

## Appendix I: Quotes from the Literature on mtDNA: T2/non-Ashkenazi

1. Counting the founders: the matrilineal genetic ancestry of the Jewish Diaspora. Behar DM et al PLoS One. 2008 Apr 30;3(4):e2062.

<http://journals.plos.org/plosone/article/metrics?id=10.1371/journal.pone.0002062>

The Jewish communities of Iraq and Iran constitute the oldest non-Ashkenazi Jewish communities outside the Levant and were established during the 6th century B.C.E. For the Iranian (Persian) Jewish community sample set, we found that 41.5% of the mtDNA variation can be attributed to 6 women carrying mtDNA genomes that belong to sub-branches of Hgs *H6a1b1*, *H14a1*, *T2g*, *T2c1*, *U1a1a*, and *J1b1* (Table 2), all known to be present in West Eurasia. In this regard, it is noteworthy that though Hg H is the dominant European mtDNA Hg (40-50%), its sub-Hgs H6 and H14 are largely restricted to the Near East and the South Caucasus [12]. Similarly, we found that about 43% of the Iraqi Jewish community can be traced back to 5 women whose mtDNA belongs to Hgs *T2c1*, *J1b'e/J1e*, *U3b1a*, *H13a2b* and *W1d* (Table 2), all frequent in the Near and Middle East. Again, Hg H13 is typically the Near Eastern, not European variant of Hg H [12]. Consistent with our findings, an independent sample of Iraqi Jews reported in a previous study [7], contained eleven out of 20 individuals who carry mtDNA variants, that can be assigned to the five founding lineages identified in the current study.

The location of the first Diaspora communities.

The Iranian Jewish mtDNA is particularly rich in Hg H (30.5%, see Tables S1 and Table S3)—the variant of maternal lineages that constitutes on average more than 40% of the mtDNA variation in Europe. Hg H is also well represented in the Iraqi Jewish community with an overall frequency of 11.8% (Tables S1 and Table S3). Meanwhile, Hg H frequency in Ashkenazi Jews of recent European ancestry is 20.4% [4]. This raises an interesting question regarding the possible source of Hg H lineages among the various Jewish communities. Recent progress in the understanding of mtDNA variation in East and West Europe [16]–[18], as well as in the Near East [12] fits with the inference that at least three quarters of Iranian and Iraqi Jewish Hg H genomes belong to sub-Hgs H6, H13 and H14, characteristic of the Near Eastern–Central Asian variants of Hg H. In view of the historical records claiming the establishment of the North African Jewish communities from the Near Eastern Jewish communities, it is noteworthy that the communities do not share their respective major founding lineages.

2. New map of mtDNA haplogroup T2

<https://www.eupedia.com/forum/threads/29197-New-map-of-mtDNA-haplogroup-T2>

Mt-haplogroup T2 is a relatively widespread, yet mysterious haplogroup. Its distribution doesn't give much hint regarding its origin. The frequency of T2 varies widely within linguistic families or countries that otherwise share similar ancestry, and even between regions of a same country. The only consistent pattern is a fairly elevated percentage in all Balto-Slavic countries (6.5% to 8.5%).

3. The maternal perspective for five Slovenian regions: The importance of regional sampling. Zupan A et al Ann Hum Biol. 2015 Jun 12:1-10.  
<https://www.ncbi.nlm.nih.gov/pubmed/26065896>

The Slovenian territory is geographically positioned between the Alps, Adriatic Sea, Pannonian basin and the Dinaric Mountains and, as such, has served as a passageway for various populations in different periods of time. Turbulent historic events and diverse geography of the region have produced a diverse contemporary population whose genetic analysis could provide insight into past demographic events.

Conclusion: The sharp gradient of the J1c haplogroup between Slovenian regions is in line with the archaeological horizon known as Impressed Ware culture and could, therefore, represent a genetic trace of the early Neolithic expansion route along the East Adriatic coastal region.

4. GENI UK Haplogroup T2.  
<https://www.geni.com/projects/T2-mtDNA/3935>

T2 is found in approximately 10% of native Europeans, & with high concentrations around the eastern Baltic Sea. Nicholas II (1868-1918), last Russian Tsar was T2.

5. Homogeneity in mitochondrial DNA control region sequences in Swedish subpopulations. Tillmar AO et al Int J Legal Med. 2010 Mar;124(2):91-8.  
<https://www.ncbi.nlm.nih.gov/m/pubmed/19590886/>

Haplogroup T is 10%

6. Mitochondrial DNA variation of modern Tuscans supports the near eastern origin of Etruscans. Achilli A et al Am J Hum Genet. 2007 Apr;80(4):759-68.  
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1852723/>

These findings support a direct and rather recent genetic input from the Near East—a scenario in agreement with the Lydian origin of Etruscans. Such a genetic contribution has been extensively diluted by admixture, but it appears that there are still locations in Tuscany, such as Murlo, where traces of its arrival are easily detectable.

7. Persian Jews  
[https://en.wikipedia.org/wiki/Persian\\_Jews](https://en.wikipedia.org/wiki/Persian_Jews)

Today, the vast majority of Persian Jews live in Israel and the United States, especially in Los Angeles, Beverly Hills and on the North Shore of Long Island. According to the latest Iranian census, the remaining Jewish population of Iran was 8,756 in 2012,[3] while the number of crypto-Jews is unknown.

Beverly Hills

In particular, Persian Jews make up a sizeable proportion of the population of Beverly Hills, California.[101][102][103][104] Persian Jews constitute 26% of the total population of Beverly Hills.[105] Following the 1979 Iranian Revolution, tens of

thousands of Persian Jews migrated from Iran, forming one of the wealthiest waves of immigrants to ever come to the United States.[106] The community is credited with revitalizing Beverly Hills and re-developing its architecture, and for the development of ornate mansions across the city.[107]

According to the US Census Bureau's 2010 American Community Survey, 26% of Beverly Hills' 34,000 residents are of Iranian origin.[105] On March 21, 2007, Jimmy Delshad, a Persian Jew who immigrated to the United States in 1958, became the Mayor of Beverly Hills. This election made Delshad one of the highest ranking elected Iranian-American officials in the United States. He once again took the post of mayor of Beverly Hills on March 16, 2010.

New York

Kings Point, a village constituting part of Great Neck, has the greatest percentage of Iranians in the United States (approximately 40%).[105] Unlike the Iranian community in Los Angeles, which contains a large number of non-Jewish Iranians, the Iranian population in and around Great Neck is almost entirely Jewish.

Several thousand of the Great Neck area's 10,000 Persian Jews trace their origins to the Iranian city of Mashad, constituting the largest Mashadi community in the United States.[108] After practicing Judaism in secret for almost 100 years, many of the Mashadi crypto-Jews returned to overt Judaism after the rise of the secular Pahlavi dynasty.[109] The Mashadi community in Great Neck operates its own synagogues and community centers, and members typically marry within the community.[110]

#### 8. Mizrahi Jews in Israel

[https://en.wikipedia.org/wiki/Mizrahi\\_Jews\\_in\\_Israel](https://en.wikipedia.org/wiki/Mizrahi_Jews_in_Israel)

Mizrahi Jews in Israel constitute one of the largest Jewish ethnic divisions among Israeli Jews, with some 607.9 thousand Jews being immigrants and first generation descendants by paternal lineage of Iraqi, Iranian, Yemenite, Egyptian, Pakistani and Indian Jewish communities,[1] traditionally associated with the Mizrahi Jews. Many more Israeli Jews are second and third generation Mizrahi descendants or have a partial Mizrahi origin. The other dominant sub-groups are the Israeli Ashkenazi Jews and Sephardic Jews.

Israeli Mizrahim are descended from Jews in the Middle East and Central Asia, from Babylonian and Persian heritage, who had lived for many generations under Muslim rule during the Middle Ages. The vast majority of them left the Muslim-majority countries during the Arab–Israeli conflict, in what is known as the Jewish exodus from Arab and Muslim countries.

#### 9. Mizrahi Jews in Israel: Jews from Arab lands are gaining more and more influence in Israeli society. Rachel Gelfman Schultz

<https://www.myjewishlearning.com/article/mizrahim-in-israel/>

As Israel shifts from a “melting pot” model to one of multiculturalism, Israeli Mizrahi Jews are bringing their once marginalized culture back to the center of Israeli life.

“Mizrahi” is a socio-political term describing Jews from Arab and/or Muslim lands, including Jews from North Africa, the Middle East, and parts of the Caucasus. The

Ashkenazic establishment in Israel coined the term in the 1950s in response to the large wave of immigrants from Arab countries at that time. The immigrants soon began to use the term to describe themselves as well. "Mizrahi" is distinct from, but often overlaps with, the term, "Sephardi," and the two terms are sometimes used interchangeably.