

*Discussion Note***Towards a Y-Chromosomal Materialization of the Biblical Abraham****Karim Daghbouche^{a*}, Abdelhak Darbouche^b, Sami M. Angawi^c**^a Hanover (Germany)^b Institute of Biology, Department of Microbiology, University Khenchela (Algeria)^c Amar International Center For Architectural Heritage, Jeddah (Saudi Arabia)

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ABSTRACT

Judaism, Christianity, and Islam refer to Abraham as the father of Isaac and Ismail who in turn are the founders of two genetic lines and religious traditions.

Genetic research may materialize the existence of the historical Abraham and link it to as well as both, to Judaism through Isaac and to Islam through the genetic lineage of Ismail as each religious tradition claims for itself.

Based on the Y-chromosomal DNA of distinct, contemporary groups of male individuals within both traditions (*Cohen* and *Ahl Al-Bait*) in conjunction with detailed paper trails, any relationship between the Jewish and Islamic tradition with regard to *Abrahamic* descent may be further strengthened or refuted.

Key words: Y-chromosomal Abraham, SNP, STR, Haplotype, *Cohen*, *Ahl Al-Bait*

1. INTRODUCTION

Further to the traditions of three monotheistic book religions, namely Judaism, Christianity, and Islam, the biblical Abraham may be in Y-chromosomal line with as well as both, the Jewish *Kohanim* through his son Isaac and the founder of Islam, i.e., Mohammed, through his son Ismail as each tradition claims for itself. However, none of the respective genealogies provides a consistent historic documentation which would allow to produce any evident relationship on paper trail alone. Y-chromosomal DNA analysis of distinct, contemporary groups of male individuals within both traditions in conjunction with detailed paper trails may refute or confirm any genetic

relationship between the Jewish and Islamic tradition with regard to *Abrahamic* descent to a commonly accepted degree of certainty.

2. APPROACH

The applied methodology consists of haplotyping male individuals with documented genealogy connecting back to the biblical Abraham.

As for the descendants of Isaac, we propose to follow the *Cohen Modal Haplotype Hypothesis* (CMH) [Skorecki et al. 1997] and to look at the Jewish *Kohanim* who have maintained the *Abrahamic* lineage on paper trail through the paternal relation of Aaron, Amram, Kehat, Levi, Jacob and Isaac to the highest credible degree among the

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Jewish tradition. While being Jewish is not genetically defined, being *Cohen* is a genetic lineage exclusively passed from father to son starting with the biblical Aaron, who, according to tradition, was the first "High Priest". On this vein, the identified CMH with either J1e or J2a as the possible *Cohen* clusters [Klyosov 2009] may have originated before the Jewish exile at the time of the Roman Empire. This specific research result however indicates that only about 48% of Ashkenazi *Kohanim* and 58% of Sephardic *Kohanim* share the J1 CMH [Skorecki et al. 1997].

Since the biblical tradition of the *Cohen* family among the so called "*Samaritans*" indicates only one Israelite *Cohen* having been sent back as teachers by the King of Assyria from Assyrian exile to the Northern Kingdom of Israel, i.e., to Samaria¹, we suggest to include detailed paper trails of the *Samaritans* who comprise of only four distinct lineages [Cazes et al. 1984] with a *Cohen* lineage from the tribe of Levi [Ben Zvi 1957] carrying the Haplogroup E3b1, defined by M78 [Shen et al. 2004]. According to *Samaritan* tradition, we would be able to compare descendants of ancient tribes of Menasseh and Ephraim (sons of Joseph) and *Levitical* priests from Shechem who claim to be of the ten lost tribes of Israel that remained in Israel after the Assyrian conquest (722–721 BCE) [Talmon, 2002] with the common CMH.

Establishing the genealogic link between Abraham's son Ismail and Mohammed, the founder of the Islamic tradition, critically depends on the founder's claim to be a descendant from Abraham through Hashim, Quraish,

Kinana, and Ismail [Bukhari 1996]. In analogy to the CMH, it is suggested to establish the Y-chromosomal haplotype of Mohammed's descendants who represent a contemporary group of individuals with genealogical paper trails (Fig. 1) connecting to Mohammed's daughter Fatima.

This distinct group is the so called "*Ahl Al-Bait*" (People of the House)² which however are multiply defined within the Islamic tradition³. For the purpose of the here-suggested context we define the *Ahl Al-Bait Haplotype Hypothesis* (AAB-MH) as the Y-chromosomal haplotype of Mohammed.



Figure 1: Typical paper trail of *Ahl Al-Bait*

² Quran 33:32–34

³ "People of the House" refers to the family or children of a person. In Islamic terminology there is significant consensus that it refers to the immediate family of Mohammad, i.e., to his progeny.

¹ 2 Kings 17:27–28

Since Mohammed had no recorded surviving sons, the Y-chromosomal lineage is broken at the very foundation of the *Ahl Al-Bait*. The only descendant of Mohammed who has a documented, unbroken lineage to contemporary male individuals is Mohammed's daughter Fatima through her sons Hassan and Hussein.

Because of the independence of the Y-chromosomal inheritance, the AAB-MH holds by considering Hassan and Hussein's father Ali who, according to tradition, was Fatima's paternal second cousin, i.e., Ali and Mohammed are supposed to share the same paternal grandfather and thereby an identical Y-chromosome.

A total of 50 DNA samples will be taken from the *Hijaz* region⁴ known as an *Ahl Al-Bait* cluster since the foundation of Islam as well as from male individuals of the six inhabited continents Asia, Africa, North America, South America, Europe, and Australia with corresponding paper trails.

3. DISCUSSION

Assuming an unambiguous AAB-MH result it will enable to further materialize the Islamic tradition of *Ahl Al-Bait*. Nevertheless, even if the AAB-MH matches with the CMH J-cluster or the *Samaritan Cohen* Haplotype E3b1, the common ancestry of Judaism and Islam with the biblical Abraham cannot be materialized to the extent of certainty but may remain subject to the collective conviction of each respective tradition. This is because of the differing claims within the Jewish tradition as to which tribe is actually in Y-chromosomal line with Abraham, i.e., the common CMH or the *Samaritan Cohen Haplotype*.

⁴ literally "the barrier" primarily defined by the cities Mecca, Medina, Taif in the current "Kingdom of Saudi Arabia"

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