B202 Demolishing Divides: A Discourse on the Dearth of Discipline Differences Between DNA and Dactyloscopy

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After attending this presentation, attendees will observe commonalities between different forensic disciplines, will understand that these disciplines struggle with the same issues, and realize that there is much the disciplines can learn from one another by breaking silos and abandoning an "us-against-them" attitude.

This presentation will impact the forensic science community by encouraging forensic science practitioners to reach across disciplinary lines and share their struggles and successes with one another. Many disciplines are facing the same questions, yet often approach them differently. Open and frank discussions concerning the similarities between disciplines can help everyone in problem solving.

Forensic science is often thought of as a conglomeration of separate disciplines, each residing in its own silo. In larger laboratories where each analyst specializes, this perspective can manifest in negative ways, with some analysts exhibiting an "us-against-them" attitude in which members of different disciplines keep to themselves, rarely converse, and at times exhibit hostility and jealousy toward one another. How many times have you heard members of a discipline describe themselves as the "red-headed stepchildren" of the laboratory or lament that "DNA gets all the money and all the good stuff"?

Not only are these attitudes divisive, but they also rob each discipline of the opportunity to grow and gain strength from the knowledge possessed by the others. When disciplines are compared with the intention of discovering commonalities, it may be surprising to realize how many exist. Many disciplines share similar principles. For instance, nearly all forensic disciplines involve comparing an unknown material to a known material and looking for similarities and differences in patterns, whether those patterns are fingerprints, shoe impressions, signatures, or tool marks, or two chemical spectra or DNA profiles. Many disciplines share the same critics who are saying similar things about them. Many are considering the same statistical frameworks for presenting their evidence or struggling with the same questions of how to interpret noise or report conclusions.

Using DNA and latent prints (a field originally known as dactyloscopy) as a model, this presentation will offer insight into the many ways in which these two disciplines are remarkably similar. Latent prints, once considered the "gold standard" of forensic evidence, and DNA, the current reigning champion, are both considered to be rock-solid evidence when there is a high quantity of high-quality information (such as a clear tenprint card or a complete single-donor profile). Yet once the signal becomes degraded (such as in a distorted partial latent fingerprint or a several-donor DNA mixture), the interpretation required increases dramatically, along with the chances for error and the exposure to criticism.

These two disciplines will be discussed from beginning to end, breaking the issues into Deposition, Detection, and Description (which incorporates database use, documentation, and dissemination of findings). Discover the "Dearth of Discipline Differences" in this eye-opening lecture.

Latent Prints, DNA, Breaking Silos