not founder) mixture into the area from the east.

Haplogroup M has several sub-branches which exhibit some geographic specificity. Subgroup M1 is found at high frequency in East Africa, at around 20 percent in many populations. Because haplogroup M itself is almost entirely absent from the region, M1 individuals likely represent migrations back into the continent from the Arabian Peninsula after people had left Africa. M2-M6 are characteristic Indian sub-groups. Haplogroup M7 is distributed across the southern part of East Asia, and two of its own daughter-groups, M7a and M7b2, are representative of Japanese and Korean populations, respectively. M7 individuals reach frequency in southern China and Japan of around 15 percent, and are found at lower frequencies in Mongolia. The old age of this branch indicates a pre-Jomon contribution to the mitochondrial gene pool in those areas.

Point of Interest

This branch and its sister branch, N, are the only two founding lineages to expand out of Africa.

Photograph by Steve Morgan, Alamy

Branch: C

Age: 24,000 ± 4,750 Years Ago

Location of Origin: Central Asia

This woman and her earliest descendants lived between the Caspian Sea and Lake Baikal in Central Asia, where the combination of deserts and plains lends itself to the nomadic lifestyle. Over time, some members of this line migrated into East Asia.

From East Asia, groups containing women from this lineage spread into Siberia. Geneticists consider it a founding lineage there, and it makes up over 20 percent of the population. This line now makes up around 5 to 10 percent of the people in Central Asia, and around 3

percent of people living in East Asia.

Around 17,000 years ago, a population explosion in East Asia triggered expansion into new lands. Then, over 15,000 years ago, a corridor opened between Siberia and North America. Some members of this lineage moved across into the Americas. They were one of only five founding lineages there, and today this line is found throughout native populations of North and South America.

Though this line is part of populations at moderate frequencies across Asia, it contributes less than 1 percent to the lineages of Europe.

Point of Interest

While four descendant branches C1b, C1c, C1d, and C4c traveled to the Americas, the C1a branch is found among populations in Asia. Another descendant branch, C1e, appears to be specific to Iceland.

Branch: C1b

Age: About 18,000 years old

Location of Origin: the Americas

This woman's line was born in a group of people who had traveled over the Bering land bridge to the Americas. From its birthplace, this lineage spread along the coastline of North America to Mesoamerica and into South America.

Today, this lineage is most common among the Zuni (36 percent) and Catamarca (32 percent) populations. It is 26 percent of the Waunana, 25 percent of the Northern Paiute and 25 percent of the Apache. It constitutes 22 percent of Ngäbe maternal lineages. It is also present in 14 percent of Wayuu groups and 11 percent of Salta groups.

Given its distribution, it is also common among people of Latin American ancestry, specially Puerto Ricans, Venezuelans and Colombians, and in some cases among people of Mexican maternal ancestry.

Note: This branch is not accompanied by a major movement on the map, and research on this branch is continuing.

Point of Interest

Although the Zuni people are a Pueblo people, their Zuni language is distinct from other existing languages. It is also an endangered language.

Heatmap for C

A heat map for your specific haplogroup is not yet available. We hope that as more people from around the world participate in the project we will be able to create a more specific map. We're showing you a heat map for an earlier branch in your path: **C**.

This next step in your journey is a map showing the frequency of your haplogroup (or the closest haplogroup in your path that we have frequency information for) in indigenous populations from around the world, providing a more detailed look at where some of your more recent ancestors settled in their migratory journey. What do we mean by recent? It's difficult to say, as it could vary from a few hundred years ago to a few thousand years ago depending on how much scientists currently know about your particular haplogroup. As we test more individuals and receive more information worldwide, this information will grow and change.

The colors on the map represent the percentage frequency of your haplogroup in populations from different geographic regions—red indicates high concentrations and light yellow and grey indicate low concentrations. The geographic region with the highest frequency isn't necessarily the place where the haplogroup originated, although this is sometimes the case.

The map of C shows that it is widespread in Eastern Eurasia and the Americas. This spread began with the lineage's expansion from Asia into North America.

Does this mean you're related to people in the areas highlighted on your map? Distantly, yes! We are all connected through our ancient ancestry. In order for us to learn more ancestry information about where haplogroups settled in more recent times, please choose to contribute your results to science (check the checkbox during Login or from the Account Settings tab of your Profile), and fill out your ancestry information in the Profile section of the site. Also be sure to tell your own story in the Our Story section.

Branch: P305

Age: More than 100,000 years old

Location of Origin: Africa

The common direct paternal ancestor of all men alive today was born in Africa between 300,000 and 150,000 years ago. Dubbed "Y-chromosome Adam" by the popular press, he was neither the first human male nor the only man alive in his time. He was, though, the only male whose Y-chromosome lineage is still around today. All men, including your direct paternal ancestors, trace their ancestry to one of this man's descendants. The oldest Y-chromosome lineages in existence, belonging to the A00 branch of the tree, are found only in African populations.

Around 100,000 years ago the mutation named P305 occurred in the Y chromosome of a man in Africa. This is one of the oldest known mutations that is not shared by all men. Therefore, it marks one of the early splits in the human Y-chromosome tree, which itself marks one of the earliest branching points in modern human evolution. The man who first carried this mutation lived in Africa and is the ancestor to more than 99.9% of paternal lineages today. In fact, men who do not carry this mutation are so rare that its importance in human history was discovered only in the past two years.

As P305-bearing populations migrated around the globe, they picked up additional markers on their Y chromosomes. Today, there are no known P305-bearing individuals without these additional markers.

Photograph by Pere Fernandez, My Shot

Branch: M42

Age: About 80,000 Years Ago

Location of Origin: East Africa

Around 80,000 years ago, the BT branch of the Y-chromosome tree was born, defined by many genetic markers, including M42. The common ancestor of most men living today, some of this man's descendants would begin the journey out of Africa to the Middle East and India. Some small groups from this line would eventually reach the Americas, while other groups would settle in Europe, and some would remain near their ancestral homeland in Africa.

Individuals from this line whose ancestors stayed in Africa often practice cultural traditions that resemble those of the distant past. For example, they often live in traditional hunter-gatherer societies. These include the Mbuti and Biaka Pygmies of central Africa, as well as Tanzania's Hadza.

Point of Interest

The M42 branch is shared by almost all men alive today, both in Africa and around the world.

Photograph by Ali Talan, My Shot

Branch: M168

Age: About 70,000 years ago

Location of Origin: East Africa

When humans left Africa, they migrated across the globe in a web of paths that spread out like the branches of a tree, each limb of migration identifiable by a marker in our DNA. For male lineages, the M168 branch was one of the first to leave the African homeland.

The man who gave rise to the first genetic marker in your lineage probably lived in northeast Africa in the region of the Rift Valley, perhaps in present-day Ethiopia, Kenya, or Tanzania. Scientists put the most likely date for when he lived at around 70,000 years ago. His descendants became the only lineage to survive outside of Africa, making him the common ancestor of every non-African man living today.

Your nomadic ancestors would have followed the good weather and the animals they hunted, although the exact route they followed remains to be determined. In addition to a favorable change in climate, around this same time there was a great leap forward in modern humans' intellectual capacity. Many scientists believe that the emergence of language gave us a huge advantage over other early humanlike species. Improved tools and weapons, the ability to plan ahead and cooperate with one another, and an increased capacity to exploit resources in ways we hadn't been able to earlier allowed modern humans to rapidly migrate to new territories, exploit new resources, and replace other hominids such as the Neanderthals.

Point of Interest

This male branch is one of the first to leave the African homeland.

Branch: P143

Age: About 60,000 years old

Location of Origin: Southwest Asia

This mutation is one of the oldest thought to have occurred outside of Africa and therefore marks a pivotal moment in the evolution of modern humans. Moving along the coastline, members of this lineage were some of the earliest settlers in Asia, Southeast Asia, and Australia.

But why would man have first ventured out of the familiar African hunting grounds and into unexplored lands? The first migrants likely ventured across the Bab-al Mandeb strait, a narrow body of water at the southern end of the Red Sea, crossing into the Arabian Peninsula and soon after developing mutation P143—perhaps 60,000 years ago. These beachcombers would make their way rapidly to India and Southeast Asia, following the coastline in a gradual march eastward. By 50,000 years ago, they had reached Australia. These were the ancestors of some of today's Australian Aborigines.

It is also likely that a fluctuation in climate may have contributed to your ancestors' exodus out of Africa. The African ice age was characterized by drought rather than by cold. Around 50,000 years ago, though, the ice sheets of the Northern Hemisphere began to melt, introducing a short period of warmer temperatures and moister climate in Africa and the Middle East. Parts of the inhospitable Sahara briefly became habitable. As the drought-ridden desert changed to a savanna, the animals hunted by your ancestors expanded their range and began moving through the newly emerging green corridor of grasslands.

Photograph by Ciaran Clancy, My Shot

Branch: M89

Age: About 55,000 Years Old

Location of Origin: Southwest Asia

The next male ancestor in your ancestral lineage is the man who gave rise to M89, a marker found in 90 to 95 percent of all non-Africans. This man was likely born around 55,000 years ago in Middle East.

While many of the descendants of M89 remained in the Middle East, others continued to follow the great herds of wild game through what is now modern-day Iran, then north to the Caucasus and the steppes of Central Asia. These semiarid, grass-covered plains would eventually form an ancient "superhighway" stretching from France to Korea. A smaller group continued moving north from the Middle East to Anatolia and the Balkans, trading familiar grasslands for forests and high country.

Branch: M578

Age: About 50,000 Years Old

Location of Origin: Southwest Asia

After settling in Southwest Asia for several millennia, humans began to expand in various directions, including east and south around the Indian Ocean, but also north toward Anatolia and the Black and Caspian Seas. The first man to acquire mutation M578 was among

those that stayed in Southwest Asia before moving on.

Fast-forwarding to about 40,000 years ago, the climate shifted once again and became colder and more arid. Drought hit Africa and the Middle East and the grasslands reverted to desert, and for the next 20,000 years, the Saharan Gateway was effectively closed. With the desert impassable, your ancestors had two options: remain in the Middle East, or move on. Retreat back to the home continent was not an option.

Photograph by Georgii Chechin, My Shot

Branch: P128

Age: About 45,000 years ago

Location of Origin: South Asia

The next male ancestor in your ancestral lineage is the man who gave rise to P128, a marker found in more than half of all non-Africans alive today. This man was born around 45,000 years ago in south Central Asia and was likely part of the second wave of migrants to move east from Southwest Asia.

Some of the descendants of P128 migrated to the southeast and northeast, picking up additional markers on their Y chromosomes. This lineage is the parent of several major branches on the Y-chromosome tree: O, the most common lineage in East Asia; R, the major European and Central Asian Y-chromosome lineage; and Q, the major Y-chromosome lineage in the Americas. These descendant branches went on to settle the rest of Asia, the Americas, and Europe. Still many others traveled to Southeast Asia, and some descendants of P128 individuals moved across the waters south and east and are most commonly seen in Oceanian and Australian Aboriginal populations.

Branch: M526

Age: About 42,000 Years Old

Location of Origin: South or Southeast Asia

The man who first carried mutation M526 was part of the second wave of settlers that migrated around the Indian Ocean and settled in Southeast Asia. This mutation is shared by men from haplogroups M, N, O, P, Q, R, and S; these are groups common in East Asia, Southeast Asia, Oceania, and the Americas.

Photograph by Andrew McConnell, Alamy

Branch: M45

Age: Around 35,000 Years Ago

Location of Origin: Central Asia or South Asia

This paternal ancestor traveled with groups to the open savannas between Central and South Asia during the Paleolithic. These big-game hunters were the parents to two of the most widespread male lineages in modern populations, one that is responsible for the majority of pre-Columbian lineages in the Americas (haplogroup Q)—among others from Asia and Europe—and one that spread farther north and west into Asia and produced the highest frequency lineages in European populations (haplogroup R).

Today, members of this lineage who do not belong to a descendant branch (haplogroups Q or R) are rare, and geneticists have found them most often in India. These populations include such diverse groups as the Saora (23 percent), the Bhumij (13 percent), and Muslims from Manipur (33 percent).

Point of Interest

Known as the Central Asian Clan, this branch gave rise to many distinct lineages that spent the next 30,000 years gradually populating much of the planet.

Photograph by Inayat Shah, My Shot

Branch: M207

Age: About 30,000 Years Ago

Location of Origin: Central Asia

M207 was born in Central Asia around 30,000 years ago. His descendants would go on to settle in Europe, South Asia and the Middle East over the following 20,000 years. Today, most western European men belong to one branch—R-M342—that descended from this lineage. While it appears to have been one of the earliest lineages to settle in Europe more than 25,000 years ago, more recent population expansions associated with the post-glacial repopulation of northern Europe after the end of the last ice age, as well as the spread of agriculture during the Neolithic, also contributed to its high frequency in Ireland, the UK, France and Spain.

One descendant lineage—R-L62—is common in Eastern Europe and India, and was likely spread in part through the migration of Indo-European steppe nomads over the past 5,000 years.

Photograph by Tomek Matiak, My Shot

Branch: P231

Age: 25,000 – 30,000 Years Ago

Location of Origin: Central Asia

The Paleolithic ancestor who founded this lineage lived a nomadic lifestyle. His descendants include two major descendant branches that today account for most European men and many others from Central Asia, West Asia, and South Asia.

Photograph by Nauman Arshad, My Shot

Branch: M343

Age: 17,000 – 22,000 Years Ago

Location of Origin: South Asia or West Asia

The first members of this lineage lived as hunter-gatherers on the open savannas that stretched from Korea to Central Europe. They took part in the advances in hunting technology that allowed for population growth and expansions.

When the Earth entered a cooling phase, most from this line sheltered in refugia to the southeast of Europe and in West Asia. It was from these refugia that their populations rapidly expanded when the ice once more receded. Some traveled west across Europe. Others moved back toward their distant ancestors' homelands in Africa, passing through the Levant region. Through these movements and the population boom triggered by the Neolithic Revolution, this lineage and its descendant lineages came to dominate Europe.

Today, it has a wide distribution. In Africa, geneticists have found this lineage in Northern Africa (6 percent) and central Sahel (23 percent). Its frequency in Europe is at times high and at other times moderate. It represents about 7 percent of Russian male lineages, about 13 percent of male lineages in the Balkans, about 21 percent of Eastern European male lineages, 55 to 58 percent of Western European lineages, and about 43 percent of Central European male lineages. In Asia, most men of this lineage are found in West Asia (6

percent) and South Asia (5 percent). However, trace frequencies of around half a percent from this lineage are present in East Asia.

Notable People

Russian Emperor Nicholas II belonged to this lineage.

Branch: M269

Age: 6,500 – 15,000 Years Ago

Location of Origin: West Asia

Groups containing this branch spread west toward Europe and east to Central Asia, then south into the Levant region. From the Levant and East Europe, your ancestors took part in the Neolithic Revolution. The population boom that resulted from the move from a hunter-gatherer lifestyle to settled agricultural communities helped push this line to dominance.

Today, this lineage accounts for the majority of the male population in Europe. In Wales, it is about 85 percent of male lineages. In Ireland, the frequency peaks along the eastern coast at over 90 percent. It is about 32 percent of the male population in Germany. Toward the southeast, it is 13 to 14 percent of the male populations in Greece and Turkey. It is 6 to 8 percent of male lineages in Iran and about 9 percent of male lineages in Iraq. It is about 5 percent of the male population in Kazakhstan.

Branch: P310

Age: To Be Determined

Location of Origin: West Asia

Members of this lineage have traveled to Central Asia, Europe, and the Levant region. One descendant branch has the highest frequency of any male line in Western Europe. However, rather than a single movement across Europe, this lineage's branches may represent many simultaneous and successive waves of migration.

Today, it is 48 to 52 percent of male lineages in Ireland. It is 45 percent of those in France. It is about 38 percent of the male population in Spain. It is about 8 percent of male lineages in Italy. It is about 5 percent of male lineages in Oman. It is 1 to 2 percent of the male population in Iraq and Lebanon. It is also 1 to 2 percent of the male population in Kazakhstan.

Note: This branch is not accompanied by a major movement on the map, and research on this branch is continuing.

Branch: U106

Age: 4,250 – 14,000 Years Ago

Location of Origin: Europe

Members of this lineage have expanded into the rest of Europe and back into parts of West Asia in the last 10,000 years.

Today, geneticists have found it and its descendant branches at moderate to high frequencies throughout Europe and occasionally in West Asia. The highest frequencies are in the Netherlands (14 percent), Luxembourg (13 percent), and Belgium (12 percent). In the British Isles, it is between 6 and 9 percent of the male population. It is about 5 percent of male lineages in Oman. It is 4 to 5 percent of the male population in Cyprus. It is 1 to 2 percent of male lineages in Italy and Spain.

Note: This branch is not accompanied by a major movement on the map, and research on this branch is continuing.

Heatmap for U106

This next step in your journey is a map showing the frequency of your haplogroup (or the closest haplogroup in your path that we have frequency information for) in indigenous populations from around the world, providing a more detailed look at where your more recent ancestors settled in their migratory journey. What do we mean by recent? It's difficult to say, as it could vary from a few hundred years ago to a few thousand years ago depending on how much scientists currently know about your particular haplogroup. As we test more

individuals and receive more information worldwide, this information will grow and change.

The colors on the map represent the percentage frequency of your haplogroup in populations from different geographic regions—red indicates high concentrations, and light yellow and grey indicate low concentrations. The geographic region with the highest frequency isn't necessarily the place where the haplogroup originated, although this is sometimes the case.

The map of U106 shows a distribution in Europe that peaks in Western Europe where it experienced successful expansions, particularly after the end of the last ice age with the recolonization of northern Europe.

Are you related to people in the areas highlighted on your map? Distantly, yes—we are all connected through our ancient ancestry.

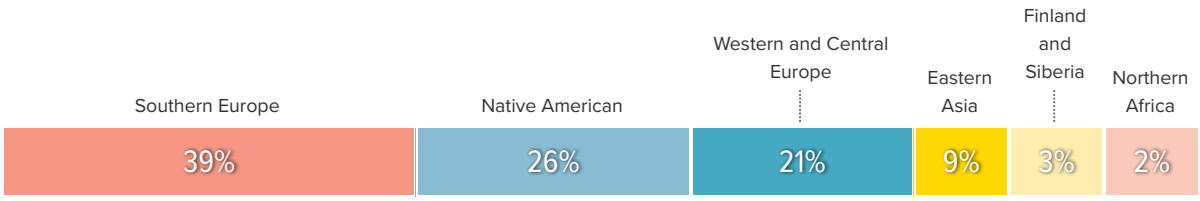
In order for us to learn more ancestry information about where haplogroups settled in more recent times, please choose to contribute your results to science (check the checkbox during Login or from the Account Settings tab of your Profile), and fill out your ancestry information in the Profile section of the site. Also be sure to tell your own story in the Our Story section.

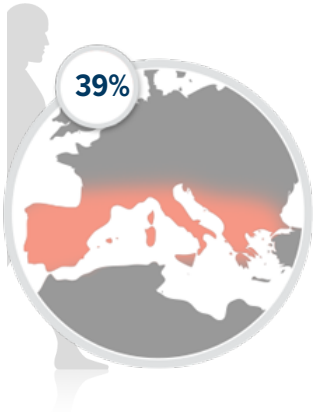
Your Regional Ancestry

(Present to 10,000 Years Ago)

We are all more than the sum of our parts, but the results below offer some of the most fascinating and newest information possible with your Geno 2.0 Next Generation test. In this section, we display your affiliations with a set of eighteen world regions. This information is determined from your entire genome, so we're able to see both parents' information, going back six generations, or more. Your percentages reflect both recent influences and ancient genetic patterns in your DNA due to how groups migrated to and from different regions, mixing for hundreds or even thousands of years. Your ancestors may have also mixed with ancient, now extinct hominid cousins, like Neanderthals. If you or your parents have an admixed background, this pattern can get complicated very quickly! Use the reference population matches below to help understand your results.

1 Your Results





Southern Europe

This component of your ancestry originates along the northern Mediterranean coast. For millennia this part of the world was a hub for the movement of trading goods as well as ideas, and thus much of modern Western culture and thought can trace its origins to here. Your ancestors may have been some of the first farmers to migrate to Europe from the Middle East thousands of years ago. Historically, this region was the home to the vast Roman Empire, which brought with it great infrastructure, cities, and cultural development, but consequently led to homogenization of its peoples.

Today, this ancestral component is most common in people of Spanish, Portuguese, Italian, and Greek descent, among other Mediterranean groups. This component is also found in people of French and British ancestry, as well as people from northern Africa. It is also a large component for people of Hispanic-American ancestry.

Native American

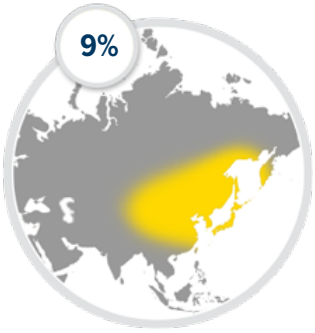
This component of your ancestry is associated with the indigenous populations of North, Central, and South America. It encompasses what is often referred to as the Western Hemisphere. Prehistorically, this part of the world saw human migrants in just the past 20,000 years. Yet, once humans reached the Americas through the Bering land bridge, they colonized the continents in just a few thousand years. Prehistorically, this part of the world was the birthplace of both corn and potatoes, and was home to the Aztec, Maya, and Inca Empires encountered by Europeans just 500 years ago. Historically, this component decreased in frequency throughout North America, as indigenous groups were pushed aside and killed by colonists. This component, however, remains high in groups with ancestral ties to Central and South America.

Today, this ancestral component is commonly seen in Native American groups from Canada and the United States, and is also quite common in Hispanic-American populations. South of the U.S.A., it increases in frequency and is often the largest ancestral component in Mexicans, Central Americans, and many groups throughout South America.

Western and Central Europe

This component of your ancestry is associated with a prehistoric European population that arose from a hybrid of different migrant groups. The region extends from northern Spain east through France, the lowlands, Germany, Switzerland, and Austria. Prehistorically, this region of Europe was home to Neanderthals, and it was possibly here where your modern human ancestors mixed with your Neanderthal ancestors as the two related species met 40,000 years ago. Historically, this region saw continuous human migration from the north, west, south, and east, which is evident from the dozens of distinct mitochondrial DNA lineages that exist there today.

This genetic component of your ancestry is seen in most people of European ancestry, but it's highest among those with Spanish, French, Dutch, Swiss, Austrian, German, and northern Italian ancestry.



Eastern Asia

This component of your ancestry is associated with the easternmost regions of the Eurasian continent. This part of the world is home to some of the oldest civilizations outside Africa and the Middle East, and it is here where rice was first domesticated and cultivated. Historically, this part of the world has seen rapid population decline as well as growth and therefore genetic change at the hands of ancient emperors and conquerors such as Genghis Khan.

Today, East Asia remains one of the most densely populated areas of the world and is home to hundreds of distinct genetic lineages. The region includes the countries of Japan, North Korea, South Korea, and most of China and Taiwan. People in neighboring countries, such as Mongolia, Russia, Vietnam, Myanmar, and Thailand, also carry this component of ancestry.

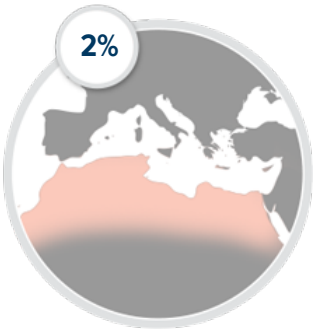
Finland and Siberia

This component of your ancestry is associated with the polar regions of Eurasia, stretching from Finland to eastern Siberia in Russia. Similar to other northern regions, this region of Eurasia was settled late and primarily by hunter-gatherers who could survive on the edges of the receding icesheets, and did not take on agriculture until very recently. Although this area may appear distant on a map, members of this population eventually expanded as far east as Alaska, Canada, and North America, and their genetic legacy is still seen in Inuit populations as far east as Canada and Greenland, but also Sami populations as far west as Finland and Sweden. Your ancestors were true circumpolar settlers.

Today, this genetic component of your ancestry is seen in Finnish, Russian, Alaska, and Canadian populations, and in low frequencies among some Native American groups farther south.

Northern Africa

This component of your ancestry is associated with the regions north of Africa's Sahara desert that make up the southern coast of the Mediterranean Sea. For millennia the Mediterranean Sea was one of the most traveled parts of the world, and consequently North Africa saw the constant movement and mixing of peoples and cultures. Prehistorically, the earliest people to settle northern Africa came from the south, the more fertile birthplace of humanity. For thousands of years this region saw the rise and fall of cultures and empires,



including the Carthaginians, the Romans, and eventually the spread of Islam originating farther east. Despite the constant movement of peoples across the Mediterranean, North Africa maintained a biological connection to groups farther south, which is evident in the remnants of old lineages associated with West and central Africa.

Today, this ancestral component is seen in people of Moroccan, Tunisian, Algerian, Libyan, and Egyptian ancestry. It can also be found in varying degrees in the Middle East, as well as Portugal, Spain, and Malta.

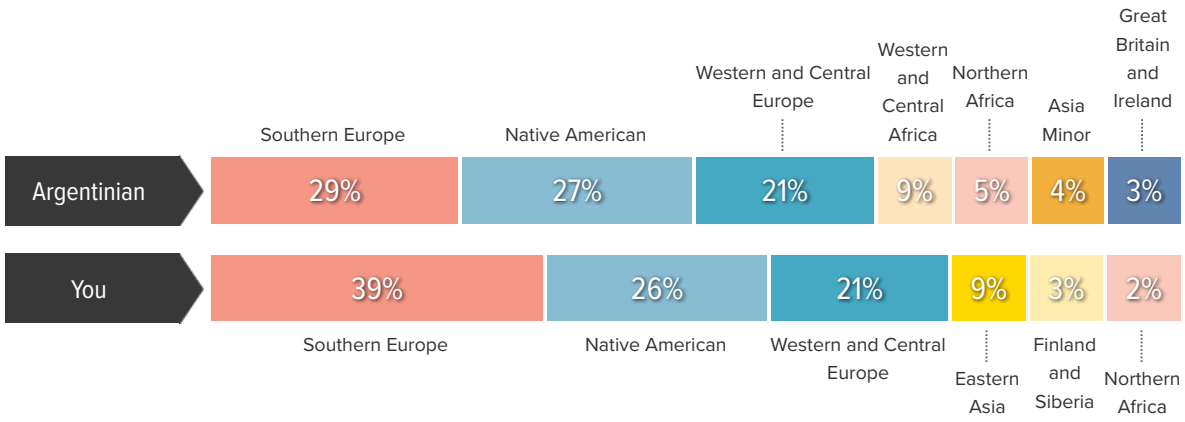
Note: In some cases regional percentages may not total 100%.

2 What Your Results Mean

We compared your DNA results to the reference populations we currently have in our database and estimated which of these populations were most similar to you in terms of the genetic markers you carry. This doesn't necessarily mean that you belong to these groups, but that these groups were a similar genetic match, and can therefore be used as a guide to help determine why you have a certain result. Remember, this is a mixture of recent (past six generations) and ancient patterns established over thousands of years, so you may see surprising matches. Read each of the population descriptions below to better interpret your particular results.

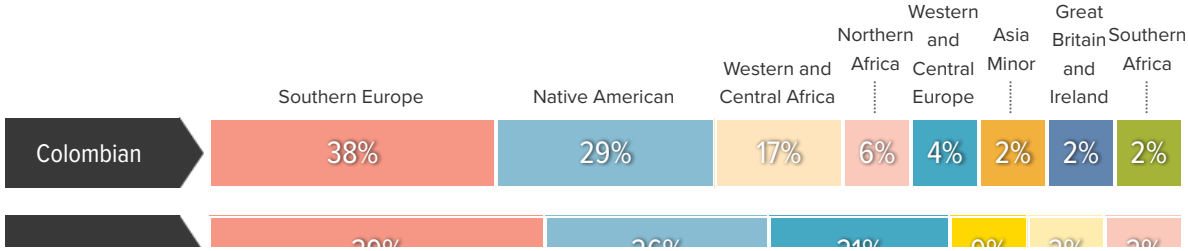
Your First Reference Population: Argentinian

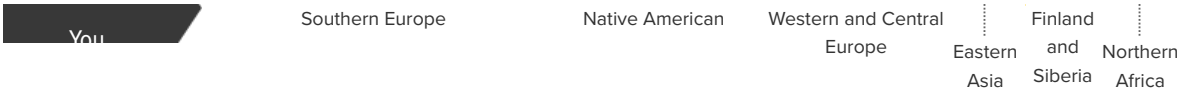
This reference population is based on people living in an urban setting in Argentina. The bio-geographic components are very diverse but include predominantly a mixture of groups from Central and Southern Europe, as well as Native American. Most groups in Central and South America, as well as the Caribbean, are a mixture of European, African, and Native American components.



Your Second Reference Population: Colombian

This reference population is associated with groups living in Colombia, in northern South America. This population is a mixture of several components, the largest of which are the Native American, associated with the indigenous groups that first settled in the region some 12,000 years ago; and the Southern Europe one associated with the centuries-long Spanish colonization of much of South America. The sub-Saharan African component suggests that Colombia holds a strong connection with groups introduced from Africa during the slave trade.




You
Southern Europe
Native American
Western and Central Europe
Eastern Asia
Finland and Siberia
Northern Africa