

DNA study confirms geographical origin of Jews

June 9 2010



Jewish pilgrims pray at the Wailing Wall in Jerusalem's old city in 2009. New research has found Jews share a genetic bond with Cypriots and Druze and confirms the Jewish diaspora maintained a strong DNA continuity despite its long separation from the Middle East, scientists said on Wednesday.

New research has found Jews share a genetic bond with Cypriots and Druze and confirms the Jewish diaspora maintained a strong DNA continuity despite its long separation from the Middle East, scientists said on Wednesday.

The work, published in the British journal *Nature*, is part of a wider exploration into human migration based on clusters of tiny differences in [genetic code](#).

"We found evidence that Jewish communities originated in the Near

East," said molecular scientist Doron Behar of the Rambam Health Care Campus in Haifa, Israel, who led an investigation gathering experts in eight countries.

"Our genetic findings are concordant with historical records."

The work entailed taking [DNA samples](#) from 121 people living in 14 Jewish communities around the world, ranging from Israel to North Africa and Europe to Central Asia and India.

The samples were then compared with those from 1,166 individuals in 69 non-Jewish populations, including the "host" country or region where there was a Jewish community.

Throwing another dataset into the mix, the researchers added analyses of 16,000 samples of the [Y chromosome](#) -- which only males have -- and of mitochondrial DNA, which is handed down through the maternal line.

What the scientists were looking for were combinations of markers called single [nucleotide polymorphisms](#) (SNPs).

SNPs are single changes in the genome that cluster in distinctive patterns among humans that live together in groups over thousands of years. The patterns are a useful pointer of how ethnicities developed through geographical isolation or social clustering.

The study, as expected, confirmed the Middle Eastern, or Levantine, origins of Jews as documented in ancient Hebrew scriptures. This lineage is clearly visible in communities today, ages after the Jews were expelled from Israel.

More unexpected, though, was the discovery that Jewish patterns of SNPs were closer to those of Cypriots and Druze than with the other

populations of the Middle East.

Diaspora Jews, tightly bound by social, cultural and religious traditions, have generally maintained a strong genetic continuity, although there has also been an induction of DNA to greater or lesser degree from the host population, the paper said.

"Jewish communities seem to have a continuity with the Levantine gene pool, but even with the Jewish communities, you still see how they tend towards the host population," said Behar.

In non-Jewish populations, the SNP clusters confirmed a close relationship among Bedouins, Jordanians, Palestinians and Saudi Arabians. The patterns in Egyptians, Moroccan, Berber and Yemenite samples, though, were more similar to populations south of the Sahara.

Previous SNP research of this kind has unfolded in the so-called HapMap Project.

It has helped to cast light on the "Out of Africa" scenario, which posits that all anatomically modern humans -- *Homo sapiens sapiens* -- descended from ancestors that ventured from an African homeland around 50,000 years ago and colonised the world.

Fearful of being drawn into a debate about the false notion of race, scientists say the SNP clusters are not a pointer to any differences in human health, intelligence or ability.

The DNA clusters do not affect genes, the parts of the genome that code for all-important proteins which provide the chemical constitution of the body, Behar said.

He added he would be dismayed if his research became misused for

genetic profiling, such as in the "who is a Jew?" debate which touches on who has automatic right of citizenship in Israel.

"It is very important for me to mention here that as a scientist, genetics has nothing to do with the definition of the Jewish identity," said Behar.

"Judaism is a plural religion. Anyone in the world can decide one day that he wants to convert to Judaism and in that case of course genetics has no meaning... genetics would not be able to prove or disprove the Jewish identity of an individual."

(c) 2010 AFP

Citation: DNA study confirms geographical origin of Jews (2010, June 9) retrieved 26 April 2024 from <https://medicalxpress.com/news/2010-06-dna-geographical-jews.html>

<p>This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.</p>
--