Y-DNA Genetic Signature of the Savran-Bendery Chassidic Dynasty

Connecting to the Great Rabbinic Families through Y-DNA

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Abstract

Genetic genealogy study focused on the Y-DNA pedigree of the Savran-Bendery Chassidic dynasty from Ukraine and Bessarabia during the nineteenth century. Genealogical and Y chromosome genetic data are presented. All patrilineal descendants of the Wertheim-Giterman rabbinical lineage share the L117 SNP of Y-DNA haplogroup E, previously described as E-M35, E-M35.1 and E1b1b1 in the literature.

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Background

According to Arthur Kurzweil, one of the pioneers of Jewish genealogy: “

For the Jewish people … our royal families have been those of the illustrious rabbis
.”17 Through the practice of
shidduch
(arranged marriage), these rabbis and their descendants tended to intermarry.26 Multiple generations of these families of rabbis provided guidance and leadership within the framework of Jewish communal self-government and were the interpreters of Jewish law and ethics.6

These great rabbinic families have long been recognized for their immense contribution to the preservation of Jewish identity and culture. However, it is only recently that Jewish genealogists have realized that these rabbinical families have yet another magnificent gift to offer their descendants – their inherited DNA. Individuals of Jewish descent have long attempted to connect themselves and their families to the family trees of these great rabbinic families. Now it is possible to use Y-DNA testing to identify and verify these ancestral

connections, and to genetically connect to these rabbinic families.

The current study focuses on the Y-DNA pedigree of the Savran-Bendery Chassidic dynasty, one of the most prominent Chassidic dynasties to emerge from Ukraine and Bessarabia during the 19th century.[41] It presents the genealogical and genetic data that characterize this rabbinic lineage, and by which its descendants may be identified, thereby providing many Ashkenazi (Eastern European) Jews with the essential genealogical and genetic information necessary to bridge the gaps in their own paper trails, and discover their lost heritage.

Map of Hassidic Court sites in 19th century Eastern Europe.

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https://www.surnamedna.com/wp-content/uploads/2015/02/Map1a-Rabbinic-Courts-in-Ukraine.jpg

Fig. 1: Major Hasidic courts in Western Ukraine, 1815–1929.

Location of Savran and Bendery in the context of 19th century Hassidic courts of Eastern Europe. Based on a map prepared for the exhibition “Time of the Hasidism.” by El?bieta D?ugosz, The Historical Museum of Kraków—Old Synagogue and reproduced on YIVO Encyclopedia. Used by permission.[41]

Challenges to Jewish Genealogy in Eastern Europe

Major challenges and difficulties abound in the study of Jewish genealogy. These challenges and difficulties are well known to Jewish genealogists: frequent pogroms, expulsions and migrations, the dearth of civil and Jewish community records (especially in Eastern Europe), the lack of Jewish surnames, language barriers, and high rates of illiteracy resulting from the severe educational and economic restrictions which were imposed upon the Jews living in the Pale of Settlement in Czarist Russia, between 1791 and 1917. On top of all of this, there was the widespread destruction of the repositories of Jewish learning and culture, including synagogues, yeshivas and cemeteries, which took place during the Holocaust. As a result of these circumstance, for many people of Ashkenazi Jewish descent, few if any genealogical records predating their ancestors’ immigration to America are accessible, if they exist at all, which helps to explain why so few Ashkenazi Jews have family trees which extend beyond a few generations.

The genealogies of the great rabbinic families, whose lines of descent have been studied and preserved for centuries, have long been relied upon to help fill this void. Due to the early adoption of fixed surnames, well-documented lineages, and high rates of intermarriage with other rabbinic families, a wealth of genealogical information exists in the Jewish literature for individuals who can establish descent from one or more of these great rabbinic families.

As a result, researchers who find a prominent rabbi in their family typically can trace their lineage much further back in time than can most European Jewish families. Rabbinic sources can provide priceless information regarding their descent to Jews who might otherwise have no means of discovering who their ancestors were. They provide the contemporary Jewish community with a way to connect to their ancestors, and to their Jewish heritage. Moreover, due to the endogamous nature of the Ashkenazi Jewish population, many, if not most Ashkenazi Jews descend from a prominent rabbi or rabbinical lineage, although they may not be aware of it.

As growing numbers of Ashkenazi Jews turn to genetic testing as a way of discovering their roots, it is becoming increasingly clear that characterizing the unique Y-DNA markers of the great Ashkenazi rabbis and rabbinical lineages will play a critical role in the ultimate success of such endeavors. Y-DNA studies such as the

WIRTH13 , Polonsky22 and Bacharach28 projects, have demonstrated the intrinsic value of characterizing rabbinic Y-DNA in an effort to bridge the major gaps in the paper trail for Ashkenazi Jews.

Y-DNA studies of the great Ashkenazic rabbinic lineages combine the family tree of a renowned rabbinical lineage with the genetic data that describe the unique Y-DNA pedigree of that lineage. The Y-DNA pedigree is defined by the unique Y-DNA allele markers or genetic "signature" of a specific rabbinical lineage. This genetic signature represents the gold standard by which Y-DNA test results can be compared, to determine if a given individual is a descendant of a particular rabbi or rabbinical lineage.

Whenever a family tree or paper trail for living descendants of a rabbinical lineage exists, Y-DNA testing can be conducted, both to confirm the validity of that paper trail, and to identify the unique Y-DNA "signature" of that lineage, back to its earliest male progenitor. Once this has been accomplished for a particular rabbinical lineage, Y-DNA testing can then be used to help identify other members of the extended family, many of whom have different family surnames, and may be completely unaware of their rabbinic ancestry. The lead author's previous Y-DNA study of the Polonsky rabbinical lineage has demonstrated this process.22

The present Y-DNA study focuses on the Savran-Bendery Chassidic dynasty, one of the most prominent Chassidic rabbinical dynasties to emerge from 18th century Russia. The Savran-Bendery dynasty includes the Wertheim rabbinical dynasty, descending from Rabbi Aryeh Leib Wertheim of Bendery, and the Giterman rabbinical dynasty, descending from his brother, Rabbi Moshe Tzvi Giterman of Savran.3741

Y-DNA testing of descendants of both of these lineages has successfully demonstrated their descent from one common ancestor, validated the traditional paper trail, and identified the Y-DNA signature of the Wertheim-Giterman rabbinical lineage. By comparing their Y-DNA markers to this Y-DNA signature, many newly discovered descendants of this rabbinical lineage, or of the forebears of this lineage, can be identified.

The Savran-Bendery Chassidic Dynasty

Chassidism became exceptionally popular in Ukraine, where it appealed to the traditional Jewish community. During the early 19th century, the best-known rabbinic courts were those of Mordekhai Twersky of Chernobyl (1770–1837), Moshe Tzvi Giterman of Savran (1775–1838), and Yisrael Friedman of Ruzhin (1796–1850)39 . All three rabbinic dynasties were connected by both religious and family ties.

The Savran-Bendery Chassidic dynasty was active from the late 18th century until the Holocaust. The founder of the dynasty was Rabbi Shimon Shlomo (circa 1750 – 1802), son of Rabbi Avraham ha-Rofe. He was the Maggid (preacher) of Savran and disciple of the Maggid of Mezeritch, the primary disciple of the Baal Shem Tov, the founder of Chassidic Judaism.

Sketch portrait Rabbi Yosef Wertheim (1881-1946)

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https://www.surnamedna.com/wp-content/uploads/2015/02/Image2.YosefWertheim.jpg

Fig. 2: Rabbi Yosef Wertheim of Bendery (1881-1946)

Photo provided courtesy of Rabbi Yitzhak Meir Hager, ADMOR of Savran of Makhon Gnazei Shoshanim, Jerusalem.

Shimon Shlomo's two sons established independent Chassidic dynasties in Savran and Bendery. The elder son,

Rabbi Aryeh Leib Wertheim (c. 1772–1854),16 settled in the town of Bendery in Bessarabia (now Bender, Moldova), where in 1814 he founded the only Chassidic dynasty ever established in that region. His Chassidim were mainly from Bessarabia, though some were from Odessa; he served as both rabbi and rebbe.36

Rabbi Aryeh Leib Wertheim was a member of one of the most important rabbinical families in the Ukraine.211 His first wife, Leah Hirsh, was the granddaughter of Rabbi Menakhem Nakhum Twersky of Chernobyl, the founder of the Twersky Chassidic dynasty. His second wife, Yehudit Shapira, was the daughter of Rabbi Yehuda Meir Shapira, the son of the renowned Rabbi Pinkhas Shapira of Koretz.

Rabbi Aryeh Leib Wertheim's son Shimon Shlomo Wertheim (c. 1805–1864) and later his grandson Yitz?ak Wertheim (d. 1911) succeeded him, as did his great-grandson Shimon Shlomo Wertheim (c. 1865–1924). The last of these was attracted to Zionism and was a member of the Mizra?i movement, as was his son Yosef Wertheim (1881–1946), who was a rabbi in several communities in Poland. Yosef moved to Palestine around 1940 and from that time the Bendery Chassidic dynasty ceased to exist.41

Portrait of the couple Leib & Vitya Wertheim, c. 1900

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Fig. 3: Leib & Vitya Wertheim, c. 1900

Photograph (c. 1900) of Leib (born c. 1855), son of Burikh (born c. 1817), and grandson of Rabbi Aryeh Leib Wertheim (born c. 1772) courtesy of Igor Wertheim.1830

The Savran Chassidic dynasty was established by Rabbi Moshe Tzvi Giterman (1775–1838), the younger son of Shimon Shlomo of Savran, and a disciple of Barukh of Mezhbizh and Levi Yitz?ak of Berdichev. After his father's death circa 1802, Moshe Tzvi took over his position as the Maggid of Savran.

After the death of his teachers, around 1811, Moshe Tzvi began to lead a Chassidic community. His status as one of the most important

tzaddikim
(plural of
tzaddik
, or "righteous one") and influential Chassidic rebbes in Ukraine, along with Yisrael of Ruzhin and Mordekhai of Chernobyl, grew stronger after the death in 1825 of the senior
tzaddik

of that generation, Avraham Yehoshua Heshel of Apt (Opatów, Poland).
The tzion ha-kodesh (grave site) of the Holy Rebbe Moshe Tzvi of Savran

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https://www.surnamedna.com/wp-content/uploads/2014/09/Image4.HolyRebbeSavran.jpg

Fig. 4: The tzion ha-kodesh of the Holy Rebbe Moshe Tzvi

Grave site of the Rabbi Moshe Tzvi of Savran, Ukraine. Public domain.

Moshe Tzvi went on to become the Rabbi of Berdichev after the death of Rabbi Levi Yitzhak of Berdichev, and he later became the rabbi of the towns of Uman and Kishinev as well. His following numbered thousands of Chassidim in Volhynia and Bessarabia.[35]

He was known as a learned Torah scholar, who was respected by the leaders of the

Haskalah
Jewish enlightenment movement between the 1770 and 1880.[1] He was also a firm leader, and very staunch in his views. Between 1835 and 1838 he led a fierce struggle against the Bratslav Chassidim, led by Rabbi Natan Sternhartz of Nemirov, issuing a severe writ of excommunication against them.

In 1831, Moshe Tzvi left Savran, perhaps because of an epidemic, and moved to nearby Chechelnik, where he died in 1838. He did not leave many published teachings; what survives was collected by one of his disciples into the book,

Likute shoshanim

(1872).
Moshe Tzvi's son, Shimon Shlomo (c. 1800–1848), took his father's place in Chechelnik.[9] Two of Shimon Shlomo's sons, who succeeded him, were at odds with each other, and each led his own Chassidic court – Moshe (c. 1827–1876) in Chechelnik and David (d. 1912) in Savran.

David of Savran was known for his belligerent character, and his Chassidim frequently quarreled with other Chassidim. A controversy with a Russian government official led to David of Savran's exile to Ovruch, in Volhynia. His sons were not Chassidic rebbes, and his son Shlomo was conscripted by force into the Russian army.[14]

David of Savran's grandson, Isaac Giterman (1889–1943), the son of Moshe Giterman and Malka Twersky, was born in 1889, in Hornostopol, Ukraine. Through his mother, he was descended from the Schneersohn and Twersky Chassidic dynasties, and he was raised in proximity to his grandfather's Chassidic court.

Isaac Giterman was the Director of JDC Operations in Poland from 1926-1939. Forced to flee Warsaw in 1939, he returned in 1940 and served as one of the four JDC Directors in Warsaw during World War II. After the establishment of the Warsaw Ghetto, he provided for the needs of the ghetto residents, supported cultural activities in the ghetto, and helped the underground resistance groups. He refused all opportunities to escape, and was murdered by the Nazi SS in 1943.[14]

Isaac Giterman (1889–1943)

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Fig. 5: Isaac Giterman (1889–1943)

The Guterman spelling is found in many rabbinical sources and is also closer to the German root meaning of the word "Gut," meaning "good or kind." However, the Giterman spelling is the way that most contemporary

descendants of the lineage spell their surname, so in order to avoid the confusion associated with using two different spellings of the surname, we use the more contemporary spelling. Photo used by permission.14

Shlomo “the Second” (c. 1858–1919), the son of Moshe Giterman of Chechelnik, succeeded his father. He was very young when he rose to leadership, and attained great popularity. His descendants served as rabbis in Podolia and Bessarabia. After the Holocaust, some of his descendants remained in the USSR and others emigrated to the United States and to Israel.

Barukh Giterman was a third son of Shimon Shlomo (c. 1800–1848), and the brother of Moshe and David.28 Barukh’s son, Moshe Tzvi, adopted the Hager surname from his mother, Folya Hager, daughter of Rabbi David Hager.27 Barukh became known as the Savraner rebbe, and another branch of the dynasty, descended from him became part of the Kosov-Vizhnits dynasty, which exists to this day in Israel. Note, however, that Barukh Hager may have been the son of Rabbi Moshe Tzvi of Savran (d. 1838), and not Moshe Tzvi’s son Rabbi Shimon Shlomo (d. 1848).

Photograph of Hassidic Rebbe Yitzhak Meir Hager

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Fig. 6: Current Savraner rebbe, Yitzhak Meir Hager

Rabbi Yitzhak Meir Hager is the current Savraner rebbe. He is the son of the previous Savraner rebbe, renowned Torah scholar and Dayan Rabbi Yissakhar Dov Hager of Har Nof Jerusalem, who passed away in 2013. Permission to use photo granted by Rabbi Yitzhak Meir Hager, ADMOR of Savran of Makhon Gnazei Shoshanim, Jersusalem

The Savran-Bendery Chassidic dynasty is a particularly interesting lineage from a genealogical research standpoint, due, in part, to its many marriage connections to other iconic rabbinical lineages and dynasties throughout Europe and the Russian Empire. These ancestral links and connections are summarized in Figure 7. Figure 8 takes a closer look at the links between the Savran-Bendery and Kosov-Vizhnits dynasties.

Due to these many marriage connections between rabbinical lineages, an individual need only to link to a relatively recent Wertheim or Giterman ancestor via his unique Y-DNA signature, thereby inheriting that ancestor’s family connections, or

yichus

. The ancestral links and connections summarized in Figures 7 and 8 below will assist descendants of the Savran-Bendery Chassidic dynasty in tracing their ancestry.

Ancestral Links and Connections

Notable among these interrelated rabbinic families is the Spira/Shapira/Shapiro rabbinical lineage, which traces its descent from Rashi (1040-1105) through the Treves rabbinical lineage, and which produced a long line of distinguished rabbis over the centuries.23

The Savran-Bendery Chassidic dynasty connects to the Shapiro rabbinical lineage through multiple marriage connections. Aryeh Leib Wertheim’s first wife was Leah Hirsch. Her grandparents, Rabbi Menakhem Nakhum

Twersky, the founder of the Twersky rabbinical dynasty, and Sarah Shapira, were both descendants of the Shapiro rabbinical lineage; Rabbi Twersky from Miriam Spira through the Katzenellenbogen rabbinical lineage, and Sarah from Miriam's brother, Rabbi Peretz Spira, through the Shapiro rabbinical lineage.

Aryeh Leib's second wife, Yehudit Shapira (b. 1787), was the granddaughter of Rabbi Pinkhas Shapira of Koretz, and also a descendant of the Shapiro rabbinical lineage.[19] Aryeh Leib and Yehudit had two daughters, Rakhel Sheindel (b. 1831) and Rivka Yuta (b. 1835). Rakhel Sheindel Wertheim married Rabbi Yosef Katzenellenbogen of Graseles and Rivka Yuta Wertheim married Rabbi Levi Yizhak Derbaremdiker, descendant of Rabbi Levi Yitzhak of Berdichev.

Rabbi Aryeh Leib Wertheim and Leah Hirsch's daughter, Sima Wertheim married Rabbi Eliyahu Pinkhas Polonsky, a great-grandson of Rabbi Pinkhas Shapira of Koretz, thereby connecting the Polonsky and Shapiro rabbinical lineages to the Savran-Bendery Chassidic dynasty. The lead author's interest in the Savran-Bendery Chassidic dynasty originated from his known descent from the Wertheim rabbinical lineage, through this marriage connection.

Leah Hirsch's sister Khava was similarly descended from the Shapiro rabbinical lineage through both of her grandparents, Rabbi Menakhem Nakhum Twersky and Sarah Shapira. Khava's son, Rabbi Yisrael Friedman, great-grandson of the Maggid of Mezeritsh, was the founder of the Friedman rabbinical dynasty of Ruzhin and Czortkow. Rabbi Yisrael's daughter, Leah, married Rabbi David Halperin, thereby connecting the Halperin rabbinical lineage to the Savran-Bendery Chassidic dynasty.[8]

Another daughter of Rabbi Yisrael Friedman, Miriam, married Rabbi Menakhem Mendel Hager of Vizhnits, thereby connecting the Hager rabbinical dynasty of Kosov-Vizhnits to the Savran-Bendery Chassidic dynasty. Rabbi Menakhem Mendel Hager was descended from the Shapiro rabbinical lineage through his mother Tzipora Shapira, the granddaugher of Rabbi Pinkhas Shapira of Koretz. The Savran-Bendery Chassidic dynasty also connects to the Hager Chassidic dynasty of Vizhnits through Barukh Giterman, son of Rabbi Shimon Shlomo Giterman (c. 1800–1848).

Savran-Bendery Chassidic Dynasty Diagram

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Fig. 7: Savran-Bendery Chassidic Dynasty Diagram

Lineages have been condensed by omitting intermediate generations in order to show the major ancestral links and connections in one figure. Descriptions have been added to clarify the relationships between ancestors. The family trees from which the extended family charts in Figures 1 and 2 were prepared are posted online.[23]

By virtue of their descent from Rabbi Menakhem Nakhum Twersky, and the Twersky rabbinical dynasty, Leah and Khava also descend from the Luria rabbinical lineage through the marriage of Rabbi Aharon Luria (c. 1400) to Miriam Spira (c. 1403), and the Katzenellenbogen/Wahl rabbinical lineage from Rabbi Meir Katzenellenbogen (1482), the great-grandson of Rabbi Aharon Luria. There were at least eight intermarriages between descendants of Rabbi Shimon Shlomo of Savran (c. 1750 – c. 1802) and Rabbi Menakhem Nakhum Twersky of Chernobyl (1730–1798).[24]

There is also some anecdotal historical evidence which suggests that Rabbi Aryeh Leib Wertheim of Bendery and his brother, Rabbi Moshe Tzvi Giterman, were descendants of the renowned Rabbi Samson Wertheimer of

Vienna. The Russian version of the Jewish Encyclopedia states: “

… and in 1840s, by order of the first local rabbi, tzaddik Leib Wertheim (grandson of Vienne rabbi Shimshon Wertheim), the synagogue, due to very poor condition, was demolished…
”[15] Similarly, the Rabbi’s Encyclopedia states: “
Rabbi Aryeh Leib Wertheim, a descendant of ha-sar (minister) Rabbi Shimshon Wertheim[er], established [the] dynasty of Bendery

.”[4]
In keeping with these two rabbinical sources, the Bessarabia Memorial Book states: “

… in Bendery, on the armchair of rabbanut (Av Beit Din
[head of the rabbinical court]
), sit tzaddik Rabbi Leib Wertheim, a descendant of Rabbi Shimshon Wertheim of Vienna, also known in legends of Hassidim as Rabbi Shimshon Vienner.
”[12] A fourth Hebrew source mentions Rabbi Moshe Tzvi Giterman also being a descendant of Rabbi Samson Wertheimer: “
Rabbi Moshe Tzvi Guterman, born in 1775, son of rabbi Shimon Shlomo, (died 1790 or 1822), Maggid of Savran, who
[Moshe Tzvi]
was related to rabbi Shimshon Wertheimer, ABD Vienna.

”[34]
Unfortunately, none of these four sources provide any genealogical information to describe

how

Rabbi Aryeh Leib Wertheim descends from Rabbi Samson Wertheimer, or to document and verify their claimed connection. Perhaps, based upon the similarity of the surnames and the importance of their respective rabbinical dynasties, the authors of these different historical sources simply assumed that Rabbi Aryeh Leib Wertheim was descended from Rabbi Samson Wertheimer, or perhaps the author of just one of them did, and the other three sources obtained this information from the first source.
In an effort to identify a genetic connection between the Wertheimer and Wertheim rabbinical dynasties, the lead author conducted an autosomal DNA study of known descendants of both lineages, the results of which indicating that there was, indeed, a high probability that the two lineages were genetically linked.[20] However, the question of whether and how the Wertheim Chassidic dynasty descends from Rabbi Samson Wertheimer cannot be definitively answered based upon the existing genealogical evidence or paper trail, and the nature of that relationship remains unresolved.

Irrespective of the possible Wertheimer connection, the Savran-Bendery Chassidic dynasty is tightly interwoven with many of Europe and Russia’s most notable and renowned rabbinical families and lineages. This vast, highly interrelated network of distinguished rabbinical families, for which there is extensive genealogical information, combined with several other factors, makes the Savran-Bendery Chassidic dynasty well suited for genetic genealogical research purposes. These other factors include: (1) the existence of key paternal descendants with known paper trails from different branches of the family, (2) the willingness of these paternal descendants to take a Y-DNA test, and (3) the time period between the founder of the lineage and present-day descendants, which largely coincides with the era of Jewish surnames.

Abbreviated family tree diagram of Wertheim, Giterman, and Hager Rabbinical Lineages

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https://www.surnamedna.com/wp-content/uploads/2015/02/Image8.WertheimerGitermanAncestryTree.jpg

Fig. 8: The Wertheim – Giterman – Hager Lineage

Lineages have been condensed by omitting intermediate generations in order to show the major ancestral links and connections in one figure. Descriptions have been added to clarify the relationships between ancestors. The family trees from which the extended family charts were prepared are posted online.[24]

Due to the endogamous nature of the Ashkenazi Jewish population, previously unidentified descendants may be able to establish descent from one or more of these distinguished rabbinical families on the basis of their genetic match to the unique Y-DNA markers which characterize the Savran-Bendery Chassidic dynasty.

Identification of Documented Descendants of the Wertheim-Giterman Lineage

Genealogical research of the Wertheim-Giterman lineage conducted by the authors over a three-year period laid the necessary groundwork for the Y-DNA study. The purpose of this research was the creation of a comprehensive family tree for the Wertheim-Giterman lineage, and involved identifying and tracking down paternal descendants who lived all over the world.

A wide variety of sources including rabbinical books, Russian and American censuses and vital records, immigration records, gravestone photographs, private family trees, internet sources, and personal contacts were consulted to make the tree as complete as possible. The result was a family tree containing over 650 documented descendants of the Wertheim-Giterman lineage.[24]

From this family tree, paternal descendants of both the Wertheim and Giterman branches of the lineage were identified for Y-DNA testing. From this pool of descendants, closely-related individuals from the same branch of the lineage for which Y-DNA test results would be redundant, and individuals without documentation or proof of descent were excluded from the study, leaving four viable candidates for Y-DNA testing.

In an effort to characterize the unique Y-DNA allele pattern or "signature" for the Savran-Bendery Chassidic Dynasty, the authors sponsored Y-DNA tests at the 37-marker level for these four descendants of the Wertheim-Giterman rabbinical lineage: David Wertheim, Igor Wertheim, Oleg Wertheim, and Ben Tzion Giterman.

Three of these Savran-Bendery descendants live in Israel, and the fourth lives in Russia. All four have a well-documented descent from either Rabbi Aryeh Leib Wertheim or Rabbi Moshe Tzvi Giterman.[24] The paternal lines of descent for all four descendants of the Wertheim-Giterman rabbinical lineage are presented in Figure 9.

Editor's Note: During the review process, the authors obtained explicit, written

Table of the Wertheim-Giterman descent lineages

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https://www.surnamedna.com/wp-content/uploads/2014/11/Table1.WertheimerGitermanLineages.jpg

Fig. 9: Paternal Lines of Descent of DNA Participants from the Wertheim-Giterman Rabbinical Lineage

Dates of birth marked with an asterisk (*) were estimated using the standard genealogical assumption of 25

years between generations. The birth year for Ikhel Itsek Wertheim (c. 1873) was estimated by interpolation between known years of birth for his father (1838) and son (1909), and corroborated by his year of marriage (1898).

Y-DNA Test Results

The Y-DNA tests were conducted by FTNDA5 using their standard Y-37 STR (short-tandem repeats) marker panel for the four document Wertheim-Giterman descendants, and four previously unknown descendants identified by their close genetic match, as presented in Figure 10.

Table of Y-STR values for Y-DNA37 Standard STR Values for Descendants of the Wertheim-Giterman Rabbinical Line

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Fig. 10: Y-DNA37 Standard STR Values for Descendants of the Wertheim-Giterman Rabbinical Lineage

Shaded cells indicate STR marker mutations from reference descendants Oleg and Igor Wertheim. Note that the original Russian spelling of David, Igor, and Oleg Vertgeim's surnames transliterates to "Wertheim" in English.

The Y-DNA results showed a Y-DNA match between Igor Wertheim and Oleg Wertheim on 37 of 37 Y-DNA markers, and a match of 36 of 37 markers between them and David Wertheim. The Y-DNA test results for Ben Tzion Giterman closely matched those of the three Wertheim descendants.

The Y-DNA results showed a match of 36 of 37 Y-DNA markers between Ben Tzion Giterman and both Igor Wertheim and Oleg Wertheim, and a 35 of 37 marker match between Ben Tzion Giterman and David Wertheim. Y-DNA SNP tests also identified all four known descendants as belonging to the E-L117 haplogroup.

Identifying the Y-DNA Signature of the Savran-Bendery Chassidic Dynasty

As shown in Figure 9, the most recent common ancestor for the Wertheim and Giterman descendants, Rabbi Shimon Shlomo (c. 1750 – c. 1802), son of Avraham ha-Rofe, lived between six and seven generations ago in the two respective lineages. Hence the Y-DNA evidence corroborates the conclusions drawn from the genealogical evidence – that the four Wertheim-Giterman descendants share a "most recent common ancestor" (MRCA) who lived during the mid-1700s to the early 1800s. Rabbi Shimon Shlomo died several years before surnames became mandatory for Ashkenazi Jews living in the Russian Empire's Pale of Settlement, which is why he never acquired a surname.42

The identical and near-identical Y-DNA 37-marker match among the four Wertheim and Giterman descendants, together with their documented proof of descent from the Wertheim-Giterman rabbinical lineage, provides a high degree of confidence that the Y-DNA allele pattern presented in Figure 10 accurately represents that of the Savran-Bendery Chassidic dynasty. Due to the documented proof of descent, the identical or near-identical Y-DNA results among the descendants, the relatively short time to the most recent common ancestor (TMRCA), and the high degree of confidence in the identity of their common ancestor, there was little benefit to be gained by testing additional Y-DNA STR markers.

Analysis – Time to Most Recent Common Ancestor

Of the four documented descendants of the Wertheim-Giterman rabbinical lineage, two of them, Igor Wertheim and Oleg Wertheim, were identical matches on all 37 Y-DNA markers that were tested. Based upon their identical 37-marker match, it is likely that their allele pattern most closely represents that of their common ancestor, Rabbi Aryeh Leib Wertheim, and that of his father, Rabbi Shimon Shlomo ben Avraham ha-Rofe, as well. Hence, their Y-DNA markers represent the reference standard to which all other descendants' STR markers are compared.

FTDNA's time predictor (TiP®) model predicts an 89.48% chance of their most recent common ancestor (MRCA) living within five generations, and a 93.29% chance of his living within six generations (Figure 11). As shown in Figure 9, their common ancestor, Rabbi Aryeh Leib Wertheim, lived five generations ago in Igor's lineage, and six generations ago in Oleg's lineage, so this prediction is highly accurate.

Ben Tzion Giterman, who descends from Rabbi Aryeh Leib Wertheim's brother, Rabbi Moshe Tzvi Giterman, matches both Igor Wertheim and Oleg Wertheim on 36 of 37 markers, varying on only one of four alleles at DYS464. Because this is known to be a rapidly mutating marker, it is likely that it occurred sometime after the founding generations of the lineage, and during the era of Jewish surnames, but it would require testing of additional descendants in order to determine this with more certainty.

FTDNA's TiP model predicts a 77.93% chance of Ben Tzion's most recent common ancestor with Oleg and Igor Wertheim living within six generations, and an 84.22% chance of his living within seven generations. Again, this is exactly when their common ancestor, Rabbi Shimon Shlomo, did live, however, this prediction, due to the single allele mutation at DYS464, is somewhat conservative – in other words, the model significantly "under-predicts" the true probability of the most recent common ancestor living within the actual or known number of generations.

David Wertheim shows a different mutation of one of the four DYS464 alleles, so he is a 36/37 marker match with Igor and Oleg Wertheim, and a 35/37 marker match with Ben Tzion Giterman. FTDNA's TiP model predicts a 69.54% chance of the most recent common ancestor with Igor and Oleg Wertheim living within five generations, and a 77.93% chance of him living within six generations. This is exactly when their common ancestor, Rabbi Aryeh Leib Wertheim did live, although this prediction, due to the single allele mutation at DYS464, is fairly conservative.

FTDNA's TiP model predicts a 53.82% chance of David Wertheim's most recent common ancestor with Ben Tzion Giterman living within six generations, and a 63.42% chance of his living within seven generations. This is exactly when their common ancestor, Rabbi Shimon Shlomo, did live; however, this prediction, due to the pair of allele mutations at DYS464, is even more conservative.

It has been known for some time that when the paper trail for a particular paternal lineage is known, "time to the most recent common ancestor" (TMRCA) predictions will often overestimate the number of generations to the most recent common ancestor. These somewhat conservative TMRCA predictions are consistent with the results

reported for the lead author's previous Y-DNA study of the well-documented Polonsky rabbinical lineage and other similar studies.[22]

In their recently published article on the possible ancestral origins of the "WIRTH" group, Unkefer et al. reported: "

In situations with known family trees, the number of generations back to the known MRCA tends to be smaller (more recent) than the 95 percent probability prediction in the vast majority of cases we have studied. The actual documented TMRCA usually falls between the 50 percent probability predictions and the 95 percent probability predictions.
"[29]
Table of MRCA Predictions for Wertheim-Giterman lineages

Image not found
https://www.surnamedna.com/wp-content/uploads/2014/11/Table3.WertheimerGitermanMRCAPredictions.jpg

Fig. 11: Most Recent Common Ancestor (MRCA) Predictions for Known and Newly-Identified Descendants of the Wertheim-Giterman Rabbinical Lineage

MRCA predictions for all known and newly identified descendants are based on comparison to reference descendants Oleg and Igor Wertheim.

Identifying Previously Unknown Descendants of the Savran-Bendery Chassidic

In addition to corroborating known relationships, Y-DNA analysis may also be used to discover new ones. Besides the four known Wertheim-Giterman descendants, Figures 10 and 11 present data for four new, and previously unknown descendants. These four individuals responded to the authors' request for access to their Y-DNA STR marker results, and agreed to participate in the study, including explicit permission to have their full names and DNA values published.

Gary Erikson, David Margulies, Francis Peel, and Josef Warhank are four of twenty-one genetic matches on all four known Wertheim-Giterman descendants' Y-DNA match lists at FTDNA. Having a single allele mutation at either DYS389II, DYS449, or CDY, they are a 36/37 marker match with known descendants Oleg Wertheim and Igor Wertheim, and a 35/37 marker match with known descendants David Wertheim and Ben Tzion Giterman. FTDNA's TiP model predicts the probability of their common ancestor with Oleg and Igor Wertheim living within the last six-to-ten generations, at between 76.0-78.3%, 87.4-89.1%, and 94.1-94.7%, respectively (see Figure 13).

The calculated probabilities for known descendants David Wertheim and Ben Tzion Giterman's common ancestor with known descendants Oleg and Igor Wertheim are very comparable, and fall within these respective probability ranges.

Gary Eriksen, David Margulies, Francis Peel, and Josef Warhank are therefore previously unknown descendants of the Wertheim-Giterman rabbinical lineage, or forebears of that lineage, who were identified solely on the basis of their Y-DNA match with known descendants. Their common ancestor is most likely to have lived from 8-to-10 generations ago (born circa 1675–1725). A total of twenty-one previously unidentified descendants of the Wertheim-Giterman lineage, who match Oleg and Igor Wertheim on 36/37 Y-DNA markers were identified

in this manner. This data is presented in Figures 12 and 13.

Vertical Bar chart of mean most recent common ancestor for 21 descendants of the Wertheim-Giterman Rabbinical Line

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https://www.surnamedna.com/wp-content/uploads/2014/11/Figure3.WertheimerGitermanMeanMRCAPredictions.jpg

Fig. 12: Mean MRCA Predictions for 21 Newly Identified Descendants of the Wertheim-Giterman Rabbinical Lineage

The fact that all twenty-one of these individuals have unique surnames but likely descend from the same patrilineal lineage illustrates the difficulty that confronts many Ashkenazi Jews – their common ancestor often predates the era in which Jewish surnames came into use. As surname use became mandatory for Jews in most of Europe during the late 18th and early 19th centuries, the descendants of those common ancestors adopted surnames based upon the places they were from, their occupations, nicknames, spouses' surnames, parents' given names, the decisions of the

kahal,
40 or the whims of the local authorities.21 These factors make tracing Jewish lineage even more difficult using traditional genealogical methods, and emphasizes the importance of Y-DNA and other genetic tests as an essential component of Jewish genealogy.
MRCA prdeictions data table Most Recent Common Ancestor (MRCA) Predictions for 21 Newly-Identified Descendant

Image not found
https://www.surnamedna.com/wp-content/uploads/2014/11/Table4.WertheimerGitermanMRCANewPredictions.jpg

Fig. 13: Datatable of Most Recent Common Ancestor (MRCA) Predictions for 21 Newly-Identified Descendants of the Wertheim-Giterman Rabbinical Lineage

The E-L117 Haplogroup

Essential to determining the unique Y-DNA "signature" of a particular rabbinical lineage is the terminal single nucleotide polymorphism (SNP), which defines the haplogroup to which descendants of the lineage belong.32 In addition to having a high percentage of standard Y-DNA markers or short-tandem repeat (STR) allele values in common, another Y-DNA characteristic that all descendants of the Wertheim-Giterman rabbinical lineage share is that they all belong to the E-L117 haplogroup.

The E-L117 haplogroup was previously known as E-M35 or E-M35.1, and has also been referred to in the literature as E1b1b1.33 Previously, it had been assumed that haplogroup E1b1b1 (E-M35) arose in East Africa and the haplogroup was often incorrectly described as African, leaving a misimpression regarding the origin and complex history of this haplogroup. According to the International Society of Genetic Genealogy (ISOGG) and National Geographic's Genographic Project, E1b1b1 may have arisen instead in the Near East or the Middle East, and then expanded into the Mediterranean with the spread of agriculture.45

Editor's Note: Y SNP L117 (C-T mutation at position 15026633) is believed to be
7

Haplogroup E-M35, which accounts for approximately 18% to 20% of Ashkenazi and 8.6% to 30% of Sephardi Y-chromosomes, appears to be one of the major founding lineages of the Jewish population. 4344 It is the most prevalent haplogroup among the Jewish population outside of haplogroup J. E-M35 has also been observed in moderate numbers among individuals from Ashkenazi, Sephardic and Samaritan communities having traditions of descending from the tribe of Levi, suggesting that the E1b1b1 men claiming to be Levites may have existed in Israel before the Diaspora of 70 CE.10

Recommendations for Future Studies

The field of genetic genealogy, and the science behind it, is evolving rapidly. The initial Y-DNA study of a rabbinical lineage is instrumental in identifying its Y-DNA signature, in terms of its basic allele patterns and haplogroup type, but undoubtedly, follow-on studies will further refine the Y-DNA signature and extend the identification of new descendants.

One way in which the genetic signature of a lineage may be enhanced is by testing a greater number of Y-DNA STR markers. For the purpose of identifying the Y-DNA signature of the Wertheim-Giterman lineage, we tested 37 Y-DNA STR markers, which is generally sufficient to identify subgroups of men who share a common ancestor within the past millennium.31

Y-DNA studies which test 67 or 111 STR markers will allow one to determine, with better precision, how many centuries ago descendants of the lineage share a direct male ancestor. Although this level of testing was not necessary for known descendants of the Wertheim-Giterman lineage, whose line of descent was already documented, it may be useful for determining whether newly-discovered descendants share a common ancestor who lived before or after the founder of the lineage.

Another way in which the genetic signature of a lineage may be enhanced is by more extensive testing of SNP markers. Y-DNA SNP markers mutate considerably more slowly than STR markers. As a result, Y-DNA SNP markers are very useful for delineating Y-DNA haplogroups, subgroups, and clusters, and for identifying which subgroups and clusters are most closely related to each other, and when each cluster likely branched off from each other.31

Y-DNA SNP genotyping is also capable of identifying terminal SNPs that are unique to a specific haplogroup, subgroup, cluster, family, or individual. Ideally, these unique SNPs may be used to identify the descendants of a particular branch of a lineage with a high degree of specificity, and to calculate with greater certainty the time to the most recent common ancestor. Studies of R1a1a Ashkenazi Levites25 and the Little Scottish Cluster38 are among the first Y-DNA studies to utilize this approach.

As next-generation Y-DNA sequencing results from genetic testing companies such as Family Tree DNA, Full Genomes Corporation, and YSEQ become more widely available, SNP testing is likely to play a larger role in defining the Y-DNA signature of rabbinical lineages, and in discovering and identifying new descendants.

In regard to further refining the Y-DNA genetic signature and extending its application to identify new descendants, the authors are currently attempting to identify documented descendants of the Hager branch of the Wertheim-Giterman lineage, in an effort to see how closely their Y-DNA test results match those of other known descendants. This information will then be used to further refine and extend the Y-DNA genetic signature of the Savran-Bendery Chassidic dynasty.

Conclusions

Although individuals of Jewish descent have employed traditional genealogical research techniques to connect their families to the great rabbinic families for centuries, it is only recently that Jewish genealogists have begun looking at genetic testing as a means for connecting contemporary Jewish families to them.

The present Y-DNA study focuses on the Savran-Bendery Chassidic dynasty, one of the most prominent Chassidic rabbinical dynasties to emerge from 18th century Russia. The Savran-Bendery Chassidic dynasty includes the Wertheim Chassidic dynasty, descending from Rabbi Aryeh Leib Wertheim of Bendery, and the Giterman Chassidic dynasty, descending from his brother, Rabbi Moshe Tzvi Giterman of Savran.

Y-DNA testing of descendants of both of these lineages has successfully demonstrated their descent from one common ancestor, validated the traditional paper trail, and identified the Y-DNA genetic signature and pedigree of the Savran-Bendery Chassidic dynasty. By comparing their Y-DNA markers to this genetic signature, many newly-discovered descendants of the Wertheim-Giterman rabbinical lineage were identified.

The four known descendants of the Wertheim-Giterman rabbinical lineage were found to share a common Y-DNA pedigree, with a 95% probability of the number of generations to the most recent common ancestor of between 7-to-10 generations ago. Hence the Y-DNA results verify and corroborate the paper trail for the Wertheim-Giterman rabbinical lineage. Due to the well-documented nature of the lineage, we know these estimated probabilities to be somewhat conservative, as the actual TMRCA is between 5-to-7 generations ago. These conservative TMRCA predictions are consistent with the results reported for the lead author's previous Y-DNA study of the well-documented Polonsky rabbinical lineage and other similar studies.[2229]

This study demonstrates that, even in the absence of a family tree, it is possible to connect to a rabbinical lineage purely on the basis of Y-DNA data, and twenty-one new descendants of the Wertheim-Giterman rabbinical lineage, or its ancestral forebears, were identified in this manner

It seems counterintuitive, but newly-identified descendants who share a more recent common ancestor with known descendants of the Wertheim-Giterman lineage will have a richer family connections (

yichus)
, because they will benefit from having more known marriage connections to other rabbinical lineages in their ancestry. For instance, if the most recent common ancestor lived fewer than seven generations ago, and was a descendant of Rabbi Aryeh Leib Wertheim (b. 1772), he would inherit the
yichus

of his marriage to Leah Hirsch, and her Twersky-Katzenellenbogen-Luria-Shapiro lineage, dating back to Rashi. Conversely, if their most recent common ancestor lived more than nine generations ago, he would have predated both the era of Jewish surnames, and the founding of the Savran-Bendery Chassidic dynasty itself. He would still be a descendant of the paternal lineage that gave rise to the Wertheim-Giterman rabbinical lineage, but very little would be known regarding his

yichus

, and the chances of identifying his common paternal ancestor without a family tree, birthplace, or surname would be extremely unlikely.

In her article on the Bacharach rabbinical lineage, under the heading “Why Should You Care?” Rachel Unkefer wrote:[28]

"Why should you do a Y-DNA test (or ask someone in your family to do one)? The answer is simple. You just might hit the jackpot and match with a well-documented lineage. As the science and the historical research progress and the number of families represented in the DNA databases increases, the likelihood of finding a match to a well-documented pedigree increases."

Indeed, twenty-one previously unidentified descendants of the Wertheim-Giterman rabbinical lineage were identified in this manner in our Y-DNA study. One of them, Gary Eriksen wrote:[3]

I want to thank you for writing to me in regard to the Wertheim-Giterman lineage. It is very interesting to discover new information regarding my paternal lineage. The entire history of my ancestral lineage has been a mystery for most of my life as I was adopted at the age of three. The paternal lineage you have outlined is the best information I have received. Thank you for contacting me.

It is the authors’ hope that this Y-DNA study of the Savran-Bendery Chassidic dynasty leads to subsequent Y-DNA studies of other rabbinical lineages that will provide the essential information necessary to fully characterize both the genealogical and genetic profiles of the great rabbinical families. Such studies will lay a foundation for uniting these two sources of information, and for meeting the needs of Ashkenazi Jews all over the world who seek their ancestral origins.

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