

# DNA: Expectations and Realizations

## Disclaimers:

- If you were expecting a presentation on DAR's DNA policy or the use of DNA on an application paper those then expectations will not be realized.
- If you were expecting to hear that now you have taken a DNA test, that you will no longer have to visit libraries, courthouses, etc. , then those expectations will not be realized.

# Overview

- The Science—Biology and Statistics (sorry I have to)
- The three principal tests—yDNA, mtDNA, and atDNA
- The companies—Family Tree DNA, 23andMe, and ancestry.com
- The people—they're just human
- The final story

You have tested with a genetic genealogy company, have your results and are still not making any progress.

- Did you take the right test?
- Did you test with the right company?
- Can DNA testing possibly answer your questions?
- Do you believe that the person or persons who might help answer your questions were also tested?

## Deoxy ribose Nucleic Acid

- Anything with “ose” is a sugar. These sugars along with phosphates form the backbone of DNA.
- The nucleic acids or bases are held in place by the sugars and phosphate backbone.
- Think of a ladder where the rungs are the nucleic acids and the sides are the sugars and phosphates.

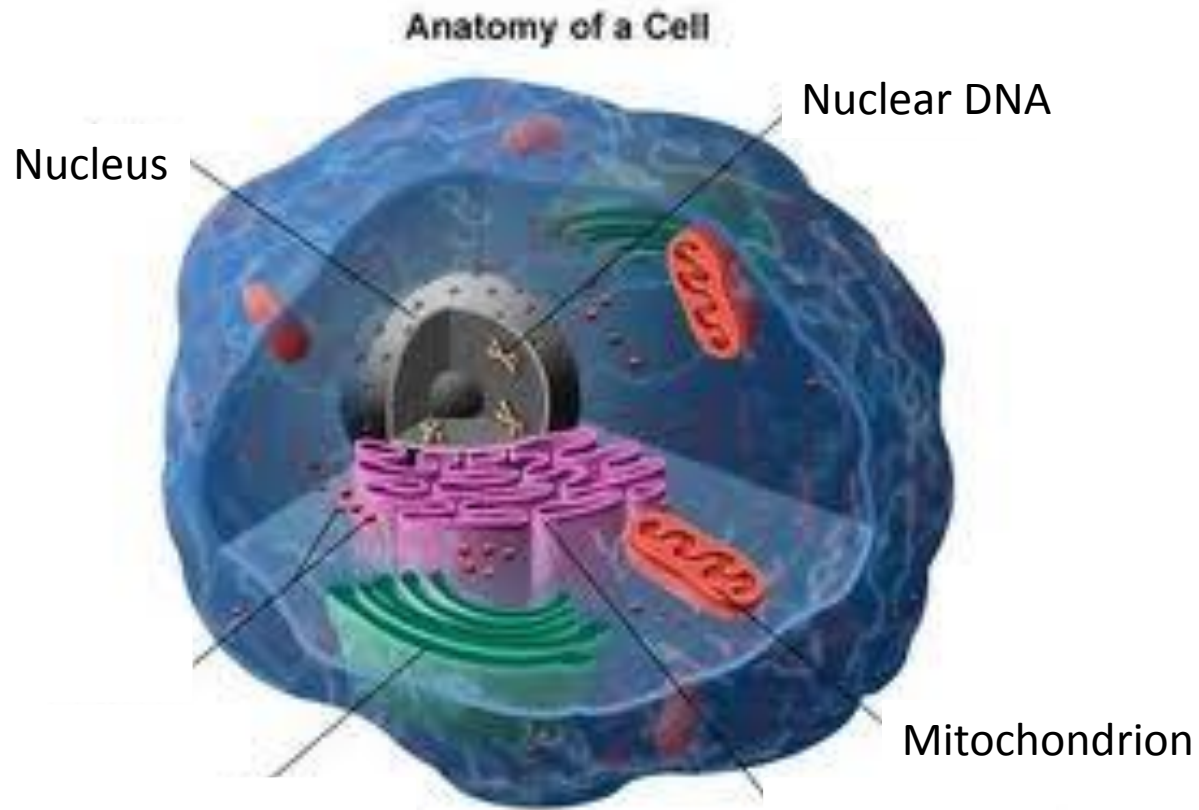
## The Nucleic acids or bases

- There are four—A, C, G, and T
- They come in pairs A & T and C & G
- Chemically A cannot connect with another A, a C or a G. Similarly for the others. Think of a zipper that no longer is usable.
- The order of the bases is a code—the Genetic Code
- Who we were, who we are and who might become

# DNA

- Forms long strands
- Found in two locations in every cell
- In the mitochondria—mitochondrial DNA/mtDNA
- In the nucleus—nuclear DNA (both yDNA and atDNA)

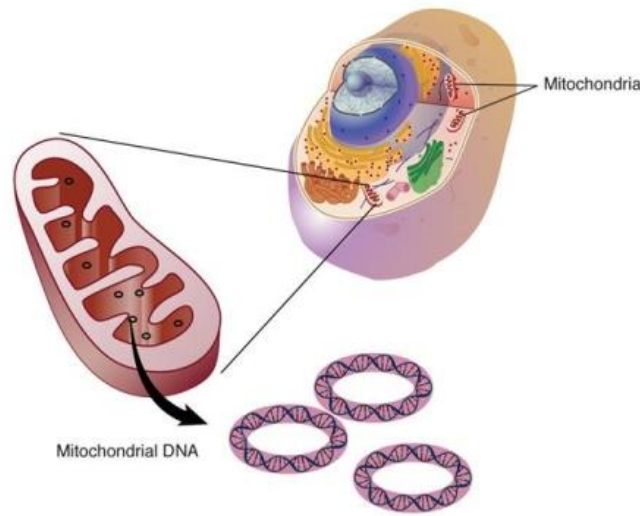
## Genealogy 101—DNA: Expectations and Realizations





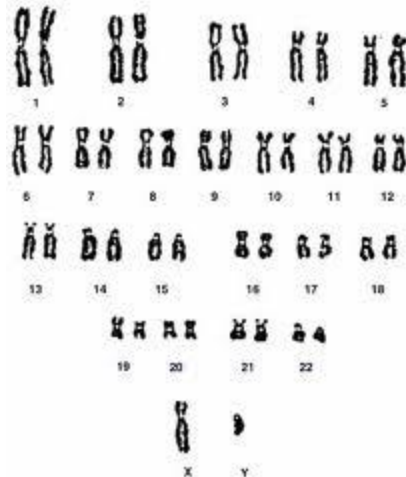
# Mitochondrial DNA

- The ends of the long strands join forming a loop or ring
- 16,000+ base pairs long
- Your mitochondrial (mtDNA) comes from your mother



## Nuclear DNA

- 23 pairs of long strands of DNA
- Totaling nearly 3,000,000,000 base pairs
- Numbered chromosomes 1 - 22 and X and Y



# Chromosomes 1 - 22

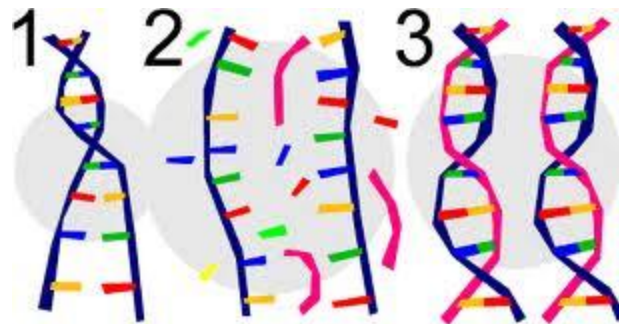
- Autosomal DNA (atDNA)
- One chromosome #1 comes from our father and one comes from your mother—making a pair

## X and Y

- The sex chromosomes
- XY is a male. The X from the mother and the Y from the father.
- XX is a female. One X from each parent.

## Growth and Division

- A cell must divide in two it cannot continue to grow in size.
- All structures in the cell including the DNA must be replicated prior to forming the new cell.
- To replicate the DNA strands unzip, are replicated, and then zipped up again.



# Mistakes or Mutations

- As the DNA is copied on rare occasions mistakes occur
- There are editors within the cell, but still some mistakes get through
- These mistakes are called mutations and are the basis of genetic genealogy
- Scientist can measure the rate of time between mutations.
- The greater the number of accumulated mutations between two samples the greater the time since the first mutation.

# Genetic Testing for Genealogy

- Since mtDNA only comes from our mother this can determine connections on our umbilical line.
- Since only males have yDNA this can determine connections on our paternal line.
- The atDNA is a collection of portions of the DNA of all of our ancestors. Statistical analysis of chromosomes 1 -22 can begin to identify cousins of varying degrees.

## mtDNA testing

- Usually only test a few hundred locations.
- Determines which base pair is present at that location.
- Time frame is wrong for genealogy.
- Tests of all 16,000+ base pairs are available
- A perfect match suggests a common ancestor within 550 years.

## yDNA testing

- Much of the Y Chromosome is considered “junk DNA.”
- Consists of groups of repetitive sequences called single tandem repeats (STR's). I prefer to call them stutters.
- The number of repeats for each of these STR's changes through time just like a mutation.
- Can determine how closely related two male lines are.
- Satisfactory for genealogical purposes. Tracks with the family surname in most western cultures.



## atDNA testing

- Determines which base pair is present at a large number of locations (500,000 or more) covering all of the 22 non-sex chromosomes.
- Two bases at every location—one from your mother, one from your father. Do not know which is which.
- A statistical analysis is necessary to sort out the voluminous data.

```

RSTD,CHROMOSOME,POSITION,RESULT
rs3094315 1 742429 AG
rs12184329 1 742968 CC
rs3131949 1 741043 AG
rs12382034 1 758311 GG
rs2518896 1 782397 GG
rs12132517 1 788664 GG
rs11240777 1 788622 AG
rs11579015 1 1026822 TT
rs12134754 1 1026819 TC
rs11260595 1 1028961 CC
rs6671356 1 1028969 TT
rs1320571 1 1110294 GG
rs6603791 1 1490804 AG
rs6603811 1 1695396 CC
rs16825556 1 1735585 GG
rs9786842 1 1749073 AG
rs11589067 1 1753634 GG
rs11269622 1 1746629 GG
rs4648727 1 1766125 AC
rs7511905 1 1783646 CC
rs11260624 1 1799369 CC
rs38648936 1 1848345 GG
rs28548017 1 1874879 AG
rs28704276 1 1923127 GG
rs38550149 1 1923688 CC
rs13303273 1 1982496 AG
rs16824727 1 2008054 GG
rs45536444 1 2105849 CC
rs16824937 1 2123159 GG
rs2840542 1 2201540 CC
rs2645090 1 2282269 TT
rs6674705 1 2282513 AA
rs2840540 1 2282548 CC
rs2840536 1 2391431 CC
rs6665546 1 2391551 GG
rs10910060 1 2392771 GG
rs10797434 1 2501140 TC
rs4379628 1 2597888 GG
rs10797441 1 2541525 TT
rs11590198 1 2541740 GG
rs6680471 1 2744972 TT
rs2842933 1 2857821 AG
rs2606418 1 2860710 AG
rs3903840 1 2946526 TC
rs12459277 1 2947480 TC
rs10797386 1 3158140 AG
rs1738069 1 3162562 GG
rs16824328 1 3243990 CC
rs882430 1 3246973 AA
rs12093990 1 3529341 GG
rs12170656 1 3653727 TG
rs1181877 1 3670589 ---
rs4648415 1 3731071 TC
    
```

>>>>>>14,000+ pages more>>>>>>

```

"rs2272836","22","48924677","CC"
"rs11704548","22","48924757","GG"
"rs28627610","22","49148200","AG"
"rs8141888","22","49156348","GG"
"rs12163408","22","49168811","GG"
"rs12157911","22","49177122","AA"
"rs12160258","22","49179618","AC"
"rs7511349","22","49184680","TG"
"rs12163129","22","49184781","TC"
"rs9616819","22","49185107","TC"
"rs12158901","22","49209172","GG"
"rs2269379","22","49395380","CC"
"rs131715","22","49413787","GG"
"rs6009945","22","49436079","CC"
"rs9616810","22","49441792","CC"
"rs9616906","22","49451546","GG"
"rs2341010","22","49486246","TC"
"rs5770819","22","49497033","TT"
"rs5770820","22","49497339","GG"
"rs3810648","22","49522492","AA"
    
```

## Parental Warning:

Some viewers may consider the following slides offensive or obscene.

## Science is not an exact Science

- No experiment or measurement is without error.
- Repeated measurements can only give you an average.
- Scientists deal with errors by using probability and statistics.
- Measuring mutation rates is a scientific experiment and therefore subject to uncertainty and statistical analysis

## The mass of an electron

$$0.510\,998\,928 \pm 11 \text{ MeV}$$

Average value

Statistical uncertainty

The true value is between

0.519 998 917 and 0.519 998 939

with 68.2 % certainty

If we take double the error the value becomes

0.519 998 906 and 0.519 998 950

with 95.4 % certainty

In the second example we are more sure we have the value within the given range but the range is larger so we are less sure of the actual value.

# Probability and Statistics for Genetic Genealogists

- No rigorous mathematics.
- Odds are based on millions and millions of chances.
- Simple examples-flipping a coin, rolling a die, drawing a card.
- Complicated example—a lottery ticket

## Flipping a coin

- Usually two possibilities.
- Heads or Tails.
- 50-50 chance, one out of two.



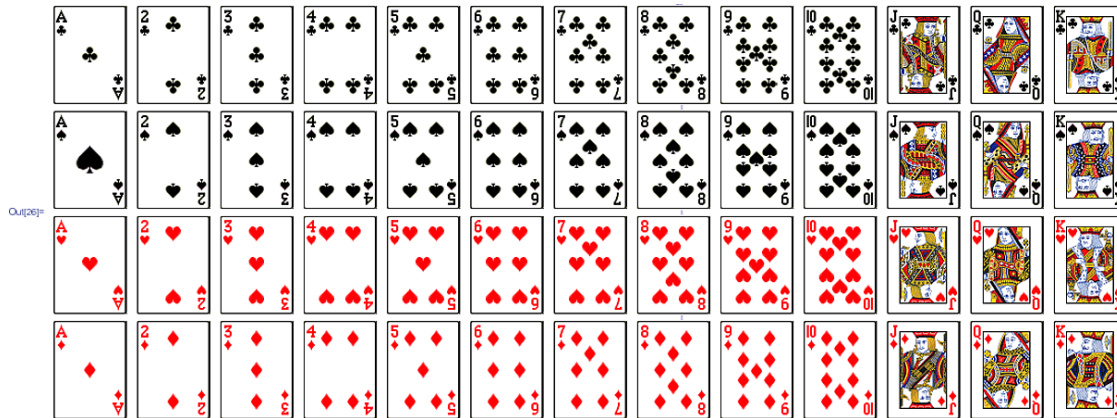
## Rolling a die

- Six possibilities.
- Side with 1, or 2, 3, 4, 5, or 6 pips facing up.
- About 16.7 % chance of any side facing up, one out of six.



## Drawing a card

- 52 possibilities, but take out one-eyed Jacks—50 possibilities.
- Numbers 2-10, A, K, Q, and J for four different suits.
- 2 % chance of drawing any card with replacement.





## “Complicated” Example

- We want “heads,” to roll one on the die, and to draw the Ace of spades.
- One out two multiplied by one out of six multiplied by one out of 50.
- One out of 600 chance of this combination occurring.

# Playing the lottery

- Choose six numbers
- Five numbers from 1-75 without replacement.
- One number from 1-22.



tjr 2/2016

## Playing the lottery (part 2)

- 1 in 258,890,850 chance of matching all six numbers.
- Five numbers drawn—one chance out of 75, times one chance out of 74, etc.
- Times one chance out of 22.
- In this case the order does not matter.



## Playing the lottery (part 3)

- Change to a spreadsheet
  - Place my name at the left with an explanation.
  - Give each column a heading name.

	Ball #1	Ball #2	Ball #3	Ball #4	Ball #6	Ball #7
Tom's Lottery Picks	11	13	15	16	25	12

## Playing the lottery (part 4)—kind of

- Changes to the spreadsheet
  - Change the explanation next to my name.
  - Change the column heading names.

## The lottery results have now morphed into yDNA results

- These are the actual values of six of the first seven markers on my yDNA
- The fifth value was the same as one of the first four and could not be used (without replacement)
- We know how to calculate the probabilities if we know the mutation rate

	DYS391	DYS393	DYS385b	DYS19	DYS390	DYS426
Tom's—yDNA	11	13	15	16	25	12

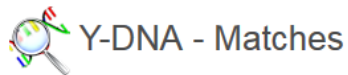
# Genealogy 101—DNA: Expectations and Realizations

My yDNA results as reported in a project on the Family Tree DNA website.

Row Number	Kit Number	Name	Paternal Ancestor Name	Country	Haplogroup	DYS393	DYS390	DYS19	DYS385	DYS391	DYS426	DYS388	DYS439	DYS392	DYS389I	DYS459	DYS458	DYS455	DYS454	DYS447	DYS437	DYS448	DYS449	DYS464	DYS460	Y-GATA-H4	YCAII	DYS456	DYS607	DYS570	CDY	DYS442	DYS438	DYS531	DYS578	DYS395S1			
E-M96>P147																																							
1	187637			England	E-M183	13	24	13	9	13-15	11	12	10	14	11	30	18	9-9	11	11	23	14	20	33	14-14-16-16	11	11	19-22	16	13	18	22	38-38	12	10	10	8	15-	
I-M170>M253																																							
2	249925			Poland	I-S6402	13	22	14	10	13-15	11	14	11	12	12	28	15	8-9	8	11	23	16	20	28	12-14-14-15	10	10	19-21	14	14	16	20	36-38	12	10	11	8	15-	
3	297473			England	I-M253	13	22	14	10	13-16	11	14	11	12	11	28	16	8-9	8	11	23	16	20	28	12-14-15-16	10	10	19-22	14	14	17	19	32-37	12	10				
J-M304>M267																																							
4	83579			Unknown Origin	J-ZS1559	12	23	14	10	13-18	11	15	11	13	11	30	18	8-9	11	11	25	14	20	24	12-14-16-17	11	10	22-22	15	14	15	19	32-33	13	10	11	8	15-	
Q-M242																																							
5	324491	Pedro Alfonso Sosa Garavito	Indalesio Sosa	Colombia	Q-L472	13	23	13	10	14-16	12	12	12	13	14	30	16	8-9	11	11	26	14	20	29	14-15-15-15	10	12	19-23	15	16	19	17	34-38	12	10				
R-M207>M173>M420																																							
6	243564			Greece	R-M512	13	24	15	11	11-14	12	12	10	13	11	30	15	9-10	11	11	24	14	20	32	12-15-15-16	12	12	19-25	15	15	16	20	36-39	12	11	11	8	17-	
7	225976			Unknown Origin	R-CTS11962	13	25	16	10	11-14	12	12	11	13	11	30	17	9-10	11	11	23	14	19	33	12-15-15-16	11	10	19-23	15	16	18	19	34-40	15	11				
R-M207>M173>M420>Z283>Z282																																							
8	179780	Thomas John Ragusin		Croatia	R-Z282	13	25	16	11	11-15	12	12	10	14	11	31	15	9-10	11	11	24	14	20	32	12-15-15-16	10	11	19-23	16	15	18	21	36-42	12	11	11	8	17-	

# My two “closest” yDNA matches

- Genetic distance of 7 is not very good
- Both are different
- But how close are we?



## FILTER MATCHES

Show Matches For:  Markers:  Distance:  Matches Per Page:

Last Name Starts With:  (Optional) New Since:  [Run Report](#)

## 67 MARKERS - 2 MATCHES

Genetic Distance	Name		Most Distant Ancestor	Y-DNA Haplogroup	Terminal SNP	Match Date
7	<a href="#">Mr. Daniel Durdov</a>	Y-DNA67		R-M512		5/19/2010
7	<a href="#">Mr. Miron Berezik</a>	Y-DNA67	Antonio Berezik, b.c.1785, Lesko, Poland	R-M512		

Download Matches: [CSV](#) [EXCEL](#)

# The closeness of the match

- Generations do not exist!
- Think of years instead with 25 years to a generation

### Y-DNA TiP Report

In comparing Y-DNA 67 marker results, the probability that **Mr. Daniel Durdov** and **Thomas John Ragusin** shared a common ancestor within the last...

#### COMPARISON CHART

Generations	Percentage
4	0.18%
8	5.88%
12	26.45%
16	54.56%
20	77.16%
24	90.25%

#### Refine your results with paper trail input

If traditional genealogical records indicate that a common ancestor between you and your match could not have lived in a certain number of past generations, your TiP results can be refined. Note, if you are not sure of this information, you should not change the value of "1" below.

**Mr. Daniel Durdov** and **Thomas John Ragusin** did not share a common ancestor in the last  generation(s).

Markers  Display

Since each marker has a different mutation rate, identical Genetic Distances will not necessarily yield the same



# Traditional Genealogy considered

- We are not related within eight generations
- More of a chance of being more than 24 generations

## Y-DNA TiP Report

In comparing Y-DNA 67 marker results, the probability that **Mr. Daniel Durdov** and **Thomas John Ragusin** shared a common ancestor within the last...

COMPARISON CHART	
Generations	Percentage
8	2.73%
12	23.99%
16	53.04%
20	76.39%
24	89.92%

### Refine your results with paper trail input

If traditional genealogical records indicate that a common ancestor between you and your match could not have lived in a certain number of past generations, your TiP results can be refined. Note, if you are not sure of this information, you should not change the value of "1" below.

**Mr. Daniel Durdov** and **Thomas John Ragusin** did not share a common ancestor in the last  generation(s).

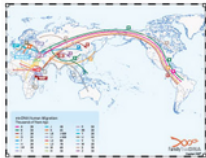
Markers  Display

# My mtDNA results

- Compared to a reference sequence, list of differences
- Formerly CRS, now RSRS

### Haplogroup - W1

#### Your Origin



Haplogroup W is derived from the N superhaplogroup, which dates to approximately 65,000 years ago. The origin of haplogroup W dates to approximately 25,000 years ago, and it is mainly found distributed in west Eurasia (or Europe). It is likely that individuals bearing this lineage participated in the expansion into the bulk of Europe following the Last Glacial Maximum. Future work, including obtaining more samples from central Asia, will further refine the historical distribution of this haplogroup and better determine the role it played in the peopling of Europe.

USAGE POLICY: Use of the above Haplogroup description requires written permission from Gene by Gene.

#### Your Results

You are logged in as a GAP Administrator. This user has changed his/her settings so the mtDNA FASTA file **cannot** be downloaded by GAP Administrators.

RSRS Values

rCRS Values

Extra Mutations

315.1C G513c 522.1A 522.2C G16145A

Missing Mutations

#### HVR1 DIFFERENCES FROM RSRS

A16129G	G16145A	T16187C	C16189T	G16230A
T16278C	C16292T	C16311T		

#### HVR2 DIFFERENCES FROM RSRS

C146T	C152T	A189G	T204C	G207A
A247G	315.1C	G513c	522.1A	522.2C

Only the primary user of this account can view these results. Please sign in with the kit number and password to access this information.

To learn more about RSRS click [here](#).

## mtDNA example

- A perfect match--all 16,000+
- 50 % within 125 years, 95 % within 550
- She's adopted



### mtDNA - Matches

#### FILTER MATCHES

Show Matches for:  Region:  Matches Per Page:


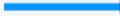



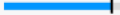




Last Name Starts With:  (Optional) New Since:  [Run Report](#)

#### HVR1, HVR2, CODING REGIONS - 8 MATCHES

Genetic Distance	Name	Most Distant Ancestor	mtDNA Haplogroup	Match Date
0	Mary Lou Henry	FMS FF	W1	7/9/2014

# My atDNA results-known relationships

- I have 131 matches
- I have identified only five relationships including my mother, sister, and brother

Relations: Known Relationships    Sort By: Relationship Range    Name:    Ancestral Surnames:    Apply					
Show Full View	Match Date	Relationship Range	Known Relationship	Shared cM	Ancestral Surnames
 Esther Ann (Qualeatti) Ragusin	2/16/2011		Mother	 3383.80	Acito (Cosenza, Italy)...
 Jeanne Marie (Ragusin) Szymanski	1/14/2011		Sister	 2592.89	Acito (Cosenza, Italy)...
 Richard Henry Ragusin	9/30/2012		Brother	 2409.54	
 Richard Jackson	1/9/2015		5th Cousin	 34.42	Barrett / Broad / Casebolt / Hale / Hall...
 Douglas Gary Detling	5/28/2014		6th Cousin	 24.05	Allen / Backus / Barents / Bennett / Bradt...

# Genealogy 101—DNA: Expectations and Realizations


## My Family Tree DNA homepage—the “dashboard”

The screenshot shows the My Family Tree DNA homepage dashboard for a user named Thomas Ragusin. The interface includes a top navigation bar with a search bar, a 'myFTDNA' menu, and links for 'DNA Tests', 'Projects', and 'Resources'. A pink banner promotes the 'Family Finder' test for \$99. The main dashboard is divided into several sections:

- Welcome to myFTDNA**: A large heading at the top left.
- Your Account**: A sidebar on the left containing the user's profile information:
  - Profile**: Thomas Ragusin, email: tomandmargarita@yahoo.com, address: 4301 S Four Mile Run Dr Apt 22, Arlington, VA 22204, phone: 703-521-2752. It also shows the last sign-in was 'This Month' and links to 'Manage Personal Information' and 'Change Password'.
  - Order History**: A table showing recent orders.
- Family Tree**: A section with a 'myFamilyTree' icon and a 'NEW' badge.
- Family Finder**: A section showing 'Results Completed: 7/17/2010' with buttons for 'Matches', 'Chromosome Browser', 'Known Relationships', and 'myOrigins'. A link to 'Matrix' is also present.
- Y-DNA**: A section showing 'Results Completed: 6/25/2010' with an 'Upgrade' button. It includes buttons for 'Matches', 'Ancestral Origins', 'Haplotree & SNPs', 'Matches Maps', 'Migration Maps', 'SNP Map', 'Haplogroup Origins', and 'Y-STR Results'. A 'Print Certificates' button is at the bottom.
- Haplogroups**: Two boxes at the top right show 'R-Z282' (Y-DNA Haplogroup) and 'W1' (mtDNA Haplogroup).

Product	Ordered
Z282	3/30/2015
Z283	1/30/2015
mtFull Sequence	12/27/2013

Mark Whatford's report page on 23andMe website.

23andMe


HOMEREPORTSTOOLSMW Mark Whatford


2

Reports OverviewReportsTutorials

# Reports Overview

Learn what your DNA says about you. Select a category below to access your reports.






## All Reports

65 Reports

See all your reports in one list.

[View Reports](#)




## Carrier Status Reports

36 Reports

Learn about variants you may have that may not affect you, but can tell you about potential health risks you could pass on to your children.


[View Reports](#)



## Ancestry Reports

3 Reports

Explore what your DNA can tell you about your origins.



## Wellness Reports

4 Reports


Understand how your DNA may influence how you

# Genealogy 101—DNA: Expectations and Realizations


## Ancestry Reports page of the 23andMe website

[Reports Overview](#) [Reports](#) [Tutorials](#)


Showing 3 reports

**Ancestry Composition**  
Ancestry  
99.8% European

The analysis considers DNA you received from all of your ancestors worldwide on both sides of your family.  
[View Report](#)

**Haplogroups**  
Ancestry  
Maternal: U5a1  
Paternal: R1b1b2a1a

Haplogroups can tell you where a small portion of your ancestors originated thousands of years ago. Your haplogroups can shed light on...  
[View Report](#)


**Neanderthal Ancestry**  
Ancestry  
>81% of Users

Neanderthals were ancient humans who interbred with modern humans before becoming extinct 40,000 years ago. This report tells you how...  
[View Report](#)

**Category** ⓘ  
All Reports  
Carrier Status (36)  
Wellness (4)  
Traits (22)  
**Ancestry (3)**

**Status** ⓘ  
☐ Bookmarked (0)  
☐ Variant Present (0)


## Test results page from 23andMe website for Mark Whatford

HOMEREPORTSTOOLSRESEARCH2MW Mark Whatford

PeopleDNA

### DNA Relatives

Find and connect with genetic relatives to learn about relationships, shared ancestors and family history.











Sort by Open Sharing

Showing 1728 out of 1728 relatives

Filters


Update DNA Relatives profile

★	Name	Strength of Relationship	Sharing
☆ 	<b>Dean Brown</b> Male	Third to Fifth Cousin 0.47% shared, 3 segments	
☆ 	<b>Ted Martin</b> Male	Third to Fifth Cousin 0.43% shared, 2 segments	
☆ 	<b>Rebecca Hougher</b> Female	Third to Sixth Cousin 0.50% shared, 1 segment	
☆ 	<b>Linda Dorei Jones</b> Female	Third to Sixth Cousin 0.37% shared, 1 segment	

Search keywords

Notifications ⓘ

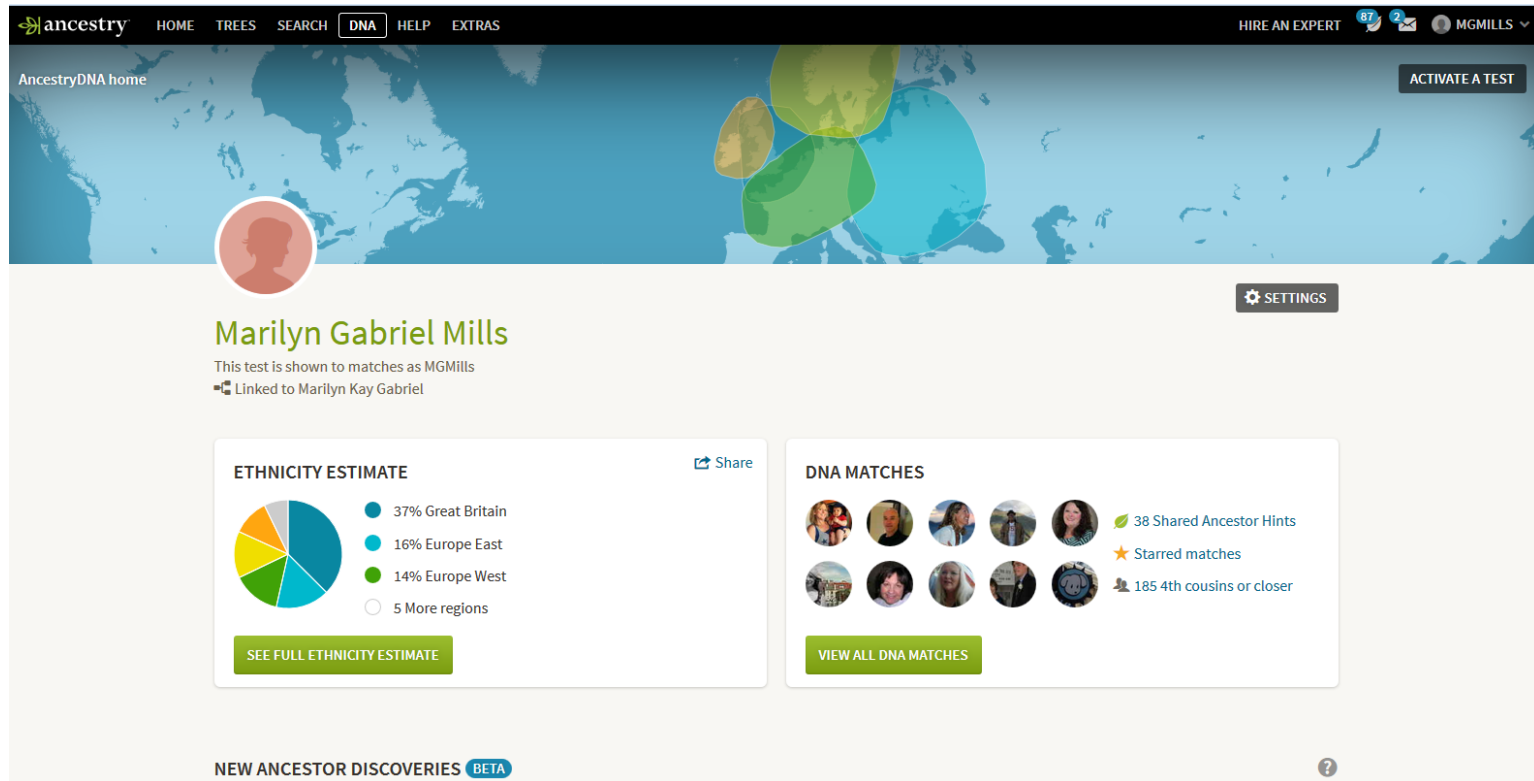
Relationship ⓘ





# Genealogy 101—DNA: Expectations and Realizations

## Marilyn Mill's homepage on Ancestry.com website



The screenshot shows the AncestryDNA homepage for Marilyn Gabriel Mills. The header includes the Ancestry logo, navigation links (HOME, TREES, SEARCH, DNA, HELP, EXTRAS), and user options (HIRE AN EXPERT, notifications, email, and the user's name MGMILLS). The main banner features a world map with colored regions and a silhouette of a person. Below the banner, the user's name "Marilyn Gabriel Mills" is displayed, along with a note that the test is shown to matches as "MGMills" and a link to "Marilyn Kay Gabriel". The "ETHNICITY ESTIMATE" section shows a pie chart with the following data:

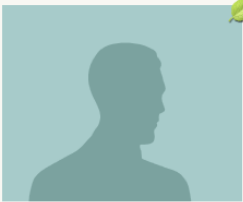
Region	Percentage
Great Britain	37%
Europe East	16%
Europe West	14%
5 More regions	-

Below the pie chart is a button labeled "SEE FULL ETHNICITY ESTIMATE". The "DNA MATCHES" section displays a grid of match photos and statistics: 38 Shared Ancestor Hints, Starred matches, and 185 4th cousins or closer. A button labeled "VIEW ALL DNA MATCHES" is at the bottom. The footer includes "NEW ANCESTOR DISCOVERIES BETA" and a help icon.


# Genealogy 101—DNA: Expectations and Realizations

Marilyn Mill's homepage on Ancestry.com website. This information is found at the bottom of the previous page

These are potential new ancestors or relatives who are **not** already in your family tree (MGMAncstryDNA)



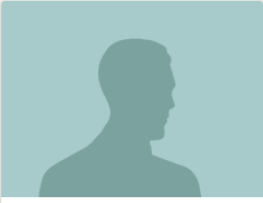
**Benjamin Summers**  
(1823-1882)



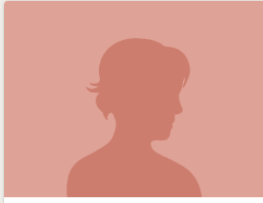
**Solomon Smith**  
(1802-1887)

**DNA CIRCLES** BETA ?

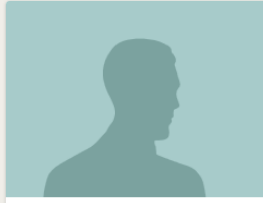
These are people who are **already** in your family tree (MGMAncstryDNA)



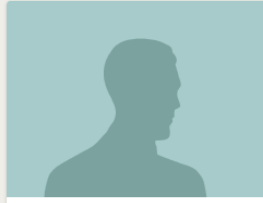
**JARED BOBO DNA CIRCLE**



**LUCRETIA BURTON DNA CIRCLE**



**JEAN GEORGE GRISIER**  
DNA CIRCLE



**WILLIAM CLOID GABRIEL**  
DNA CIRCLE

# Genealogy 101—DNA: Expectations and Realizations

## Marilyn Mill's comparison with Darrell Gritten on Ancestry.com website

**DARRELL\_GRITTEN's tree**  
1058 people

VIEW FULL TREE

Shared Ancestor Hint

HIDE DETAILS

According to your family trees, it looks like you have a shared ancestor. Review the info below to confirm the relationship. You can take this opportunity to [get in touch](#), share stories and photos, or just say hello.

Shared Ancestor Hint

John F. Gritton  
4th Great-Grandfather

&

Elizabeth Hoagland  
4th Great-Grandmother

Jacob Gritton  
3rd Great-Grandfather

Dorothy Ann Gritton  
2nd Great-Grandmother

John Fletcher Fairchild  
Great-Grandfather

Cathrine Hunt Fairchild  
Grandmother

Virley Thurman Gabriel  
Father

Marilyn Kay Gabriel  
Self

Jesse Gritton  
3rd Great-Grand uncle

John R. Gritton  
1st Cousin (4x removed)

Laban Gritton  
2nd Cousin (3x removed)

Charles Elisious Gritton  
3rd Cousin (2x removed)

Clarence Ashley Gritten  
4th Cousin (1x removed)

Paul Hubert Gritten  
5th Cousin

DARRELL\_GRITTEN  
5th Cousin (1x removed)

tjr 2/2016

# The people (We are all human)

- If you are searching for Great-grandpa Buck's parents the so are others.
- Adoptees.
- Immigrants—non American, non English.
- You may not correspond with the person who took the test. Some don't respond. Others respond nastily.
- Are the family genealogies sufficient?

## The people (part 2) My “rules of thumbs”

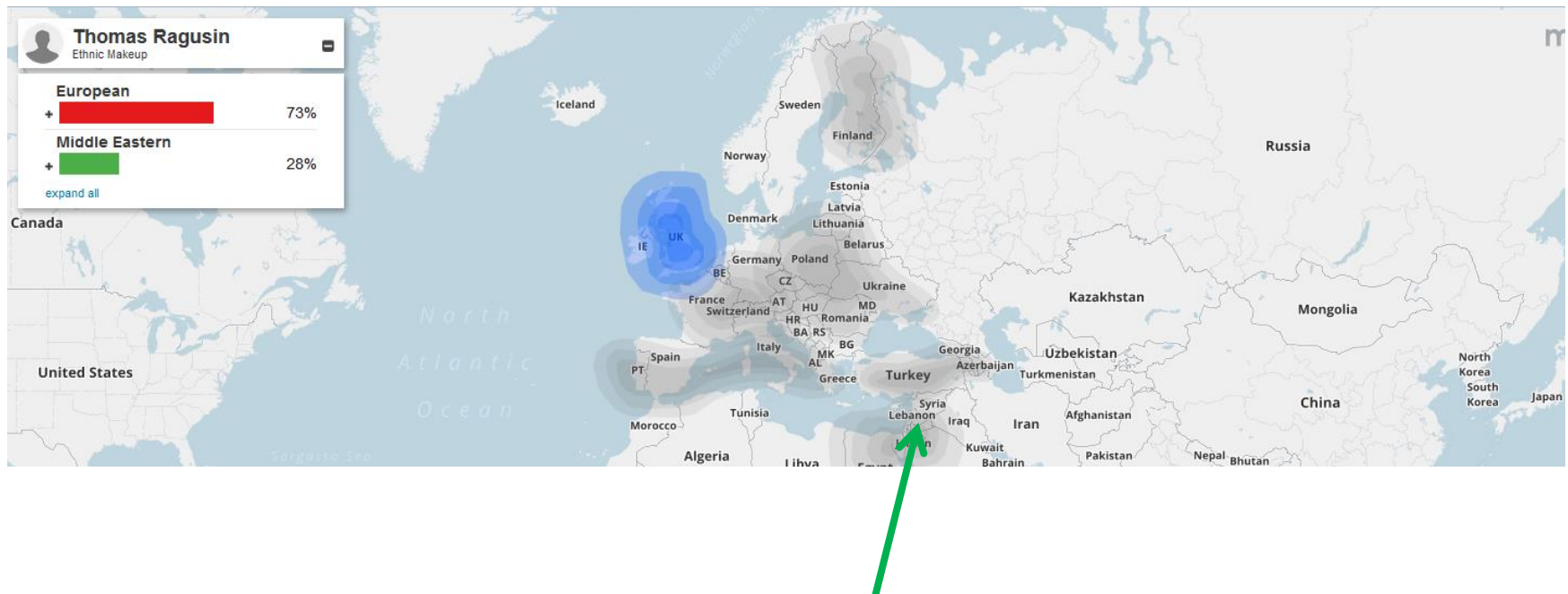
- I do not address them by the given name, but use Mr. or Mrs. Then I see how they sign the response.
- I sign my email as Tom.
- I introduce myself. I give my kit number, and what DNA test I talking about.
- I give them something. “Based on your surname list/family tree the enclosure is my lineage back to XX who married YY. Are these the same people from your lineage? If so, then this would make us nth cousins.”

## The Final Story

- Three of my four grandparents were immigrants
- Their lineages in Europe are based on Roman Catholic Church records.
- My sole American born grandparent is descended from every form of Protestantism that immigrated to the American colonies.
- Unspoken expectation—my ancestors were Christians.

## Genealogy 101—DNA: Expectations and Realizations

My ethnic makeup: I am 28 % Middle Eastern originally labelled as Jewish



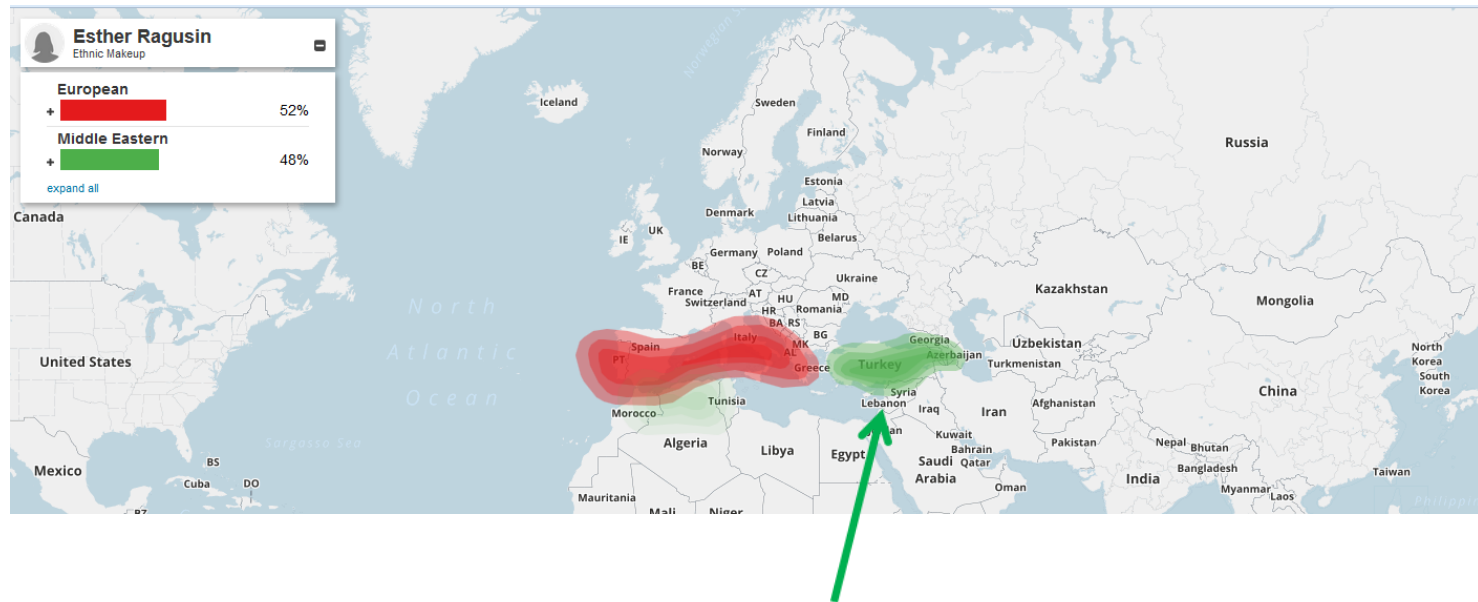
# What do I do now?

- Got a yamulke.
- Merchants of Venice were Jewish
- Rumors about the Steinmans
- The Republic of Ragusa was a haven for Jews in the Middle Ages
- Spanish Jews were driven into southern Italy and Ragusa during the Inquisition
- Research of Rabbi Barbara Aiello



## Genealogy 101—DNA: Expectations and Realizations

My mother's ethnic makeup: Her approximately 50 % fully explains the approximately 25 % “Jewishness” of myself and my siblings



## Rabbi Barbara's website describing records from the Inquisition identifying Calabrian Jews who were forced to convert

rabbi barbara  
Rabbi Barbara Aiello

HOME ABOUT US CONTACT RABBI BARBARA AIELLO WHAT WE DO VIRTUAL RABBI BLOG PRODUCTS TESTIMONIALS



### ITALIAN JEWISH ROOTS AND SURNAME RESEARCH



The Italian Jewish Cultural Center of Calabria (IjCCC) is an international organization based in Calabria, the southernmost region of Italy. Founded by Rabbi Barbara Aiello, whose Jewish ancestry includes B'nai Anusim (Italians whose ancestors were forced into adult baptism and Christian conversion during Inquisition times), is the founding director of the IjCCC, an organization dedicated to help those with Italian heritage determine if their family surnames indicate Italian Jewish roots. Although the IjCCC does not establish a blood line, our staff initiates a search of Italian family surnames to determine a Jewish connection.

Staff combs through ancient Inquisition records, searching for matches between family surnames and Jewish religious persecution. For example, in Rabbi Barbara's family's the surname "GRANDE" is prominent. Research determined that families named GRANDE, coming from the same towns and villages as Rabbi Aiello's family members, were arrested and tortured for "judaizing," practicing Judaism in secret.

# Genealogy 101—DNA: Expectations and Realizations

The punch line: My mother matches Rabbi Barbara

The screenshot shows the FamilyTreeDNA Family Finder interface. At the top, there is a search bar with the text "Enter a name or place to begin searching" and a magnifying glass icon. To the right of the search bar are links for "Upgrade" and "My Cart". Below the search bar, there is a navigation menu with "myFTDNA", "DNA Tests", "Projects", and "Resources". A pink banner across the top of the main content area reads "Family Finder - only \$99 - as seen on ABC News' 20/20!". Below this, a yellow banner states "The Family Finder for Project is participating in the myGroups Beta! Click here to see your new myGroups page." The main content area is titled "FAMILY FINDER - MATCHES" and includes links for "Feedback", "Refer Friends & Family", and "Page Tour". A warning message states: "You are logged in as a GAP Administrator. This user has changed his/her settings so the Family Finder known relationships cannot be changed by GAP Administrators." Below the warning, the "Most Common Surnames" section shows "2 Ragusin", "2 Ryan", and "1 Szymanski". The "Relations" section shows "Show All Matches", "Sort By: Relationship Range", "Name: aiello", and "Ancestral Surnames: Apply". The "Show Full View" section shows a match for "Rabbi Barbara Aiello" with a match date of "1/5/2014", a relationship of "5th Cousin - Remote Cousin", a known relationship of "Distant Cousin (Pending)", and a shared cM of "22.50". At the bottom right, there are buttons for "Download Matches:", "CSV", and "Excel".

FamilyTreeDNA

Enter a name or place to begin searching

Upgrade My Cart

myFTDNA DNA Tests Projects Resources

Family Finder - only \$99 - as seen on ABC News' 20/20!

The Family Finder for Project is participating in the myGroups Beta! Click here to see your new myGroups page.

FAMILY FINDER - MATCHES Feedback Refer Friends & Family Page Tour

You are logged in as a GAP Administrator. This user has changed his/her settings so the Family Finder known relationships cannot be changed by GAP Administrators.

Most Common Surnames: 2 Ragusin 2 Ryan 1 Szymanski

Relations: Show All Matches Sort By: Relationship Range Name: aiello Ancestral Surnames: Apply

Show Full View Match Date Relationship Range Known Relationship Shared cM Ancestral Surnames

Rabbi Barbara Aiello 1/5/2014 5th Cousin - Remote Cousin Distant Cousin (Pending) 22.50

Download Matches: CSV Excel

## Genealogy 101—DNA: Expectations and Realizations

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