A182 Admissibility of Unconfirmed Accelerant- Detection Canine Alert

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After attending this presentation, attendees will understand current legal issues surrounding the admissibility of Accelerant-Detection Canine (ADC) alerts without laboratory analysis confirming the presence of ignitable liquids.

This presentation will impact the forensic science community by detailing how while a number of courts have followed the recommendations of the IAAI Forensic Science Committee and the NFPA Technical Committee on Fire Investigation and rejected the admissibility of expert testimony regarding unconfirmed alerts, others have nevertheless admitted this type of opinion evidence either as proof that an accelerant was present near the origin of the fire or that arson was the cause of the blaze. In arson cases, where the ultimate issue is whether a fire started accidentally or purposely, the jury could easily disregard the lack of laboratory confirmation and equate an uncorroborated alert with proof that the fire was aided by an accelerant. The probability of a wrongful conviction under those circumstances is not insignificant.

While the utility of ADCs in securing samples with a higher probability of laboratory confirmation may be generally accepted in the field of fire science investigation, the body of scholarly literature to date confirms that even the best-trained ADC cannot discriminate between accelerants and all possible background contaminants or byproducts of pyrolysis. As a result, the mere detection of traceable quantities of these substances has limited evidential value. Also, studies have shown they can falsely alert to areas of a fire scene that contain no trace evidence of ignitable liquids.

There is scant support for the proposition that a canine's olfactory sensitivity and specificity is more accurate than state-of-the-art GC/MS instruments employed in crime labs. This is why most scientists in the field conclude that an unconfirmed alert should be considered invalid, unreliable, and entitled to no weight. However, courts are not uniform in their approach to the question of whether these alerts are reliable.

The presentation will focus on the legal analysis on which courts rely in either admitting or rejecting expert testimony on unconfirmed alerts. This necessarily involves an examination of the issues of relevance, the prejudicial effect of this type of testimony and the tendency to confuse and mislead the jury, and foundation for expert opinions under the rules of evidence. Particular emphasis will be placed on the question of admissibility of such unconfirmed alerts under both *Frye*, *Daubert,* and *Kumho Tire* standards.

Canine, Accelerant, Arson