



U.S. Department of Justice

Ronald C. Machen Jr.
United States Attorney

District of Columbia

*Judiciary Center
555 Fourth St., N.W.
Washington, D.C. 20530*

November 15, 2010

The Honorable Lee F. Satterfield, Chief Judge
Superior Court of the District of Columbia
500 Indiana Avenue, N.W., Suite 3500
Washington, D.C. 20001

Dear Chief Judge Satterfield:

The purpose of this letter is to address the assertion by the Public Defender Service (PDS), in letters dated April 14 and September 1, 2010, that the United States Attorney's Office (USAO) should conduct a sweeping investigation to identify and report on all cases in which FBI microscopic hair and fiber analysis played a role in securing a conviction in the District of Columbia. We respectfully submit that there is no legal or scientific basis for the USAO to undertake such a massive and unprecedented review.

PDS's request is based upon the misconception that hair and fiber evidence is "pseudo-science" that has been recently discredited or can be used only in conjunction with DNA evidence. PDS is mistaken. To this day, hair and fiber evidence continues to provide useful information to finders of fact in criminal trials throughout the industrialized world. The FBI Laboratory at Quantico continues to conduct hair and fiber examinations on a daily basis regarding evidence recovered from crime scenes throughout the United States.

Hair examinations involve the analysis and comparison of the morphological characteristics present in hair. The analysis of these characteristics has been used for centuries to distinguish between human and animal hairs, and was first used in a forensic context as early as 1837. Similarly, fiber examinations involve the analysis and comparison of the morphological characteristics as well as chemical and optical properties present in fibers.

The forensic analysis of hair or fiber evidence can be valuable in the examination of physical evidence by (1) demonstrating that an association may exist between a suspect and a crime scene or a suspect and a victim; or (2) demonstrating that no association exists between a suspect and a crime scene or a suspect and a victim. Although the science of microscopic hair or fiber examination can never result in absolute identification – *i.e.*, a conclusion that (1) a hair came from one individual to the exclusion of all other individuals; or (2) a fiber came from a particular article to the exclusion of all other articles – the information available from hair or fiber analysis can provide a valid basis

for an association.¹

PDS appears to be under the impression that a 2009 report by the National Research Council (NRC) somehow supports reexamination of every case in which the FBI analyzed hair or fiber evidence.² To the contrary, the NRC Report reaffirms the principles by which the FBI Laboratory has operated for the past 40 years. PDS cites the report for the unremarkable propositions that (1) a microscopic hair comparison should not be the sole basis for individualizing a hair to a particular person (*e.g.*, defendant or victim); and (2) a microscopic fiber comparison should not be the sole basis for individualizing a fiber to a particular article (*e.g.*, rug). The FBI has always embraced these basic tenets of the discipline. As the former Chief of the FBI's Trace Evidence Unit has explained,

In order to ensure that proper weight is put on the results and interpretation of a microscopic hair comparison, FBI Laboratory reports for the past 40 years have stated that hair comparisons are not a means of individualization in reports of examination containing microscopic hair comparisons. In addition, FBI hair examiners are trained to include, at a minimum, the same information during their testimony on cases involving a hair association.³

See Cary T. Oien, *Forensic Hair Comparison: Background Information for Interpretation*, Forensic Science Communications, April 2009, Vol. 11, No. 2, at 27.⁴ Far from discrediting the science of hair and fiber examination, or the FBI's practice of that science, the NRC Report simply reiterates principles that the FBI has accepted and practiced for 40 years.

¹ Mitochondrial DNA (mtDNA) analysis of hair is now routinely conducted in the FBI Laboratory following a microscopic examination. Since neither technique can individualize, the combination of microscopy and mtDNA yields the most complete information, short of nuclear DNA.

² This is not the first occasion on which PDS has misinterpreted the significance of the NRC Report. Since the report was issued, PDS has repeatedly cited the report as a basis to suppress fingerprint identification evidence and firearms and toolmark identification evidence. Those efforts have been soundly rejected by this Court in each instance. In other words, the NRC Report has not provided a basis to suppress forensic evidence prospectively, much less a basis to question the integrity of prior convictions.

³ PDS erroneously suggests that the case of Donald Gates serves as a reason for reviewing all cases in which hair and fiber evidence played a role. However, PDS overlooks the fact that in Gates's case, FBI Examiner Michael Malone appropriately documented the limitations of the association in his written report, stating that his hair comparison did "not constitute a basis for positive personal identification," but then offered unfounded testimony at trial that exaggerated the probative value of the hair match. However, absent any allegation, let alone evidence, that a particular examiner strayed from longstanding FBI protocol, there is simply no basis for the USAO to expend valuable time and resources locating and reexamining decades-old convictions.

⁴ FBI analysts do not individualize fibers to a particular article, as common sense dictates that two textiles made from the same batch of fibers would contain fibers that could not be differentiated.

The USAO remains firmly committed to investigating any instances in which a convicted individual has a potentially viable claim of actual innocence. We are dedicated to responding in a timely and responsible manner whenever issues arise regarding the integrity of any prosecution. Under these circumstances, however, PDS has offered no scientific or legal basis that would justify a sprawling search of decades-old records to identify and report on all cases in which the FBI analyzed hair or fiber evidence.

Sincerely,



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Special Counsel to the United States Attorney



Patricia A. Riley
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cc: The Honorable Fred B. Ugast
The Honorable Russell F. Canan
Shawn Ambrust, Esq., Mid-Atlantic Innocence Project
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