E68 Big Business, Big Brother, and Genetic Genealogy

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After attending this presentation, attendees will better understand the three-way relationship between Direct-To-Consumer (DTC) DNA testing companies such as Ancestry.com®, those involved in forensic identification, and the genetic genealogy community. The growing size of the DTC companies has been an exciting prospect to genetic genealogists due to an increasing success rate of finding adoptee birth parents and long-lost family members; however, this same growth has been an issue for the forensic community. Although those same databases have the potential of solving crimes, DTC DNA testing databases are unavailable for forensic identification due to Fourth Amendment search and seizure issues. There is also the concern that DTC companies wish to protect access to those databases as their primary financial assets. Genealogists, on the other hand, seem comfortable with relinquishing their rights to how their DNA can ultimately be used by DTC companies for drug development and various research purposes, while at the same time regarding law enforcement as "Big Brother," ready to exploit their DNA for who knows what purpose.

This presentation will impact the forensic science community through an open discussion of how to overcome the challenges that currently limit collaboration with both DTC companies and the genetic genealogy community. Such a discussion will lead to a better appreciation of the issues facing all three communities, with suggestions as to how they can work together toward the common goal of developing strong working relationships based on trust.

The need for this discussion is compelling. At present, there are approximately three hundred thousand Y-chromosomal Short Tandem Repeat (Y-STR) profiles posted online in thousands of large and small public genetic genealogy databases. At the same time, databases of autosomal Single Nucleotide Polymorphism (SNP) testing results controlled by the DTC testing companies have grown to include millions. The database for AncestryDNA™ has now topped four million, while the 23andMe® database has passed the two million mark. While Y-chromosomal DNA (Y-DNA) can only provide information about the direct male line of a family, autosomal SNP testing can provide information not only about the individual who was tested, but also about his immediate relatives. Therefore, the size of each autosomal SNP database is virtually much larger, considering that each person tested shares an average of 50% of his autosomal DNA with his parents and siblings. If, as expected, AncestryDNA™ will top ten million members in a couple of years, based on a typical family of four, the database could represent four hundred million virtual members — larger than the United States population. Unfortunately, unlike Y-STR databases, autosomal SNP databases are not available to the public, but are controlled by Big Business.

The potential of both Y-STR and autosomal SNP databases for solving crimes and identifying John Does must be recognized and a means found for the three communities — the DTC companies, the forensic practitioners, and the genetic genealogy community — to work toward resolution of the issues preventing collaboration. This presentation will explore ways of making this happen.

Direct-to-Consumer, Genealogy, Identification

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