Blind proficiency testing at the Houston Forensic Science Center

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Abstract

The critiques expressed by the National Academy of Sciences in its landmark report on the state of forensic science (2009) led to considerable research aimed at developing statistical methods to measure error rates. Yet we have seen little progress in developing a statistical foundation for forensic methods. Without reliable information about how often a forensic science process yields the wrong answers, the probative value of forensic evidence is impossible to quantify. In other words, to date, the research on most forensic disciplines is insufficient to demonstrate foundational validity.

This presentation will describe a major breakthrough in developing a statistical foundation for forensic science disciplines: a cutting-edge blind proficiency testing program operating in six disciplines at the Houston Forensic Science Center (HFSC). By introducing mock evidence samples into the ordinary workflow of its laboratory analysts, HFSC has begun to develop statistical data that will allow it to calculate error rates for those disciplines. Moreover, the top-to-bottom quality assessment provided by blind testing creates a continual feedback loop regarding every aspect of the laboratory process – from evidence packaging, storage and transportation to the ultimate issuance of laboratory reports.

The presentation will

- Explain the difference between standard proficiency testing employed by most crime labs and the blind proficiency testing used by the HFSC.
- Describe both the challenges and the benefits of blind proficiency testing.
- Explore why calculation of error rates for forensic disciplines are crucially important to strengthen real science and discredit junk science.

The presentation will show why criminal justice stakeholders should urge other large forensic laboratories to implement similar blind proficiency testing programs to develop the statistical data needed to prove (or disprove) the scientific validity of the forensic disciplines.

About the speaker

Nicole Cásarez is an attorney and an emeritus professor in the communication department of the University of St. Thomas, where she taught courses in wrongful convictions, media law, media ethics and journalism. She has also taught constitutional law, privacy law and First Amendment law at the University of Houston Law Center. She has a bachelor of journalism as well as a law degree from the University of Texas, and a masters in communication/public relations management from the University of Houston. She writes and speaks frequently about First Amendment, privacy and criminal justice issues, and in 2009, she was elected to the American Law Institute. Cásarez received national media attention in connection with the case of Texas death row inmate Anthony Graves, who was exonerated in the fall of 2010. She was appointed to the Houston Forensic Science Center's board of directors in 2012, and served as board chair from 2015–2019.