S1 Interdisciplinary Symposium: The Evolution of Daubert and Its Effects on the Forensic Sciences

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After attending this presentation, attendees will better understand how forensic science practitioners have addressed the evolution of *Daubert* and the reaction of the legal community as the standard has progressed. Attendees will be exposed to the challenges faced by forensic scientists and the research that is addressing criticisms. Furthermore, the Interdisciplinary Symposium will help attendees understand how the courts understand *Daubert* and how they address the admissibility of forensic practitioners and science.

This presentation will impact the forensic science community by discussing the past, present, and future ramifications of the *Daubert* Trilogy on the admissibility of forensic evidence from the viewpoint of practitioners, attorneys, educators, and judges.

Stephanie Domitrovich, JD, PhD; W. Milton Nuzum, JD - The American Bar Association (ABA) recently adopted a Resolution wherein the ABA urges the National Commission on Forensic Science to support the development of a model curriculum in the law and forensic science as well as training in that curriculum for federal, state, territorial, and tribal judges. The NAS recommended: "Better connections must be established and promoted between experts in the forensic science disciplines and law schools, legal scholars, and practitioners." Specifically, the NAS Report further indicated: "And judges need to be better educated in forensic science methodologies and practices." Consistent with these recommendations, presenters in this session will discuss the evolving developments in judicial education over the years in providing state and federal trial judges the necessary tools for their tool boxes to become better equipped to understand forensic scientific evidence issues in both *Daubert* and *Frye* jurisdictions. Judicial educators will discuss the design of such curricula to teach state and federal trial judges to become more competent gatekeepers when deciding scientific issues in all areas, for instance, civil, criminal, family, and orphans' court. Judicial educators will also discuss implementing needs assessments, curricula development, and adult education principles as their latest tools in education theories to accomplish these goals.

Stephen T. Goudge, LLB - This presentation will address the public inquiry Judge Goudge chaired into Pediatric Forensic Pathology in Ontario. The Inquiry was created by the government of Ontario because unreliable opinion evidence from this science had resulted in a number of wrongful convictions. In his report, Judge Goudge addressed the challenge of unreliable scientific opinion evidence and how the justice system could guard against it.

Neal H. Haskell, PhD - The science of Forensic Entomology (FE) has regularly entered the courtroom in the United States within the past three decades. At first, it was perceived as a "new and novel science" using insects to answer questions regarding a human death. During this time, the *Frye* test of acceptability in courts was the standard method of reliability. Only a handful of states had actually utilized FE in courts. This led to numerous challenges of its use in courts as more states sought use of FE, the gatekeepers being the justices on the bench.

As was explained to each new state where testimony was given, whether *Frye* or *Daubert*, FE is nothing more than proven and reliable entomological scientific principles dating back to 1265 China in a murder case. Forensic application of entomology is one of the oldest sciences to be used in the courtroom. In short, FE is the use of biological aspects of entomology encompassing insect biology, insect behavior, insect growth and development, insect ecology, interacting with climatology and environmental biology, all of which have been studied for centuries and are fully accepted in the biological sciences.

Peter V. Tytell, BA - One practical change in post-*Daubert* courtrooms has been at the *voir dire* stage of an expert's appearance. Previously, opposing counsel would challenge the specifics of the education, training, and experience of the witness in an effort to disqualify that individual as an expert in a certain discipline (or at least lessen the witness's credibility in the eyes of the jury). Today, the challenge is often to the reliability of the discipline itself rather than the qualifications of the witness as a practitioner. It is increasingly likely that the *voir dire* will be conducted outside the presence of the jury, and that it will be essentially indistinguishable from a *Daubert* hearing in content and intent.

Today's expert witness must be prepared not just to present the results of an examination and to explain the specifics of each of the findings, but must also be prepared to present the basis for the reliability of the discipline with specifics relating to each of the *Daubert* factors and the requirements of Rule 702. Of equal importance, today's trial attorney must be prepared not just to present the facts of a case, but must also be prepared to ask the right questions of the expert and to present *Daubert*-appropriate references, citations, and arguments. This presentation will illustrate these changes as they relate to forensic document examiners with case examples highlighting problems that can arise in these situations.

Joseph J. Maltese, JD, PhD - The expansion of *Daubert* and *Kumho Tire* standards into the Federal Rules of Evidence, and their adoption by many state courts, have served as a catalyst for the criminal defense bar to challenge the reliability of the "specialized knowledge" utilized in most of the forensic disciplines. With greater scrutiny being applied by the courts, many forensic disciplines have attempted to validate or revalidate their methodology and procedures to withstand objections raised by attorneys and skeptical judges about the admissibility of such evidence, which was rarely subject to objection before the *Daubert* revolution. This presentation will address some of these issues.

Barry C. Scheck, JD - As the National Commission on Forensic Science recently acknowledged in a views document, protecting against cognitive bias through blind examinations and sequential unmasking is critical to conducting sound science. Forensic scientists, lawyers (prosecutors and defense), judges, and police officials must all take simple, systematic precautions to minimize the effects of cognitive bias in their investigations, scientific testing, and assessments of evidence. Fashioning judicial remedies to enforce best practices plays an important role in this process.

Mara Merlino, PhD - This presentation will discuss the issues faced by forensic practitioners as the various forensic disciplines work to articulate and standardize education, training, and other practices to ensure that valid

and reliable evidence is produced in service to the justice system. The process of the social construction of scientific knowledge and the impact of legal requirements on scientific "facts" that cross the boundary of admissibility to become scientific "evidence" will be discussed in the context of *Daubert, Joiner,* and *Kumho* decisions.

John J. Lentini, BA - While *Daubert* challenges are becoming more and more common in all expert disciplines, fire investigation seems to attract a significant number of them. The first *Daubert* challenge occurred in 1997, in the case of *Michigan Millers Mutual Ins. v. Janelle R. Benfield*, when a fire investigator with 40 years of experience was precluded from testifying because he could not articulate the scientific method, even though he claimed to have used it. However, in the same case, a firefighter was allowed to render an opinion based on his "experience." Courts have ruled on hundreds of *Daubert* challenges, including the Supreme Court. Sometimes the court gets the science completely wrong, as the 10th circuit did in the case of *Truck Insurance Exchange, A Farmers Insurance Company v. Magnetek, Incorporated*. They arrived at the correct result, but in so doing, completely confused a lot of other courts.

The prevalence of *Daubert* challenges has led to a more general "Rule 702" challenge. In the past, challenges to fire investigators have focused mainly on methodology. There is a trend now toward challenging an investigator's qualifications. After being unable to answer simple fire chemistry questions, an investigator is likely to be withdrawn and the case is likely to settle. Such cases will not result in new case law.

In fire cases, the *Daubert* challenge is now as common as motions for summary judgment. This presentation will discuss several important fire-related *Daubert* cases and what they portend for the future of fire investigation.

Daubert, Evidence, Admissibility