Adventures in Genetic Genealogy

Genealogical vs. Genetic Family Trees

(Glen Saucier, M.D.; 2023)

Part 1: "Y" Me, Lord ?

Diggin into our DNA past, especially that revealed by mitochondrial DNA (mtDNA) and Y-DNA, frequently carries the risk of unanticipated, and perhaps shocking, results. It might even nullify well-researched and documented pedigrees. This article concerns Y-DNA results, and the secrets they might contain. In the 1999 film *The Matrix*, there is a pivotal scene called Red Pill/Blue Pill, and it was so transformational that it became part of our cultural lexicon. Even Wikipedia contains a remarkably accurate description of this phenomena which it explains as follows: “a choice between the willingness to learn a potentially unsettling or life-changing truth by taking the red pill or remaining in contented ignorance with the blue pill.” This article is offering you the red pill – it is intended as a challenge. A quick review of the basics of the Y-chromosome can be found in a short and informative article from 2014 (more recent articles that I've found don't provide any additional useful updates at this time): https://www.genome.gov/27557513/the-y-chromosome-beyond-gender-determination.

The Y chromosome contains 63-80 genes consisting of 59 million base pairs, much more of both than is found in mtDNA, but like the latter, researchers use pertinent mutations found in single nucleotide polymorphisms (SNPs) and/or short tandem repeats (STRs) as markers for determining primary, or base, Y-DNA haplogroups that share hundreds, or even thousands, of mutations unique to each haplogroup. Those mutations are inherited essentially unchanged from father to son; and, known as subclades, are defined by a *terminal SNP.* Most SNPs are ancient. They occurred thousands or tens of thousands of years ago. The human Y-chromosome accumulates roughly two mutations per generation, but not all haplgroups mutate at the same rate. The average is around every 80 yrs, and it depends on the haplogroup and the surname. Many generations can pass without a SNP occurring. Deadra Bourke and colleagues have found an apparent accelerated rate of mutation among families of early LA. This all means that SNPs occuring in a specific lineage are unique.

Tests for determining one's Y-DNA haplogroup are now available from several companies. I've been tested by both 23&Me and FamilyTreeDNA. My base haplogroup and subclade results from both companies are in agreement, so I deemed 23&me testing adequately detailed for SNP screening.

Haplogroups as reported by 23&Me and FamilyTreeDNA are not necessarily the "default haplogroup" for a particular family line. That terminology is inaccurate as applied to the reported results from these companies. For instance, 23&Me may report subclades of related individuals at different levels of resolution in a continuum of mutations that may appear unrelated when seen alone, although their full reports do provide some "back history" to their final reported subclade, revealing a truer idea of any familial connection. If a "default haplogroup" does exist, it would be the primary group designation combined with descendant subclades that are shared as far down the continuum as currently possible, hopefully to a common terminal subclade. Of course the last value will be ever-changing along with DNA technology, and probably with variable nomenclature conventions. Identification of your true terminal subclade currently requires more detailed, and expensive, testing as provided by FamilyTreeDNA's Big-Y, currently about $450 (good older article on testing at https://madaboutgenealogy.com/y-dna-test/).

The nomenclature for these groupings seems to be in constant flux, some differing from the designations used when I first tested for Y-DNA. Currently, Y-DNA haplogroup and subclade names follow the conventions of the Y-Chromosome Consortium’s (YCC). The YCC short form names haplogroups with the first letter from the primary, haplogroup branch, designated with the capital letters A through T, followed by a dash and the name of the final/terminal SNP; e.g., S-M310, S-M254.

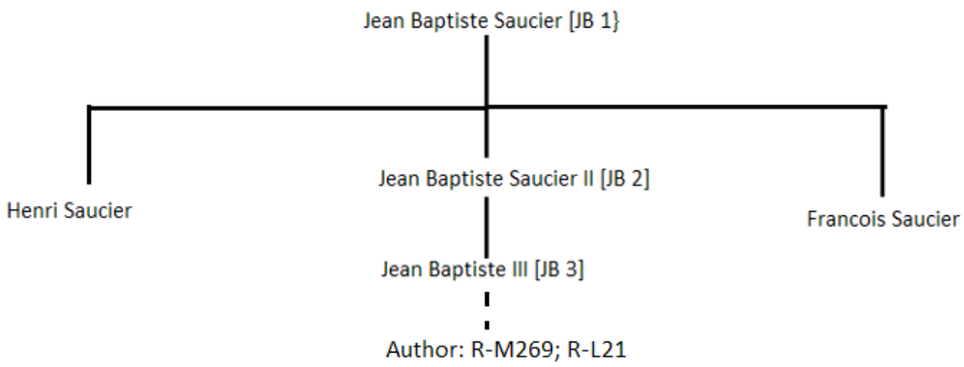
As previously alluded to, whenever researching Y-DNA matches or mismatches, the following must be considered: since the Y-DNA haplogroups/subclades are inherited essentially unchanged from father to son, some occurring over thousands of years, many family lines were subsequently derived from a particular primary haplogroup, or even some "downstream" subclades, and today are often shared by many different families and surnames, and not specific to only one. On the other hand, all direct male descendants of a paternal line share a common ancestor and his Y-DNA primary haplogroup branch, regardless of how long ago he lived; therefore, to even begin to look for a "recent" common ancestor on a Y-DNA (direct patrilineal) line, the primary haplogroup branch, as designated with the capital first letter, **MUST** match. In addition, eg. with living potential patrilineal relatives, later mutations; i.e., downstream subclades, must also match to a high degree in order to identify with any certainty, a recent common ancestor.

My excellent adventure with Y-DNA began 10 years ago with testing by both of the aforementioned companies. I was assigned a major paternal haplogroup subclade of **R-M269** by both, with later

refinement to the descendant subclade **R-L21**, by 23&me, and the even further downstream subclade, **R-FTA98300**, by Familytree Big-Y. With a lack of published Saucier paternal Y-DNA for comparison, as well as a lack of initiative to pursue it any further, I lived in ignorant bliss and accepted that this was the "default" Y-DNA of all Sauciers descended from 17th century Charles Saucier of Paris, and his later descendant, Jean Baptiste Saucier [JB 1], settler of Ft. Maurepas and Mobile, as well as his brother, Charles, who remained in Canada ... UNTIL ABOUT 18 MONTHS AGO!

While leisurely surfing online genealogy sites, I came across Francogene.com, and the page Généalogie des Français d'Amérique du Nord. Utilizing the index, I quickly found the "Saucier" page, which included mtDNA and Y-DNA for the listed individuals. The Y-DNA subclade haplogroup for all males of the family "Saucier" was indicated to be the major subclade, **I-M253**. [According to Francogene, the "haplogroup from Y-STR : I1-M253 *(I-M253)* Fiabilité/Reliability (now reported as the further downstream subclade, **I-Z58**): 70% as determined by FamilyTreeDNA]. "WHAT! Wait a minute! That didn't agree at all with what I had believed to be the Saucier "default" haplogroup, as the major group "R" doesn't match major group "I", IN ANY WAY! How could this be? Where did they get their information? How many different people had reported this result and which son of Jean Baptiste Saucier [JB 1] were they descended from (see chart below)? Perhaps a single person had contributed their results, and sometime in the past, one of their ancestors WASN'T actually fathered by a Saucier (termed **NPE, or non-paternity event** by genetic genealogists).

According to current research, the primary group "R" appeared 16000 years AFTER primary group "I", so the last common ancestor for both lived tens of thousands of years ago, and not 300 years ago in Mobile. I must then "follow the science" to the only possible conclusion, i.e., someone, somewhere was not a Saucier!! At least not one related to the other founding Saucier families in North America. There was only one action that might solve the discrepancy; i.e., determine the Y-DNA primary haplogroup and subclades from one or more living male descendants of the other two sons of JB1



who produced progeny, as they should also have the "default" Saucier Y-DNA. Best two out of three. I set out to do just that; i.e., identify and verify the apparent "default haplogroup" of Saucier descendants. With considerable research into present day kin, I was able to locate, verify pedigree, and test one volunteer living male descendant of brothers Henri and Francois, as well as a descendant of Charles, brother of JB 1, whose family remained in Canada. Easy peasy. All results agreed: subclade haplogroup **I-Z58**. The results I didn't want to hear! MY line is the victim of an NPE. Admittedly a small sample size due to expense, as well as time devoted to finding and convincing volunteers; however, all volunteers were still living in the areas where their ancestors had first settled, thousands of miles apart and separated from their siblings in the early 1700s, yet maintaining their Y identity. My amateur opinion is that it's a very reliable result.

Next step: identifying the when, where and whom of the NPE. Not so easy as the first step.

First, I found that two verified third cousins matches on 23&Me, also matched Y-DNA with me to a pretty far downstream level of R-M269; i.e., **R-L1066**. Being third cousins, our most recent common ancestor was our g-g-grandfather Lazare, which led me to conclude that he would've also been R-L1066, indicating that either he (Lazare) was not the son of his pedigree father, Nicolas, or that Nicolas was also **R-L1066** and not the son of his pedigree father, Simon, thereby establishing to some extent, a possible "most recent" NPE.

What to do next? For reasons that I won't get into here, I decided to continue from the top with the lineage of JB 2. Unfortunately, JB 2, prior to his early demise, produced only one son who lived to maturity, JB 3, leaving me with only the one immediate descendant to pursue.

I considered JB 3 to be a good candidate for an NPE due to the circumstances of his not so routine life. A traveler/guide/translator, he married Catherine Desmarest, who it appears from sacramental records for their children, often accompanied JB 3 on his travels, but I thought she had perhaps been left alone in the Opelousas area for extended periods which might have afforded opportunity and reason to seek other company. The couple eventually parted, she staying with the kids in the Opelousas area, and JB 3 accepting the position of Quapaw translator at Arkansas Post ca 1782, a position he held for at least 25 years, never to return to Opelousas. The male children of JB 3 who

survived to reproduce were Simon, Joseph, Louis, children of Catherine; and, Jean Baptiste, child of an unidentified Quapaw woman at Arkansas Post.

Descendants of Simon were myself and the aforementioned third cousins, so initially no additional testing was performed, although I also already had a Big-Y test with FamilyTreeDNA, revealing five additional downstream subclades.

One volunteer each from descendants of both Joseph, Louis and Jean Baptiste were located and tested. Others were likely available, but were not pursued. Results for the first two ostensibly matched each other and myself, with a major subclade of R-M269, suggesting that JB 3 had fathered all three of his children with Catherine Desmarest, and HIS father, JB 2, was also R-M269.. Later testing of a descendant of his son with the Quapaw woman, Jean Baptiste, tested at I-Z58, an unexpected result probably indicating that JB 3 and his Arkansas descendants were/are "true" Saucier, as well as his sons with Catherine Desmarest.

The devil is in the details! Looking further downstream at results from 23&ME, the descendants of Joseph and Louis are not closely related to me, nor to each other, and none of us to Jean Baptiste, son of the Quapaw woman.

What happened with the three sons of Desmarest? At this time I can only conclude that ALL had an NPE sometime in their lines. In the families of Simon's brothers, Joseph and Louis, an NPE could have occurred at any generation of their respective progeny, and maybe even more than once in a particular line, or not at all. It's possible that the two tested descendants of those two brothers had an NPE with their father, grandfather, or way back to the sons of Joseph and Louis, and coincidentally with individuals also in the R-M269 haplogroup, which seems to be a very common group for the early families of LA. Depending on the generation at which the NPE occurred, and the number of male descendants in that generation, not all would necessarily be R-M269 today. Due to the time and effort needed to determine if that had indeed occurred, I'm leaving it up to those descendants to pursue any additional research for their line (and hope they will let me know the results).

As for my line, at this point, believing that JB 3 was I-Z58, I narrowed down the possible generation for the NPE to that of Simon, or his son Nicolas. Testing of a descendant of another son of Simon should have provided an answer. Unfortunately, the family of Simon II disappears from the records after 1850, and I've not been able to find a living descendant. My only other alternative was to find and test a descendant of Nicolas' only other son to reproduce, brother of Lazare, Theodule Defrange. Not surprisingly, that gentleman tested at R-L1066, same as me and my third cousins, leaving me to conclude, since Lazare and Theodule descendants matched, that their father, Nicolas, was also very likely to have been R-L1066, as would've been his biological father, who was NOT Simon.

Circumstances of the lives of Simon and Emelie Chatelain provide reinforcement for my NPE conclusion. The couple resided for several years at the Bayou Boeuf area of Rapides Parish, with Emelie's father, Nicolas, living nearby. The last mention found of a living Simon was as the *parrain* of two of his nieces in 1807, baptisms recorded at St. Landry. It is assumed that Simon and Emelie were at Bayou Boeuf until his death, as the marriage record for son, Nicolas, states that he was a native of that settlement. It has also been thought that Simon died ca 1809-1810, as Nicolas was born in Feb. 1810 and baptized at St. Landry in Oct. 1810. The widow, Emelie, married Charles Fontenot in June 1811. I think it likely that Simon died in 1808 or early 1809, prior to the conception of Nicolas by the unknown paramour. Emelie may have hidden that fact, depending on when Simon actually passed, by locating elsewhere and fibbing to the baptizing priest, as I've not been able to find her and her kids anywhere in the Dec. 1810 census, including her father's household at Bayou Boeuf.

Final conclusions: (1) My line of the Saucier family is no longer descended from a Saucier progenitor. Due to the small number of reproducing males in the line, likely all living male descendants of Simon and Emelie Chatelain are likewise affected. (2) The progenitor of our line is unknown at this time, but he probably fathered Nicolas Saucier by Emelie Chatelain ca 1809.

Living with the initial shock. First, we are still legally Sauciers. Second, one might consider our branch as being adopted. Third, no Saucier living today has any significant amount of DNA (other than Y-DNA) from JB 1 and/or Gabrielle Savary. What really disturbs me is the deletion from my tree of all the now irrelevant research and information that I've accumulated over many years. Perhaps someday, when detailed Y-DNA tests and matching becomes cheaper, a likely candidate for our progenitor will be found. (Special thanks to genetic genealogist, Deadra Doucet Bourke for her guidance)

Generation	Relationship	How Many?	DNA %
7	GGGGG-grandparents	128	0.78
6	GGGG-grandparents	64	1.56
5	GGG-grandparents	32	3.12
4	GG-grandparents	16	6.25
3	Great-grandparents	8	12.5
2	Grandparents	4	25
1	Parents	2	50
	You	1	100