

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

UNITED STATES OF AMERICA

v.

Crim No.: 19-CR-250 (DLF)

DAQUANTE GREEN

Defendant.

MOTION IN LIMINE TO LIMIT FINGERPRINT TESTIMONY

Comes now Defendant DaQuante Green, through undersigned counsel, and respectfully moves the Court pursuant to *Daubert v. Merrell Dow Pharm., Inc.*, 509 U.S. 579 (1993), Federal Rule of Evidence 702 and related case law, to limit the scope and instruct the jury on the level of certainty of the expert's opinions as detailed below. This motion is not intended to request exclusion of the fingerprint examiners' testimony as a whole or to disqualify the expert, but rather to request that the Court limit the language used by the expert in relating his opinion and to require that the Court and the expert clarify for the jury the limitations of the methodology used by fingerprint examiners. These limitations will ensure that the testimony employs only language which the scientific community agrees accurately reflects the state of the discipline.

In support of this Motion, counsel states:

1. DaQuante Green is before the Court charged with one count of Unlawful Possession of a Firearm (18 USC 922(g)).
2. The government's case largely revolves around one piece of forensic evidence: a latent print found on the magazine of the firearm, which is purported to "match"¹ Green's left

¹ As explained in further detail below, the suggestion that a fingerprint "matches" another fingerprint, although commonly used in the discussion of fingerprint comparison, is an inaccurate and misleading phrasing.

palm print. As such, the testimony comparing Green's palm print to the latent print recovered will be central to the question of guilt in this case.

3. Pursuant to Fed. R. Crim. P. 16, the government has disclosed Department of Forensic Sciences (DFS) files related to the forensic testing in this case. Among these materials are fingerprint materials concerning fingerprint examiner Jerry Craft's analysis of the latent prints recovered in this case. In his report, Craft ultimately concludes that Green is the source of the latent print of value found on the handle. It is also likely that Craft will refer to the results of his analysis as an "identification." The government has indicated that they intend to call Jerry Craft as an expert witness to testify to his conclusion that Defendant is the source of the latent print identified as impression 9.1.
4. The government has often presented the testimony of fingerprint examiners as proof that latent fingerprints recovered from a crime scene were a "match" with those of a criminal defendant. Forensic examiners generally use the ACE-V² methodology: a multi-step process in which the examiner first analyzes the latent print independent of any comparator to identify key features of the print, and then compares that print to known fingerprints to identify similarities. Although examiners have long proclaimed high levels of certainty that latent prints can be identified to come from a source-certain, numerous governmental reports have concluded that such statements are "scientifically indefensible." *See e.g.* Ex. 1, William Thompson, John Black, Anil Jain & Joseph Kadane, AM. ASSOC. ADVANCEMENT SCI., *Forensic Science Assessments: A Quality and Gap Analysis of Latent Fingerprint Analysis* at 60-61 (2017) ("AAAS

² ACE-V is an acronym for the steps of a fingerprint examination: Analysis, Comparison, Evaluation, and Verification.

Report”)³ (Excerpts). There is currently a consensus among the relevant scientific community that fingerprint comparison cannot accurately claim to produce an “identification” or a definitive conclusion as to the source of a latent fingerprint. Ex. 2, Cole Affidavit⁴ at 10-21.

5. Despite the scientific consensus that fingerprints cannot “identify” a source to the exclusion of others, the government’s experts typically overstate the ability of their discipline to identify the source of a fingerprint to the exclusion of all other sources. This is exactly what the government proposes to have Craft do in this case, identify Green as “the source” of one of the latent prints recovered in the investigation. Such statements of certainty regarding the source of the latent print are not the result of reliable principles or methodology as required by *Daubert*. These statements, when combined with the popular misconception of the infallibility of fingerprint identification in the lay population, creates a misimpression among the jury regarding the reliability and accuracy of a fingerprint examiners’ ultimately subjective opinion. Ex. 1, AAAS Report at 11. (recommending that fingerprint examiners include specific caveats in their reports acknowledging that their conclusions are opinions rather than facts, that it is not possible to definitively determine source, and that studies have shown that errors occur in

³ This recently published report, discussed in further detail below, is of particular significance in understanding the state of the field of fingerprint comparison and was created by one of the most prestigious and well-regarded journals in the field of science. This peer-reviewed report was designed to survey and re-examine the discipline in order to highlight “where forensic practice is well-founded in science and where it is not.” Ex. 1, at 3. This report focused specifically on the field of fingerprints and was authored by a diverse group of experts in forensic science, biometric engineering, statistics, and a criminology.

⁴ Dr. Simon Cole is a Professor of Criminology, Law, & Society at UC-Irvine who has written extensively in the area of forensic science and who served as a peer-reviewer of the AAAS report. The attached affidavit was filed in support of a challenge to a fingerprint expert’s testimony in a separate case and is attached here because it contains a useful summary of the state of scientific consensus regarding the limitations of fingerprint comparison and the known error rates associated with fingerprint comparison. *See* Ex. 2, at 10-21.

fingerprint examination, in order to combat misconceptions “shaped by decades of overstatement by latent print examiners”).

6. The defense’s contention is not that fingerprint examination and comparison writ large are not the result of reliable principles or methodology and must be excluded. It is the scientifically-unsupported claim that the ACE-V method can produce a certainty that a known person is definitively the source of a latent fingerprint that is not the result of reliable principles or methodology under the *Daubert* analysis. The defense seeks nothing more than that the Court provide conditions under which the jury will be left with an accurate picture of the limitations of fingerprint comparison analysis. This is no different than the requirement that a DNA analyst not say definitively that DNA recovered belongs to a known source, but must instead report an accurately-derived probability that a random person would share the same profile as that recovered from the crime scene and that the suspect cannot be excluded as the source.
7. As such, to ensure that the jury is not misled by his expert testimony, the Court should instruct that Mr. Craft cannot say that he has “identified” the print as Green’s palm print or make any equivalent statements such as that Green is “the source” of the latent print. This sort of testimony is scientifically indefensible in light of the well-documented limitations of latent print examination. Further, Mr. Craft should be prepared to “discuss forthrightly” error rates in fingerprint identification. Ex. 1, AAAS Report at 11 . The Court should also provide the jury with a specific instruction informing them of the error rates associated with fingerprint comparison. Absent these limitations—even with the benefit of cross-examination— Mr. Green will be unfairly prejudiced by materially misleading statements regarding the accuracy of fingerprint comparison that will

unquestionably garner significant weight from the jury. *See Motorola, Inc.*, at 753 (“Because expert or scientific testimony possesses an aura of special reliability and trustworthiness, the proffer of such testimony must be carefully scrutinized”) (internal citations omitted).

MEMORANDUM OF POINTS AND AUTHORITIES

I. THE GOVERNMENT’S EXPERT FINGERPRINT TESTIMONY MUST BE LIMITED UNDER FRE 702

A. Rule 702 And Daubert Require Rigorous Evaluation Of The Reliability Of Particular Methodologies And How They Are Applied

Federal Rule of Evidence 702, which codified the Supreme Court’s holding in *Daubert* and its progeny, governs the admission of expert testimony of a technical or scientific nature.

The rule requires the proponent to show:

- (1) the expert’s scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue;
- (2) the testimony is based on sufficient facts or data;
- (3) the testimony is the product of reliable principles and methods; and
- (4) the expert has reliably applied the principles and methods to the facts of the case.

Fed. R. Evid. 702. Thus, it is the Court’s duty to serve as the gatekeeper and exclude certain expert opinions unless they are the product of reliable principles and methods. *See, e.g., Daubert*, 509 U.S. at 589; *Motorola Inc.*, 147 A.3d 755-56; *Johnson v. United States*, 960 A.2d 281, 296 (D.C. 2008) (citing *Dockery v. United States*, 853 A.2d 687, 697 (D.C. 2004); *Smith v. United States*, 686 A. 2d 537, 542 (D.C. 1996)). “Nothing in either *Daubert* or the Federal Rules of Evidence requires a [court] to admit opinion evidence that is connected to existing data only by the *ipse dixit* of the expert.” *Kumho Tire Co. v. Carmichael*, 526 U.S. 137, 158 (1999) (citing *Gen. Elec. Co. v. Joiner*, 522 U.S. 136, 146 (1997)). The proponent of the expert testimony bears the burden of proving its admissibility by a preponderance of the evidence. *See also Daubert*,

509 U.S. at 592 n.10 (proponent bears the burden); *Best v. United States*, 66 A.3d 1013, 1017 (D.C. 2013) (“The proponent of the evidence bears the burden of demonstrating its admissibility.”); *United States v. Woodfolk*, 656 A.2d 1145, 1150 n.14 (D.C. 1995) (“Preponderance of the evidence is the most commonly accepted standard in determining the admissibility of evidence.”).

Reliability is thus the touchstone of admissibility under *Daubert*. *Daubert*, 509 U.S. at 589; *see also United States v. Crisp*, 324 F.3d 261, 268 (4th Cir. 2003). Indeed, because of the power of expert testimony to sway a jury, “it is crucial that the [trial] court conduct a careful analysis into the reliability of the expert’s proposed opinion.” *United States v. Fultz*, 591 Fed. Appx. 226, 227 (4th Cir. 2015). To guide this inquiry, *Daubert* and its progeny established five factors for assessing the reliability of an expert’s proffered opinions:

- (1) whether the particular scientific theory “can be (and has been) tested”;
- (2) whether the theory “has been subjected to peer review and publication”;
- (3) the “known or potential rate of error”;
- (4) the “existence and maintenance of standards controlling the technique’s operation”; and
- (5) whether the technique has achieved “general acceptance” in the relevant scientific or expert community.

See Motorola Inc., 147 A.3d at 754; *United States v. Hassan*, 742 F.3d 104, 130 (4th Cir. 2014); *see also Daubert*, 509 U.S. at 593-94. The list is not exhaustive: the Court retains broad latitude to use other factors to measure reliability. *See, e.g. Kumho Tire.*, 526 U.S. at 152.

B. The Court Must Schedule An Evidentiary Hearing To Address The Issues Detailed In This Motion

As detailed below, the recent analysis of fingerprint examination has debunked the myth that the process is infallible. In fact, what has come to light is the process of fingerprint examination (1) does not have a standard protocol; (2) suffers from insufficient documentation of opinions; (3) is highly subjective; (4) is difficult to replicate; and (5) has a higher than expected

error rate. Even if this Court determines that fingerprint analysis testimony has been admitted in other jurisdictions, “[t]here is no grandfathering provision in Rule 702.” *Motorola Inc.*, 147 A.3d at 758. For the reasons detailed below, the Court must schedule an evidentiary hearing to determine the permissible extent of the government’s fingerprint expert testimony under *Daubert*.

C. The Application Of *Daubert* And FRE 702 To Fingerprint Examination

Despite *Daubert*’s emphasis on judicial scrutiny of reliability “serious questions have been raised . . . about how well judges have performed this role” when evaluating forensic evidence in criminal cases. *See* Ex. 1, AAAS Report at I. In response to these concerns, in 2006 Congress authorized the National Academy of Sciences/National Resource Council (NRC)⁵ to report on the status of forensic science. *Id.* (citing H.R. Rep. No. 109-272, 2005). After a three-year investigation, the NRC issued its report. *See* Ex. 3, National Resource Council, National Academy of Sciences, *Strengthening Forensic Science in the United States: A Path Forward* (2009) (“NRC Report”) (excerpts).⁶ Most significantly, the NRC report found that much of forensic science as currently practiced has “little rigorous systematic research to validate the discipline’s basic premises and techniques.” *Id.* at 22. It also criticized courts for failing to properly perform their gatekeeping role: “Federal appellate courts have not with any consistency or clarity imposed standards ensuring the application of scientifically valid reasoning and reliable methodology in criminal cases involving *Daubert* questions.” *Id.* at 11.

⁵ Dr. Cole’s Affidavit provides background information regarding several of the organizations who have issued key reports on forensic evidence over the past 10 years. Ex. 2, Cole Affidavit, ~ 11 (a)-(t). He explains that “[t]he National Research Council (“NRC”) is an arm of The National Academies,” which is “often called the most prestigious scientific institution in the United States.” *Id.* ~11(a). Because of this reputation, “NRC reports command a special authority on scientific and technical matters,” and have been called a “court of last resort” on scientific controversies. *Id.* The Supreme Court has recognized the NRC Report as authority in *Melendez-Diaz::: v. Massachusetts*, 551 U.S. 305, 319 (2009) and in *Hinton v. Alabama*, 134. S.Ct. 1081, 1083 (2014).

⁶ Available at <https://www.ncjrs.gov/pdffiles1/nij/grants/228091.pdf>.

This same observation applied to fingerprint analyses and testimony. Fingerprint identification was once viewed as a gold standard in forensic identification. *See, e.g.*, FEDERAL BUREAU OF INVESTIGATION, *THE SCIENCE OF FINGERPRINTS*, iv (1984) (describing the technique as “infallible” in its official publication, which also referred to the technique as a science). However, over the past ten years, the scientific community and government organizations have re-evaluated this traditional view. To be sure, for decades various courts in the United States have admitted expert testimony comparing known and latent fingerprints. *See, e.g., United States v. Crisp*, 324 F.3d 261, 269 (4th Cir. 2003). On the other hand, certain assumptions regarding fingerprint examination’s unassailable accuracy have been re-examined and found not to be scientifically supported.

The above landmark reports, in addition to a significant body of scientific literature and commentary within the forensic community, demonstrate significant concerns regarding the reliability of fingerprint evidence. These concerns were pushed to the forefront by the FBI’s 2004 misidentification of Brandon Mayfield as the source of latent prints on a bag of detonators linked with the terrorist train bombing in Madrid on March 11, 2004, despite the fact that Mr. Mayfield was in Portland, Oregon at the time of the bombing. *See* U.S. Dep’t of Justice, Office of the Inspector General, *A Review of the FBI’s Handling of the Brandon Mayfield Case 1* (2006) (hereinafter “OIG Report (2006)”).⁷ The high-profile misidentification resulted in investigations by the FBI and the Inspector General of the Department of Justice. *Id.*; *see also* Robert B. Stacey, *A Report on the Erroneous Fingerprint Individualization in the Madrid Train Bombing Case*, 54 J. FORENSIC IDENTIFICATION 707 (2004); OIG Report at 7. In the wake of the Mayfield case, the OIG report, rising awareness of false attributions, and scholarship questioning the view of fingerprint identification as infallible, scientific boards began to closely

⁷ Available at <https://oig.justice.gov/special/s0601/final.pdf>.

examine the foundational validity of fingerprint examination, as well as its claims of infallibility. Fingerprint examination in general (and in this case) most commonly includes a review of the fingerprint using a procedure known as Analysis, Comparison, Evaluation, and Verification (ACE-V). The 2009 NRC report urgently called for empirical studies to test the foundational validity of ACE-V latent print analysis as a means of forensic identification. Ex. 3, NRC Report at 144-45. It observed that since “the ACE-V method does not specify particular measurements or a standard test protocol . . . examiners must make subjective assessments throughout,” making the outcomes of the method “not necessarily repeatable from examiner to examiner.” *Id.* at 139 (noting that empirical studies of actual examiners and actual cases showed that “experienced examiners do not necessarily agree with even their own past conclusions when the examination is presented in a different context some time later”) (citation omitted)). The report added that “[t]he latent print community in the United States has eschewed numerical scores and corresponding thresholds” and consequently relies on “primarily subjective criteria” in making the ultimate attribution decision.” *Id.* at 144. Moreover, the NRC report gave short shrift to the argument that fingerprint examination had a zero error rate, finding that “claims these analyses have zero error rates are not scientifically plausible.” *Id.* at 142. In conclusion, the NRC report outlined an agenda for the research it considered necessary “[t]o properly underpin the process of friction ridge identification.” *Id.* at 144.

Several key fingerprint studies were published after the NRC report, and were reviewed in two seminal reports: a 2016 Report issued by the White House Presidential Council of Advisors on Science and Technology (“PCAST Report”), PRESIDENT’S COUNCIL OF ADVISORS ON SCIENCE AND TECHNOLOGY, REPORT TO THE PRESIDENT: *Forensic Science in Criminal Courts: Ensuring Scientific Validity of Feature-Comparison Methods*,

September, 2016,⁸ Ex. 4 (excerpts); and a 2017 report issued by the American Association for the Advancement of Science (“AAAS Report”). The PCAST report was particularly significant in that it was the result of extensive collaboration between leading experts in relevant fields in re-examining the validity of certain claims advanced by various forensic science disciplines and offering suggestions.

As Doctor Cole explains:

PCAST is “an advisory group of the nation’s leading scientists and engineers who directly advise the President of the United States and the Executive Office of the President. PCAST makes policy recommendations in the many areas where understanding of science, technology, and innovation is key to strengthening our economy and forming policy that works for the American people.” The PCAST Report was published in September 2016 at the request of then-President Obama. The Report reviewed several fields of forensic science, including latent fingerprint analysis, for the purpose of strengthening the various fields and clarifying the requirements for foundational validity and validity as applied.

See Ex. 2, Cole Affidavit ¶ 11(e).

The PCAST report emphasized the challenges in establishing the scientific validity of a forensic science method that relies, in part, on subjective judgment:

Subjective methods require particularly careful scrutiny because their heavy reliance on human judgment means they are especially vulnerable to human error, inconsistency across examiners, and cognitive bias. In the forensic feature comparison disciplines, cognitive bias includes the phenomena that, in certain settings, humans may tend naturally to focus on similarities between samples and discount differences and may also be influenced by extraneous information and external pressures about a case.

See Ex. 4, PCAST Report at 5; Ex. 1, AAAS Report at 15, 35-42 (agreeing with this assessment and examining the scientific literature regarding cognitive and contextual bias in latent print examination). Although the PCAST Report ultimately concluded that “latent fingerprint analysis is a foundationally valid subjective methodology,” it cautioned that the false positive rate “is

⁸ Available at https://obamawhitehouse.archives.gov/sites/default/files/microsites/ostp/PCAST/pcast_forensic_science_report_final.pdf.

substantial and is likely to be higher than expected by many jurors based on longstanding claims about the infallibility of fingerprint analysis.” Ex. 4, PCAST Report at 10. The Report warned that “[t]he false-positive rate could be as high as 1 error in 306 cases based on the FBI study and 1 error in 18 cases based on a study by another crime laboratory.” *Id.* For this reason, the PCAST Report advised that “in reporting rates of [a] latent-fingerprint examination, it is important to state the false-positive rates based on properly designed validation studies.” *Id.*

The AAAS report’s findings were of particular significance as it focused specifically on reexamining the discipline of fingerprint comparison and assembled a diverse group of experts to do so. As Professor Cole explains:

AAAS is the world’s largest general scientific society and publisher of the Science family of journals. Science has the largest paid circulation of any peer-reviewed general science journal in the world. AAAS was founded in 1848 and includes nearly 250 affiliated societies and academies of sciences, serving 10 million individuals. The non-profit AAAS is open to all and fulfills its mission to ‘advance science and serve society’ through initiatives in science policy, international programs, science education, public engagement, and more.”

The AAAS reevaluation of fingerprint evidence came in direct response to the 2009 NRC Report. The four-person working group who authored the report included one practicing forensic scientist, a biometric and computer engineer, a statistician, and a professor of criminology.

Ex. 2, Cole Affidavit, ¶ 11 (f). The AAAS Report reached a number of conclusions regarding the use of fingerprint testimony in criminal trials. First, claims that experts can identify the source of a latent print with 100 percent accuracy are “clearly overstated and are now widely recognized as indefensible.” *Id.* at 9. Whether an examiner says this explicitly or implicitly through claiming that he has made an “identification” or that a suspect is “the source”, as the examiner in this case did, the effect is the same: the examiner communicates to the jury that his or her analysis is definitive and infallible. *See*, Ex. J, Cole Affidavit, ¶¶ 21, 27. Second, use of the term “identification” in reports and testimony even with qualifications “fail to deal forthrightly with

the level of uncertainty that exists in latent print examination” and “cannot be justified scientifically.” *Id.* at 10. Third, the report concluded that, because of public misconceptions, experts “should acknowledge: (1) that the conclusions being reported are opinions rather than facts (as in all pattern-matching disciplines), (2) that it is not possible for a latent print examiner to determine that two friction ridge impressions originated from the same source to the exclusion of all others; and (3) that errors have occurred in studies of the accuracy of latent print examination. An accompanying news release summarized the report’s findings: “Courtroom testimony and reports stating or even those implying that fingerprints collected from a crime scene *belong to a single person are indefensible and lack scientific foundation . . .*” Anne Q. Hoy, *Fingerprint Source Identify Lacks Scientific Basis for Legal Certainty; More Research into Validity of Fingerprint Comparisons Needed, Forensic Report Says*, Sept. 15, 2017 (emphasis added).⁹

To keep from misleading the jury and prejudicing Defendant Green, this Court must take steps

to clarify the examiner’s testimony in a few key respects:

- (1) preclude the government’s expert from testifying that the latent print and Green’s known print “match,” that he “identified” the latent print as coming from Green, that the two prints are from a “common source”, that Green is “the source” of the latent print, that the latent print and the known print originated from the same source “to the exclusion of all others”, or any testimony of a similar nature;
- (2) limit the government’s expert to testifying that based on his analysis of the latent print and Green’s known fingerprint, he cannot exclude Green as the source of the latent print;

⁹ Available at <https://www.aaas.org/resources/latent-fingerprint-examination>.

- (3) limit the government expert's testimony regarding the field of fingerprint analysis to terms of exclusion rather than matching, identification, and individualization;
- (4) preclude the government expert from offering any testimony indicating that you would not expect the latent print and Green's known print to have come from two different individuals;
- (5) require the expert to qualify his opinion by acknowledging that the level of certainty in any conclusion of source attribution would be limited by the upper bound of the error rates in the only relevant and properly-designed studies on the subject; and
- (6) instruct the jury regarding the error rates associated with fingerprint comparison and instruct them that the testimony is not to be considered as establishing a "match" between Green's print and the latent print.

Even if a method is scientifically valid, any expert testimony based on that method must also be scientifically valid. Ex. 4, PCAST Report at 54. In particular, "[s]tatements claiming or implying greater certainty than demonstrated by empirical evidence are scientifically invalid." *Id.* (emphasis in original). As Dr. Cole explains, there is "now a consensus among five scientific and governmental reports . . . that categorical conclusions of "individualization" or "identification" are not acceptable." Ex. 2, Cole Affidavit ¶ 12. There is also "growing acceptance in the fingerprint community of this point." *Id.* The AAAS Report closely examined the "kinds of statements" that "fingerprint examiners" can "reasonably make . . . in order to appropriately convey both the strength and uncertainty associated with fingerprint evidence." Ex. 1, AAAS Report at 9. The Report concluded, "Examiners should be careful not to make

statements in reports or testimony that exaggerate the certainty of their conclusions.” As such, the AAAS report recommended that testifying examiners could “indicate that the similarity between a latent and known print are such that the donor of the known print cannot be excluded as the source of the latent print.” *Id.* This is the same language used in DNA analysis, a discipline considered to be the gold standard in objectivity of the forensic disciplines. The AAAS report also cautioned that testifying examiners should “avoid statements that claim or imply that the pool of possible sources is limited to a single person.” *Id.*

Any statement by an expert on the stand that Green’s known print “matches” the latent print, or has been “identified” as the source of the latent print, is in essence a statement of absolute source attribution. *See*, Ex. 2, Cole Affidavit ¶¶ 21, 27. Dr. Cole explains that, even where examiners do not use the phrase “to the exclusion of all others,” language which implies the same point—such as “identified” or “is the source”—without assigning a probability to their conclusion is “not scientifically defensible.” Ex. 2, Cole Affidavit ¶ 27. Dr. Cole’s conclusions reflect the view adopted in the NRC report that “[w]hen a latent print examiner testifies that two impressions ‘match,’ they are communicating the notion that the prints could not possibly have come from two different individuals.” *See, e.g.*, Ex. 3, NRC Report (2009) at 141-42. The AAAS report confirms this view, concluding that “[t]erms like ‘match,’ ‘identification,’ ‘individualization’ and their synonyms, imply more than the science can sustain.” AAAS Report at 11, 63 (“The term *identification* . . . implies an ability to limit the source of a friction ridge print to a single individual. That is an ability that latent print examiners cannot justifiably claim to have.”). As detailed above, a statement that two prints could not possibly have come from two different individuals is a statement implying certainty that simply has no empirical foundation. For this reason, the Court should preclude the government’s expert from making any

claims that imply that an identification can be made as a result from a fingerprint examination. *See United States v. Willock*, 696 F. Supp. 2d 536 (D. Md. 2010), *affd sub nom. United States v. Mouzone*, 687 F.3d 207 (4th Cir. 2012) (recommending that ballistics examiner be “permitted only to state his opinions and bases without any characterization as to degree of certainty,” because “without a proper basis for supporting the confidence level testified to, there is a real danger of misleading the jury”).

Moreover, even without a statement about an “identification” or “the source” of the latent fingerprint, the expert’s opinion about the similarities between the latent print and Green’s known prints will be an implicit signal to the jury that these similarities must indicate a definitive match, given misconceptions that “have been shaped by decades of overstatement by latent print examiners.” Ex. 1, AAAS Report at 11. For this reason, the AAAS Report concluded that “[w]hen latent print examiners testify, they should be prepared to discuss forthrightly the results of research studies that tested the accuracy of latent print examiners on realistic known-source samples.” *Id.*; *see also Willock*. 696 F. Supp.2d at 572 (stressing that “firearms toolmark identification evidence is only relevant, reliable, and helpful to a jury it is offered with the proper qualifications regarding its accuracy”). The unadorned opinion of the expert about similarities in the pairs of prints, without any information about the high error rate, will leave the jury to determine for itself the probative value of such similarities. Given lay jurors’ grossly inaccurate assumptions about the false positive rate of fingerprint examiners, *see* Ex. 4, PCAST Report at 95 n.282 (citing a study showing that mock jurors believed the false positive rate was 1 in 5.5 million), allowing the expert testimony without an explicit qualification of the level of uncertainty would be both contrary to Rule 702’s requirement of foundational validity and

unduly prejudicial. *See also* Ex. 4, PCAST Report at 56 (requiring, to establish that a technique was reliably applied, that the expert report the false positive rate when testifying).¹⁰

The Court should similarly provide the jury with an instruction informing them that fingerprint comparison is not infallible and detailing the known error rates associated with fingerprint comparison in order to clarify the common misconception that fingerprint identification is 100% accurate.

To clarify and summarize, the NRC, PCAST and AAAS reports highlight significant issues with the fingerprint analysis process. Problems identified in these reports include, but are not limited to:

- 1) Lack of specificity with particular measurements or a standard test protocol
- 2) Lack of numerical scores and corresponding thresholds
- 3) Insufficient documentation of relevant information gathered during the analysis, evaluation, and comparison of latent prints
- 4) Insufficient documentation of the basis for conclusions
- 5) Pattern matching which leads to subjective assessments by examiners
- 6) Difficulties with repeatability from examiner to examiner
- 7) The lack of a known and established error rate. Although, the PCAST report determined that the false positive rate “is substantial and is likely to be higher than expected by many jurors based on longstanding claims about the infallibility of fingerprint analysis.” Ex. 4, PCAST Report at 10.

¹⁰ Indeed, prior to the wave of scientific research and study summarized in the PCAST and AAAS reports, many courts also accepted testimony that the error rate for fingerprint comparison was “essentially zero.” *See Crisp*, 324 F.3d at 269 (noting that fingerprint identification has an “exceedingly low rate of error”). Notably, in a dissenting opinion in *Crisp*, Judge Michael criticized the majority's acceptance of the examiner's testimony regarding the error rate: “The third *Daubert* factor calls for consideration of the known or potential rate of error. . . . Some courts have merely assumed that the rate of error in fingerprint identification is low . . . And that may be. But an error rate must be demonstrated by reliable scientific studies, not by assumption.” *Crisp*, 324 F.3d at 274 (Michael, J. dissenting).

CERTIFICATE OF SERVICE

I hereby certify that on December 10, 2019, a copy of the foregoing Motion and Memorandum of Points and Authorities has been filed via the CM/ECF, which will cause an electronic copy to be served upon all parties. Additionally, a courtesy copy was sent via email to the AUSA Mervin Bourne, Jr.

_____/s/_____
Jonathan Zucker

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA

UNITED STATES OF AMERICA

v.

Crim No.: 19-CR-250 (DLF)

DAQUANTE GREEN

Defendant.

ORDER

It is hereby **ORDERED** that the Defendant's Motion in Limine to Limit Fingerprint Testimony is **GRANTED** and it is **FURTHER ORDERED** that

(1) the government's fingerprint expert is precluded from testifying that the latent print and Defendant Green's known print "match," that he "identified" the latent print as coming from Green, that the two prints are from a "common source", that Green is "the source" of the latent print, that the latent print and the known print originated from the same source "to the exclusion of all others", or any testimony of a similar nature;

(2) the government's fingerprint expert is limited to testifying that based on his analysis of the latent print and Green's known print, he cannot exclude Green as the source of the latent print;

(3) the government expert's testimony regarding the field of fingerprint analysis is limited to terms of exclusion rather than matching, identification, and individualization;

(4) the government's fingerprint expert is precluded from offering any testimony indicating that you would not expect the latent print and Green's known print to have come from two different individuals;

(5) the government's fingerprint expert is required to qualify his opinion by acknowledging that the level of certainty in any conclusion of source attribution would be limited by the upper bound of the error rates in the only relevant and properly-designed studies on the subject; and

(6) the Court will instruct the jury regarding the error rates associated with fingerprint comparison and instruct them that the testimony is not to be considered as establishing a "match" between Green's print and the latent print.

It is so **ORDERED** this ____ day of _____ 2019.

Hon. Dabney L. Friedrich

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