

MAKING YDNA AND MTDNA PART OF YOUR FAMILY HISTORY

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mtDNA tests are often categorized as the least helpful DNA test. But we don't want to throw the baby out with the bath water! Here are a few quick tips for making use of your **mtDNA** test results.

The **mtDNA** test is the direct maternal line test that will help you make connections on a **direct maternal line**. Anyone can take this test to find out more about their maternal line ancestry. In this way, having an mtDNA test completed is just like obtaining any other genealogical record. Just as you would want birth and marriage records for your ancestor, this is another record that documents your direct maternal line.

Once you submit your DNA sample to the laboratory for testing and it is processed, you receive two different kinds of results from the testing company: a haplogroup and a profile.

HAPLOGROUP

A haplogroup is a deep ancestral group. That means that it describes the heritage of your direct maternal line on a very extended scale- think tens of thousands of years ago.

Knowing your haplogroup can act as a GPS- a genealogical positioning system to help you better understand where your line originated. Some haplogroups can be very specific, even helping you understand a country of origin for your ancestors- but that isn't always the case. Visit www.eupedia.com and look through their genetics and anthropology section to learn more about your European haplogroups.

Investigate the following tools at FTDNA to learn more about your haplogroup and origins. (Similar tools are available under the YDNA header). Most of these tools will not help you with your genealogy, but only in helping you understand your deep ancestral origins.

Ancestral Origins: Just tells you the self-reported locations of other people who have taken



this mtDNA test and who share all or part of your mtDNA profile.

Haplogroup Origins: Similar to Ancestral Origins, the haplogroup origins section casts a

broader net, providing you with the country of origin for other individuals in the database who share your mtDNA haplogroup.

Neither of these tools is likely to be helpful in family history research.

PROFILE

An mtDNA profile is really just a list of numbers - your differences from a reference sequence. Your mtDNA profile works to help you verify and extend your maternal line.

RSRS Values			rCRS Values									
HVR1 DIFFERENCES FROM rCRS			HVR2 DIFFERENCES FROM rCRS					CODING REGION DIFFERENCES FROM rCRS				
16223T	16292T	16519C	73G	119C	189G	195C	204C	709A	750G	1243C	1438G	2706G
			207A	263G	309.1C	315.1C		3505G	4769G	5046A	5460A	7028T
								7864T	8251A	8860G	8994A	11674T
								11719A	11947G	12414C	12705T	14766T
								15326G	15884C			

Because of the way this kind of DNA is inherited, a living person tested today can likely exactly represent every ancestor on a direct maternal line for many many generations. This means you have an original document from eons ago right there inside of you!

The power of mtDNA testing is in finding matches to your DNA profiles. A match indicates that you share common ancestry with that person- you are genetic cousins! But not all matches are created equally. Most of the time, for your mtDNA, you want someone who is an EXACT match to your profile before you consider pursuing a genealogical relationship.

NEXT STEPS FOR MTDNA

Don't have many good matches in your mtDNA? There may be some things we can do to look for more, or to explain why, and you can schedule a time to meet with me if you want help with that (reach me at guide@yourDNAguide.com). But, unfortunately, patience is a virtue. This database is growing, and sooner or later you are bound to find a relative.

RESOURCES FOR YDNA AND MTDNA ORIGINS

- www.yourDNAguide.com/ydna
- www.yourDNAguide.com/mtDNA
- www.eupedia.com/genetics
- http://www.isogg.org/wiki/Portal:Genetic_Genealogy_Resources

In the meantime, check out the pages in the box above for more information.

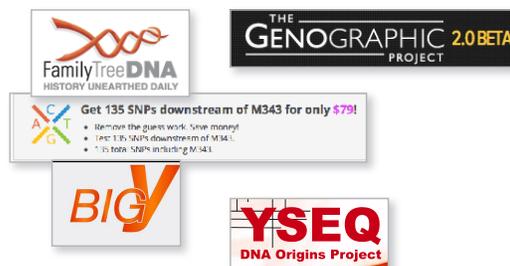
YDNA

Many of the features of the results of the YDNA testing are very similar to the mtDNA testing. With some key differences.

HAPLOGROUP

Just as with the mtDNA, you get two kinds of results with your YDNA test: a haplogroup and a profile. Your haplogroup helps define your deep ancestral group. However, where your haplogroup was fully

SNP Testing Options



defined with the mtDNA test, to fully identify your YDNA haplogroup you would have to pursue additional testing. Because you can do that in different ways, one of the best things you can do is join a haplogroup project at FTDNA to help you navigate that world of additional testing. To find a group, choose *Projects* from the top menu, then *Join a Project*. Search by haplogroup in the search box to find the right group for you.

PROFILE

Your YDNA profile works to help you verify and extend your paternal line. But though that sounds magical, it really is just a list of numbers.

PANEL 1 (1-12)											
Marker	DYS393	DYS390	DYS19 **	DYS391	DYS385	DYS426	DYS388	DYS439	DYS389I	DYS392	DYS389II ***
Value	13	24	14	11	11-14	12	12	12	13	13	29

PANEL 2 (13-25)									
Marker	DYS458	DYS459	DYS455	DYS454	DYS447	DYS437	DYS448	DYS449	DYS464
Value	16	9-9	11	11	25	15	19	29	15-15-16-16

PANEL 3 (26-37)									
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Because of the way this kind of DNA is inherited, a living person tested today can almost exactly represent every ancestor on a direct paternal line for at least 8 generations, with only a few differences. This means that you have an original document from 8 generations ago right inside of you!

Just as with mtDNA, the power of YDNA testing is in finding matches to your DNA profiles. A match indicates that you share common ancestry with that person- you are genetic cousins!

COMPARISON CHART	
Generations	Percentage
2	16.70%
4	46.60%
6	70.93%
8	85.73%
10	93.46%
12	97.15%
14	98.81%
16	99.51%



TIP CALCULATOR

Unique to the YDNA is the TiP Calculator at FTDNA. The TiP calculator appears in the form of a small orange button on your match page. It allows you to calculate the likely generation when you and your match share common ancestry.

In this example, it is telling you that it is nearly 71% likely that you and this match can find your common ancestor at or before 6 generations. Remember that this is just a statistic, and should be used a guide to start looking for a common ancestor.

NEXT STEPS YDNA

Don't have many good matches in your YDNA? There may be some things we can do to look for more, or to explain why. But, unfortunately, patience is a virtue. This database is growing, and sooner or later you are bound to find a relative.

In the meantime, see the previous page for more YDNA resources.

GROUP PROJECTS

The best Next Step for your YDNA test is to join a group project. YDNA family groups are very

powerful research tools and you should consider investigating the existence of a YDNA study for each surname you are researching.

With several individuals combining the genetic and genealogical resources you can often make faster progress on a connection. The simplified process for working with family study data is:

If you do not find a project for the surname you are searching for, you should consider starting your own family project. FTDNA makes this process very easy. There is no level of expertise required. FTDNA hosts a family website for you that you can populate with text and family YDNA results even if you have no idea how to make a webpage.

It might just be your turn to be a pioneer in your family history!

