

INTRODUCTION to DNA for GENEALOGISTS – 12 February 2020 - AGS

Why should you test your DNA? Find new kin, break down brick walls, learn my deep roots, find my biological parents, learn my health results, learn my estimated ethnicity, etc.

Are there any risks? **YES**, you can discover family secrets.

What is DNA? Deoxyribonucleic Acid with 4 base pairs nicknamed A, C, G & T.

DNA is the blueprint of every living thing.

It is in almost every cell in our bodies (except red blood cells)

DNA is a very NEW Science - started in **1953** by DNA discovery by James Watson & Francis Crick

All humans are 99.9% DNA identical, but that 0.1% difference = 3,000,000 possible differences

We share 98.8 % of the same DNA as a chimpanzee. We descend from an older common ancestor

All sons share their father's Y-DNA sex chromosome. Very useful for tracing surnames.

All children share their mother's mtDNA & her "X" sex chromosome

All daughters share their father's "X" sex chromosome. Thus, all women are "X" & "X"

Thus, all men are "X" & "Y"

Three basic DNA tests are offered for genealogists:

- 1. Y-DNA** for tracing male surnames – men only - **Family Tree DNA (FTDNA.com)**. They also offer **Surname & Geographic Projects**. I recommend the **111-marker test**.
- 2. mtDNA** for tracing your maternal line – Both women & men can take this test. **FTDNA.com**. I recommend the **full mtDNA sequence**.
- 3. atDNA** for finding kin back about five generations. **Offered by five companies. See Handout.**

atDNA results also gives you your **predicted ethnicity**. The **continental results** are usually very accurate. The **detailed country by country results are poor** but getting better. **See Handout.**

You learn your **Deep Roots** by learning your female & male **Haplogroups**. **23andMe** results and **Living DNA** results include this data. The **FTDNA Y-DNA & mtDNA** results include this data & they also offer **Haplogroup Projects**.

WOMEN: I recommend that you take the **mtDNA test** and at least one of the **atDNA tests**. If possible, find a male kin with your target surname & persuade him to take a **Y-DNA test**.

MEN: I recommend that you take the **Y-DNA test** and at least one of the **atDNA tests**.

Possible benefit: By taking a DNA test you may help catch a serious criminal or ID a body.

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Autosomal DNA (atDNA) Testing Companies					7-Feb-20
Prices are per their WEB Sites, but check for sales around holidays					JohnAFarris@comcast.net
All of these atDNA tests can be taken by both Women & Men.					By: John Adam FARRIS
COMPANY	23andMe	Ancestry	Family Tree DNA	My Heritage	Living DNA
			FTDNA		
Phone	800-239-5230	800-615-6560	713-868-1438	800-987-9000	?????
WEB Site	23andme.com	ancestry.com	ftdna.com	myheritage.com	livingdna.com
Date Started	2006	2012	2010	2016	2016
Cost - Recheck WEB for sales	\$99 +S&H	\$99 +S&H	\$79 +S&H	\$59 +S&H	\$99/\$168
CURRENT SALES	\$79 & \$129	\$59	\$49	\$99 W/Health	\$79 & \$149
Location	Los Angeles	Provo, UT	Houston, TX	Israel	England
Matches Provided	Yes	Yes	Yes	Yes	Finally Now - a Few
Matches connect trees/circles	No	Yes	No	Yes	NA
Matches presented as cMs	Yes	Yes	Yes	Yes	Yes
Ethnicity % Info	Yes	Yes	Yes	Yes	Yes
Ancestry General Location	Yes	Yes	Yes	Yes	Yes
Ancestry Detailed Location	No	No	No	No	Yes
M&F Haplogroups Given	Yes	No	No	No	Yes
Analysis Tools Available	Yes	Yes	Yes	Yes	Not Yet
Medical Information	Yes +\$	Yes +\$ New	Yes +\$ New	Yes +\$	No *
Neanderthol Info	Yes	No	No	No	No
Direct contact with matches	No	No	Yes	No	No
Est. Database Size-30 Dec 2019*	~10,000,000	~16,000,000	~1,150,000	3,770,000	No Data
NOTES:					
*Total Tested = >30,920,000					*Wellbeing Test
1. The atDNA results from each of these companies can be transferred for FREE to GEDmatch.com, which has many analysis tools.					
2. For more details go to <<< www.isogg.org >>> & select WIKI & select: Autosomal DNA testing comparison tool.					
3. For matches in cMs, enter for FREE the value into <<< dnainter.com >>> by J. Seabright & the possible relationships appear.					

	A	B	C	D	E	F	G	H	I
1	My Comparative % Ethnicity (Admixture) Results as of 09 February 2020								
2									
3	Testing Company		23andMe	Ancestry DNA	FTDNA	Living DNA	MyHeritage		Nat'l Geographic
4									No Longer Testing
5	Country								
6	European		99.8-99.9-99.8	99-100-99	99	100-100	100-100		98
7									
8	British Isles		69.7-67.9-61.6	59-89-95	27	99.3-95.9	73-73		8
9	England			?-?-64		57.5-52.0	?-38.3		
10	Ireland			?-?-31		13.5-16.3	?-34.7		
11	Scotland			Ire & Scot		11.1-9.9	Ire & Scot		
12	Ulster					2.1-9.9			
13	Wales			See Eng.		15.1-7.8			
14									
15	West, Central & North		18.5-28.4-20.6	0-0-2	61	4-4	27-27		57
16	Europe								
17	France					2.4-0			
18	Germany					0-4			
19									
20	Scandinavia		6.3-1.7-1.4	16-0-2	11	0-0	0-0		33
21									
22	Italy & Greece		1.4-1-0	8-0-0	0	0-0	0-0		0
23									
24	Iberian Peninsula		0.9-0.4-3	1-0-0	0	0-0	0-0		0
25									
26	Misc.		3-0.5-0	3-0-0	<1.0	0-0	0-0		2