YODER REVELATIONS FROM THE "BIG Y" DNA TEST (700 MARKERS)

(Editor's note: The Yoder Newsletter began Yoder DNA testing over 15 years ago, using "Family Tree DNA", also used by National Geographic Magazine for its Human Genome Project. Over time, the number of individual markers on the Y chromosome measured by Family Tree DNA has grown to 700 (the "Big 700" Y DNA test). An Alsatian Yoder (Amish line) member of our test group had already upgraded his test to the 700 marker level, and the YNL used reader donations to pay for upgrades by a descendant from the American Mennonite Yoder line and another from the Joder family still living is Steffisburg, Switzerland. By triangulating these three tests we are able to present MOST of the 700 Marker Y DNA profile for their most recent common ancestor, namely Kaspar Joder bc1548 who m. Margareth Moser. This profile is summarized on the Yoder Newsletter through the link at the home page www.yodernewsletter.org.

. Many thanks to DNA expert Darvin Martin for his very technical analysis of how the Yoder/Joder surname branches from common ancestors long before surnames began to be used.)

Contributed by Darvin Martin

For about ten years we have known that the Y-DNA of the Swiss Mennonite/Amish Yoder, Zimmerman and Martin families match quite closely, indicating that all three families share a common paternal ancestor, perhaps 600 to 900 years ago, before the time of modern surnames. However, at that time we did not have access to testing with high resolution to determine how these respective families branched from a common origin. Now, in 2022, we have tested with high enough precision to determine how each of these family's relate to each other from before the time of surnames, however many questions remain answered. I last published on this topic in the *Yoder Newsletter* 72 (October 2018), page 7. I have now included an update along with a chart detailing these branches.

Typical Y-DNA testing examines and compares STRs (short-tandem-repeats) in the DNA code to determine how closely families of the same or similar surname are related within a genealogical time frame. These tests typically involve 37, 67, or 111 "STR markers." Each STR comprises a distinct section of Y-DNA where a unique sequence is repeated for a certain length of code. The number of repeats of any particular STR tend to be relatively stable. When they do change, they usually change only in single steps (one higher or one lower), therefore comparing these repeats have posed a good indication of how closely males are related through a common paternal ancestor. First cousin or second cousin males who descend from the same paternal ancestor will likely have exactly the same 111 STR markers, while more distantly related males will have increasing differences. Those repeats have been easier (and cheaper) to test than the full DNA code. This is the reason why Y-DNA testing for genealogy has moved in the direction of expanded STR testing. The most recent and elaborate tests are 500 or even 700 STR marker tests. We now have Yoders, Zimmermans and Martins who have complete all these tests. This gives us a much better picture of how these three families (and a few others) all descend from a common male paternal ancestor.

In addition to these STR markers, Y-DNA testing has advanced into testing specific mutations (SNPs) at exact positions on the Y-Chromosome. The Human Y-Chromosome includes some 58 million base pairs. This testing has advanced to determine an exact position upon which an "A" in the code changed to a "T," a "C." to a "G" or any combination thereof. These changes are so specific and occur so infrequently that they can be nested chronologically and geographically across the whole spectrum of human existence. Yoders, Zimmermans and Martins have all expanded testing to include SNPs we share in common, along with several SNPs that are now defined as unique and distinct to each family. In fact, this recent testing resulted in newly discovered and newly named SNPs that are represented in common in only our branch of a few selected families of Bernese Swiss origin.

On the chart below the SNPs pertinent to the Yoders and those families closely related to the Yoders are nested chronologically into their respective lineages based on Y-DNA. The chart begins with SNPs we share in common with diverse families across northern Europe, likely from the time our Germanic ancestors lived in the territory north of the Roman Empire. Corresponding to what we know about socio-political history, our common ancestors were likely among

the Germanic tribes who caused the fall of the western Roman Empire in the 5^{th} century AD, and thereafter settled in western Switzerland, within what is now Canton Bern.

The red numbers before each list of named SNPs is an estimate of the generations back in time indicating an approximate time frame for the creation of those SNPs. Where multiple SNPs appear of the same line, we have not yet developed chronological differentiation between individual SNPs on that line. In time, the chart will become more detailed as data from more testers becomes available, but the basic chronology will remain the same. We can now say with confidence that the Yoders and the Martins are slightly more closely related paternally to each other than either family is to the Zimmerman/Carpenter lineage.

Z190, F	FT2426, FT2677, FT3240
* - co	ommon with certain Germanic families that spread across western Europe during and after the Roman Empire.
ce	rtain families of POWELL, JENNINGS, PATTERSON, EMERSON, SEWELL, KELLDORF
80 FGC	17811 - defined geographically as German Rhineland, Dutch, English, Swedish, and some Finnish
* -	common families GOEKE, GOERTZEN, OLOFSSON, HEAPS, HARRINGTON, NORRIS, DEWES
60 Y	7280, BY47949, FT13462, FT146942, FT46943, FT6997, FT7988, FT8244, FT8482, Y30735, Y30736, Y7281
	* - defined geographically as Swiss or Palatine, families include JACOBS
40	FT422838, FT422060, FT423335
	* - JORDI family (a derivative of YODER?), BECKWITH family
40	Y7818, BY46579, Y7819 -Switzerland
	* - Swiss LAMPERT family (from Fläsch, Graubunden, Switzerland)
	Y29666, FT10865, Y30730, Y30731, Y30732, Y30733, Y30734 (YODER, MARTIN, TOMME, FOELLE
	12 BY166952, BY167177, BY210935, BY211430, FT443035 - (YODER only)
	* - YODER, a descendant who remained in Switzerland
	9 BY166829 - SNP distinct to three American YODER families of Swiss descent
	20 FT84192 - SNP common to MARTIN, TOMME, and FOELLER family
	* - FOELLER, a descendant of Caspar Foeller, Niederhausen, Pfalz, Germany
	15 BY28636 - SNP common to MARTIN and TOMME family; Rueggisberg, Bern
	* - TOMME , a descendant of Jacob Tomme, Bernese Swiss immigrant to New Bern, NC, c1710
	9 BY28637 - MARTIN descendants of 1727 imm. David Martin and 1731 imm. Hans Heinrich Martin
	7 BY3097 - MARTIN descendants of immigrant David Martin's grandson David Maritn (1785-1839)
	BY176351, FT16521 - SNPs in common for ZIMMERMAN/CARPENTER, BROWN and ZRYD family
	* - ZRYD family (Switzerland to Ohio)
	17 A10757, A10756, A10759, Y167705 - SNPs in common for ZIMMERMAN/CARPENTER family
	9 FTA98318 - ZIMMERMAN family of Frederich Wilhelm Zimmerman, 1729, of Washenheim, Germany
	12 BY194926, BY141579, FT13475, FT46944, Y168848 - (ZIMMERMAN and BROWN)
	* - ZIMMERMAN, descendant of Michael Zimmerman (b. 1617; Steffisberg, Switz.)
	7 BY193465 - BROWN, descendants of William Brown (b. 1812, of Switz.)
	BY176350 - SNP common to remaining ZIMMERMAN/CARPENTER family
	9 A10758 - CARPENTER family (Steffisburg, Switzerland to Lancaster Co., Pa., to North Carolina)
	9 BY177050, BY1766998 - ZIMMERMAN
	6 FT83713, FT83146, FT84202 - descendant of Daniel Zimmerman (b. 1813; Ger., immigrant to Ohi