E40 12 Myths About Genetic Genealogy

Tynan Peterson, MA, ThroughLine Consultants, Oakland, CA; Melanie Thomas Armstrong, BA*, ThroughLine Consultants, Vienna, VA 22180-6358*

Learning Overview: After attending this presentation, attendees will better understand how genetic genealogy is used to solve crimes.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by dispelling 12 common myths regarding genetic genealogy and how it is used to help identify unknown contributors and solve cold cases. This presentation will also help clarify terminology that often is misused and misunderstood in the context of genetic genealogy,

Ever since the breaking of the Golden State Killer case and the arrest of Joseph James DeAngelo in April 2018, the use of genetic genealogy—a relatively new method of crime solving—has become increasingly accepted. The forensic community is finally talking about genetic genealogy (AAFS had a genetic genealogy workshop at the 2019 annual conference in Anaheim, CA), but many do not understand the approach or how much work it entails. Additionally, there is a lot of confusion about the benefits and risks of using genetic genealogy. It is not rocket science, nor is it simply a matter of typing a name into a database and getting a "hit."

Genetic genealogy has been used for years, but the rise in popularity of consumer DNA tests continues to increase the effectiveness of this approach. Combining autosomal DNA data from at-home DNA tests with traditional genealogical research, one can determine the level and type of genetic and familial relationship between individuals. The increased pool of people in these consumer DNA databases increases the number of DNA matches that can be used for genetic genealogy. This approach is most often used to help identify an adoptee's likely birth parents or the unknown parent of a child of a Non-Paternity Event (NPE). Since the arrest of the Golden State Killer, more than 100 suspects have been identified this way. Now that more and more law enforcement agencies are learning about the possibilities of using these methods to help solve cold cases, it is important to shed light on how a genetic genealogist does their work ethically and precisely.

This session will address a variety of assumptions people make about how genetic genealogy works and what happens if they "opt in. For example, some people think genetic genealogy works like the combined DNA Index System (CODIS): upload the DNA and the name of the contributor pops out. Other people are afraid if they "opt in," law enforcement will have access to health data derived from their DNA or can use their DNA to frame them for a crime. At the end of this session, attendees will have more accurate information about genetic genealogy. This presentation will also clarify a variety of terms that are often used incorrectly or interchangeably, such as genetic genealogy, familial searching, investigative genetic genealogy, and forensic genealogy. To benefit the forensic science community, this presentation will touch on the application of genetic genealogy, its legal and ethical implications, its methodology, and the terms that are used to describe it.

Forensic, Genetic, Genealogy