# IN THE UNITED STATES DISTRICT COURT FOR THE DISTRICT OF NEW MEXICO

**THE UNITED STATES OF AMERICA**,

Plaintiff,

vs. No. CR 10-2734 JCH

# JOHN CHARLES McCLUSKEY,

Defendant.

# MOTION TO EXCLUDE FINGERPRINT IDENTIFICATION EVIDENCE, AND REQUEST FOR DAUBERT HEARING

COMES NOW, Defendant John Charles McCluskey, by and through his counsel of record, Michael Burt and Theresa Duncan, and pursuant to Federal Rules of Evidence Rules 104(a), 402, 403, 702, 703, Federal Rule of Criminal Procedure Rule 16 and the Fifth, Sixth, and Eighth Amendments to the United States Constitution, and respectfully submits this Motion to Exclude Fingerprint Identification Evidence And Request For *Daubert* Hearing .

The grounds for this motion are: (1) there is no reliable scientific basis for this proposed testimony, and thus the testimony is inadmissible under *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993) and *Kumho Tire Co. v. Carmichael*, 526 U.S. 137,

119 S.Ct. 1167, 143 L.Ed.2d 238 (1999); (2) the testimony is inadmissible under the 2000 amendments to Rule 702 in that (a) the testimony is not based upon sufficient facts or data, (b) the testimony is not the product of reliable principles and methods, and (c) the fingerprint examiner who performed the latent print examinations in this case has not applied the principles and methods reliably to the facts of the case; (3) the subjective conclusion, unsupported by

statistical analysis, that a particular latent impression belonged to a particular person, or cannot be eliminated as belonging to that person, is so weak as to lack any probative value; and (4) any weak probative value of the proposed testimony is also substantially outweighed by the danger of unfair prejudice, confusion of the issues, and misleading the jury, and by considerations of undue delay, waste of time, and needless presentation of cumulative evidence and is thus inadmissible under F.R. Evid. 403 and the due process, fair trial, and cruel and unusual provisions of the Constitution and 18 U.S,C. § 3592 (c). In addition, the testimony should be excluded because of the government’s failure to comply with Federal Rules of Criminal Procedure Rule 16 and this Court’s scheduling order.

This Motion is based on this Motion, the attached memorandum of points and authorities, the CD of exhibits which is being filed manually because of the size of the exhibits thereon, and any oral and documentary evidence and argument as may be produced at the hearing on said motion.

# TABLE OF CONTENTS

[TABLE OF AUTHORITIES ii](#_TOC_250007)

1. [Statement of Facts and Threshold Objections 1](#_TOC_250006)
2. [Tenth Circuit Law On The Admissibility of Fingerprint Evidence 13](#_TOC_250005)
3. [There Is No Reliable Scientific Basis for the Government’s Fingerprint Identification Testimony and Thus the Testimony Is Inadmissible under *Daubert and* Rule 702 23](#_TOC_250004)

[A. The ACE-V Methodology is Unreliable. 25](#_TOC_250003)

1. [The Expert Should Not Be Allowed To Testify To Inconclusive Results 33](#_TOC_250002)
2. [An Evidentiary Hearing Should Be Granted 34](#_TOC_250001)

[CONCLUSION 35](#_TOC_250000)

Certificate of Service 37

# TABLE OF AUTHORITIES

**Cases**

Ambrosini v. Labarraque, (D.C. Cir.1992), 966 F.2d 1464, 1469 7

Caldwell v. Mississippi, 472 U.S. 320, 105 S.Ct. 2633, 86 L.Ed.2d 231 (1985) 8

Commonwealth v. Gambora, 457 Mass. 715, 933 N.E.2d 50 (Mass.2010). 12

Commonwealth v. Pytou Heang, 458 Mass. 827, 847, 942 N.E.2d 927, 944 (2011) 11

Dodge v. Cotter Corp., 328 F.3d 1212, 1223 (10th Cir.2003). 35

Daubert v. Merrell Dow Pharmaceutical, 509 U.S. 579 (1993) . . . . . . . . . 1-4, 7-10, 13-20, 30-35

Delaware v. Fensterer, 474 U.S. 15, 22-23, 106 S.Ct. 292, 296, 88 L.Ed.2d 15 (1985) 9

Frederick v. Swift Transp. Co. 616 F.3d 1074, 1082 (10th Cir. 2010). 34

Kumho Tire Co. v. Carmichael, 526 U.S. 137, 150 (1999) 14, 17-18, 34-35

Melendez-Diaz v. Massachusetts, U.S. , 129 S.Ct. 2527, 2536, 2537, 174 L.Ed.2d 314 (2009). 12

United States v. Baines, 573 F.3d 979 (10th Cir.2009). . . . . . . . . . . . . . . . . . . . . . . . . . . 13-22, 33

United States v. Brien, 59 F.3d 274, 277 (1st Cir. 1995). 7

United States v. Brown, 592 F.3d 1088, 1090 (10 Cir. 2009). 9

United States v. Garcia, 635 F.3d 472, 476 (10th Cir. 2011). 33

United States v. Glynn, 578 F.Supp.2d 567, 574 (S.D.N.Y. 2008) 21-23

United States v. Green, 405 F.Supp.2d 104, 108 (D. Mass. 2005) 11

United States v. Gutierrez-Castro, 805 F.Supp.2d 1218 (D.N.M. 2011). 18-19

United States v. Lacy, 2011 WL 2600689 \*2 (D.Utah 2011) 9

United States v. Lawson, 653 F.2d 299, 302 (7th Cir.1981), certiorari denied 102 S.Ct. 1017, 454 U.S. 1150, 71 L.Ed.2d 305 8

United States v. Llera Plaza, 188 F.Supp.2d 549, 572 (E.D.Pa.2002). 18

United States v. Mitchell, 365 F.3d 215, 245 (3d Cir.2004) 10, 17, 18, 20

United States. v. Monteiro, 407 F.Supp.2d 351 (D.Mass. 2006). 11, 21

United States v. Prime, 431 F.3d 1147 (9th Cir. 2005). 18

United States v. Robinson, 44 F. Supp. 2d 1345, 1346 (N.D. Ga. 1997). 8, 10

United States v. Rodriguez-Felix, 450 F.3d 1117, 1125 (10th Cir.2006) 7

United States v. Stokes 388 F.3d 21, 27 (1st Cir. 2004) 7

United States v. Taveras, 424 F. Supp. 2d 446, 462 (E.D.N.Y. 2006) 8

United States v. Taylor, (663 F. Supp. 2d at 1178 ). 12

United States v. Velarde, 214 F. 3d 1204, 1208-09 (10th Cir. 2000). 35

United States v. Willock, 696 F.Supp.2d 536, 570 (D. Md. 2010). . . . . . . . . . . . . . . . . . 11-12, 21

United States v. Williams, 447 F.2d 1285, 1290 (5th Cir. 1971). 8

University of Rhode Island v. A.W. Chesterton Co., (1st Cir.1993), 2 F.3d 1200. 7

# Statutes and Rules

Rule 16.. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 1-2, 4, 9, 11

Rule 702. 7, 9, 20, 33, 35-36

Rule 703. 7

Rule 705. 7, 9

18 U.S.C. 3592(c). 7, 36

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I.E. Dror and D. Charlton, *Why experts make errors*, Journal of Forensic Identification (2006)

56(4):600-616.) . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 28

J.L. Mnookin, *The validity of latent fingerprint identification: Confessions of*

*a fingerprinting moderate* (2008), Law, Probability and Risk 7:127 ) 29

L. Haber and R.N. Haber, *Scientific validation of fingerprint evidence under Daubert, Law, Probability, and Risk* (2008) 7(2):87-109.) 30

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Schwartz, More Than Zero: Accounting For Error in Latent Fingerprint Identification, 95 J.Crim. L. & Criminology 985, 993-94 (Spring 2005) 19

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# Statement of Facts and Threshold Objections

This motion addresses the admissibility of fingerprint examiner testimony with regard to comparison of prints collected in this case against prints belonging to Mr. McCluskey, his co- defendants, and the two decedents. The relevant facts in support of the motion are as follows.

On June 30, 2011, the Court entered a preliminary discovery order consistent with D.N.M.LR-Cr. 16.1. [Doc. 203.] Under that Order, Mr. McCluskey is deemed to have requested discovery under Fed. R. Crim. P. 16 unless he filed a waiver within seven days from the entry of the Order. [*Id*.] Mr. McCluskey did not file a waiver. On September 9, 2011, this Court

entered a Scheduling Order which set January 20, 2012 as the “[d]eadline for government to complete all summaries and provide all reports on all experts, with all foundational data to be disclosed by February 17, 2012.” [Doc. 220, p.1]. The Court set March 30, 2012 as the

“[d]eadline for defense *Daubert* motions directed at government experts.” (Id.).1

On January 30, 2012, the government filed a four page Notice of Intention To Offer

Expert Testimony [Doc. 261]. This Notice concedes that the Notice itself does not comply with Rule 16(a)(1)(G), or this Court’s Scheduling Order, for it explicitly states that “the United States will provide the experts’ credentials, summaries, and reports as separate discovery, and

foundational information at a later time...” (Id.). The Notice purports to be only a “list of experts

and the subject area of their expected testimony.” (Id.) The list includes the names of fifteen named experts in fourteen different areas of forensic science. The list does not constitute “a written summary of testimony...[which] describe[s] the witness’s opinions, the bases and reasons for those opinions, and the witness’s qualifications.” Federal Rule of Criminal Procedure, Rule

1 The Court has since extended the deadline to April 22, 2012. [Doc. 416].

16(a)(1)(G). Instead, for each expert the Notice lists certain broad subject matters, and then indicates that the expert’s testimony “will include discussion of” that broad topic, without indicating what that discussion will consist of. For example, with respect to the fingerprint examiner’s testimony at issue in the present motion, the notice merely states that the United States gives notice that it intends to introduce certain expert testimony, including the testimony of :

Bonnie Knoll, Forensic Scientist, New Mexico Department of Public Safety Forensic Laboratory. Testimony will include the analysis of latent fingerprint evidence.

[Doc. 261, p. 3].

On January 30, 2012, Mr. McCluskey filed a Motion to Compel Production of Expert

Disclosures in Compliance with Rules 16(a)(1)(G) and this Court's Scheduling Order, for

Depositions of Government Experts Pursuant to Rules 2, 16(a)(2), and 57, and for Adjustment of

Scheduling Order. [Doc. 292]. In response to the motion, the government indicated that “[t]he United States will agree to provide to Defendant and this Court a further summary under Rules 702, 703, or 705 of the Federal Rules of Evidence of evidence it intends to present during its case-in-chief pursuant to Rule 16(a)(1)(G).” [Doc. 332, p. 50]. The government also indicated that depositions of the government’s expert’s was unnecessary because “numerous *Daubert* motions presumably will be heard by this Court wherein the experts for the Government will testify, as well as being available to testify at trial and subject to cross-examination.” (Id.)

On March 30, 2012, over two months after the Court’s January 20, 2012, deadline, the government filed a Supplemental Notice of Intent to Offer Expert Testimony. [Doc. 383]. The

Supplemental Notice lists eleven expert witnesses.2

The summary with respect to the fingerprint examiner’s testimony is as follows: The United States intends to call Supervising Forensic Scientist, New

Mexico Department of Public Safety Forensic Laboratory, Bonnie Knoll, who is specialized in Latent Prints examination. Ms. Knoll is expected to testify regarding her experience since 1999 in analyzing latent prints. She is also expected to testify regarding the numerous seminars and continuing education she has attended to date in enabling her to conduct reliable analysis regarding latent prints. The basis for her opinion, and her qualifications have been provided as discovery to Defendant and his counsel. Her report was provided to Defendant and his counsel on December 23, 2010 (bates range 1237-1247; 1399-1404; 2304-

2406); February 24, 2011 (bates range 2546-2549); and April 15, 2011 ( bates range 3719-3722). Ms. Knoll is also expected to testify about the use of Amido Black to develop latent fingerprints in blood on the pickup truck, as well as the use of Cyanoacrylate fumes to fix the latent prints in the pickup truck, and the result that were obtained from the process.

Qualified as an expert in latent print examination in numerous courts, she is expected to testify in this case as to how she visually examined the latent lifts taken in this case for identifiable latent impressions. She is expected to testify that numerous latent prints were not suitable for comparison. She is expected to testify regarding those latent lifts that were suitable for comparison and how those were compared with the standards from Defendant, Casslyn Welch, Tracy Province, Gary Haas and Linda Haas. Ms. Knoll is expected to testify regarding the many comparisons made between the identifiable latent impressions and those standards. She is also expected to testify regarding the submission of certain identifiable latent impressions into the AFIS and IAFIS databases and what results were obtained. Her testimony will include her expert opinion and specialized knowledge in latent print examination, derived from her education, training, and professional experience.

[Doc. 386, p. 5-6].

As explained in detail below, the supplemental notice, like the original notice, does not

2 Four witnesses listed in the original notice (Dr. Nadia Granger, Dr. Lee M. Blum, Dan Wright, and Andrew Armstong) are not listed in the supplemental notice. In conversation with counsel following the last court appearance on April 3, 2012, the government clarified that the government did not intend to call these four witnesses. The government indicated agreement to Mr. McCluskey’s position that he reserves the right to file *Daubert* or other motions challenging the admissibility of these four witnesses should the government change its position.

constitute “a written summary of testimony...[which] describe[s] the witness’s opinions, the bases and reasons for those opinions, and the witness’s qualifications.” Federal Rule of Criminal Procedure, Rule 16(a)(1)(G). Saying that “[h]er testimony will include her expert opinion”, does not tell us what that opinion is. Saying that her opinions will be “derived from her education, training, and professional experience” does not begin to describe “the bases and reasons for those opinions.”

The referenced reports in discovery, included on the manually filed Exhibit CD as Exhibit 1, do not solve the problem because the conclusions stated therein, like the supplemental notice, do not state, “the bases and reasons for [the] opinions”, but are instead phrased in intentionally vague, equivocal, and conclusory terms that provide no idea what the specific opinions are, or why the expert concluded as she did. The specific opinions set out in the reports that are challenged in this motion on Rule 16, *Daubert,* and other grounds are as follows:

* 1. “Item 8 contains multiple areas of ridge detail; five of which were entered into and seached through the AFIS database. Two of the five impressions searched through AFIS with positive results to the number eight and nine fingers of John Charles McCluskey.”;
  2. “Item 8 contains eight impressions identified as follows: 8A and 8H both identified as the number ten finger of Tracy Province, 8B and 8E both identified as the number nine finger of Province, 8C identified as the number eight finger of John McCluskey, 8F as the number six finger of Province (result of an IAFIS search-prior to receiving known standards), 8G identified as the number eight finger of Province.”;
  3. “Item 22 contains four impressions; the comparative results are as follows: 22A identified as the number eight finger of Linda Haas, 22B identified as the number two finger of

L. Haas, 22C and 22D can be eliminated from all three suspects, but not from the victims as no palm standards are available.”;

* 1. “Item 23 contains one impression, items 23A which is identified as the number three finger of L.Haas.”;
  2. “Item LP3 cannot be eliminated from McCluskey, Province, Welch, or L. Haas, but can be eliminated from Gary Haas.”;
  3. “Item LP4 is identified as the number seven finger of G. Haas.”;
  4. “Item LP7 contains two impressions, one of which cannot be eliminated from Province, Welch, or L. Haas, but can be eliminated frm McCluskey and G. Haas and the second of which cannot be eliminated from any of the standards due to their quality.”;
  5. “Item LP10 is identified as the number three finger of G. Haas.”;
  6. “Item LP11 is identified as the number eight finger of G. Haas.”;
  7. “Item LP12 is identified as the number three finger of G. Haas.”;
  8. “Item 1B39A contains one impression, item 1B39A-A which can only be eliminated from G. Haas.”;
  9. “Item 1B39A-2 contains two impressions, item 1B39A-2A identified as the number two finger of Casslyn Welch and 1B39A-2B identified as the number six finger of Welch.”;
  10. “Item 1B39A-3 contains one impression, item 1B39A-3A identified as the number two finger of Welch.”;
  11. “[A] fourth impression [on item 15] can be eliminated from Province, McCluskey, and Welch.”;
  12. “Item 1B34-2 contains three impressions, two of which are identified as the number

nine and two finger of Welch; the third cannot be eliminated from Welch.”;

* 1. “Item 1B34-6 is identified as the left palm of McCluskey.”;
  2. “Item 1B34–7 is identified as the number eight finger of McCluskey.”;
  3. “item 1B34-9 contains two impressions, one of which cannot be eliminated from Welch, and the second of which is identified as the palm of Welch.”;
  4. “Items 8F and 15B were entered into and searched through the IAFIS data based as well; 8F searched with positive results to the number six finger of Province and item 15B searched with negative results.”

The foundational material provided by the government on February 16, 2012 is included on the manually filed CD as Exhibit 2. The Court will search this material in vain for any explanation of how the expert was able to reach any of the conclusions stated above. For the most part, the foundational material consists of chain of custody documents, notes describing the latents, AFIS documents, and digital images of latent prints. There are no side-by-side comparison photographs of the latents and known prints, and there are no photographs where points of similarity or dissimilarity are noted. The only note about the process of identification merely states: “The identifiable impressions were compared against the know fingerprints and palm standards of Charles McCluskey, Tracy Province, and Casslyn Welch. They were also compared against the known fingerprint standards of Gary Haas and Linda Haas (no palm standards available). The results are as follows: [listing same conclusions staed in reports].

Comparisons and identifications were reviewed and verified by T. Zehringer.” [Exhibit 2, p. 9598-6599]. The foundational material thus does not state the bases and reasons in support of the expert’ s opinions.

Mr. McCluskey also requested as foundational material any proficieny tests of Ms. Knoll or any reviewer. In response, on April 20, 2012, he received a single proficiency test completed by Ms. Knoll in May 2010, and no proficiency tests for T. Zehringer.

At the outset, therefore, Mr. McCluskey moves to exclude any fingerprint identification testimony on the ground that the government’s failure to provide an adequate summary and “all” foundational data as ordered by the Court makes it impossible for this Court to determine, as it is

required to do under Daubert and Rule 702, whether: (a) the testimony is based upon sufficient facts or data, (b) the testimony is the product of reliable principles and methods, and (c) the firearm examiner who performed the comparison in this case has applied the principles and methods reliably to the facts of the case. 4

4See, United States v. Rodriguez-Felix, 450 F.3d 1117, 1125 (10th Cir.2006) (finding no abuse of discretion when the district court excluded testimony based on the "woefully inadequate" report regarding proffered testimony); United States v. Stokes 388 F.3d 21, 27 (1st Cir. 2004) (“Providing the district court with information underlying the expert's assumptions and conclusions allows the court to ‘gauge whether the testimony would be helpful to the jury or would confuse or mislead instead.’"); United States v. Brien, 59 F.3d 274, 277 (1st Cir. 1995), certiorari denied 516

U.S. 953, 116 S.Ct. 401,, 133 L.Ed.2d 320 (trial court did not err in excluding expert testimony concerning fallibility of eyewitness testimony where proponent of testimony failed to present underlying data supporting opinion; "There is nothing to Brien's alternative argument that Fed.R.Evid. 705 entitled Yarmey to offer the expert testimony without disclosing the underlying data, leaving that to be developed by cross-examination. Rule 705 relates to the presentation of testimony at trial and, even then, is subject to the supervision of the trial judge to avoid unfairness. The rule does not impair-- indeed, has nothing to do with--the trial judge's right to insist that he or she be given the underlying information by proffer as an aid to the preliminary ruling on admissibility."); University of Rhode Island v. A.W. Chesterton Co., (1st Cir.1993), 2 F.3d 1200, 1218 (trial court did not err in precluding CPA from testifying on grounds his damage calculation was flawed where proponent offered no supporting documentation to substantiate the calculation;

"Rules 703 and 705 do not afford automatic entitlements to proponents of expert testimony. ...

[U]nder the broad exception to Rule 705 ('unless the court otherwise requires'), the trial court is given considerable latitude over the order in which evidence will be presented to the jury While

the trial court's discretion is not unfettered, at a minimum the rules suggest that the proponent must be prepared, if the court so requires, to make a limited offer of proof to aid the court in its assessment."); Ambrosini v. Labarraque, (D.C. Cir.1992), 966 F.2d 1464, 1469 (in products-liability

Mr. McCluskey also moves to exclude the firearm identification under the Fifth Amendment (due process), the Sixth Amendment (confrontation, fair trial), and,, the Eighth Amendment guarantee of heightened evidentiary reliability in a death penalty case, because in this particular case the government’s failure to adequately summarize the basis of the expert’s opinion and provide all foundational data as ordered by the Court prevents Mr. McCluskey from effectively challenging and cross examining the bases of the experts’ opinions.5

action against drug manufacturer alleging drug caused birth defects, where trial court granted defendant's motion for summary judgement and disregarded affidavits of plaintiff's experts on grounds their opinions connecting drug to birth defects were inadmissible under Rule 703, trial court erred in failing to require experts to disclose basis for their opinions; "[P]ursuant to Rule 705, the court could have required [the experts] to disclose the bases for their opinions so that it could determine whether the opinions had an adequate foundation (i.e. whether they were based on information that experts in the field would reasonably rely on in determining whether a particular drug causes birth defects). Only then could the court determine whether the affidavits were admissible under Rule 703. A court must know the basis for an expert's opinion before it can determine that the basis is not of a type reasonably relied upon by experts in the field.").

5Caldwell v. Mississippi, 472 U.S. 320, 105 S.Ct. 2633, 86 L.Ed.2d 231 (1985) (vacating sentence because prosecutor's remarks were inconsistent with the “heightened ‘need for reliability’ ” in capital cases); United States v. Taveras, 424 F. Supp. 2d 446, 462 (E.D.N.Y. 2006)(“Federal courts bear responsibility for ensuring that trials before them are conducted in conformity with statutory imperatives and the fairness required by the Fifth, Sixth, and Fourteenth Amendments. Because of heightened need for reliability in capital sentencing, the court should be exceptionally careful when considering whether to admit or exclude evidence...”)(Weinstein, J.); United States v. Lawson, 653 F.2d 299, 302 (7th Cir.1981), certiorari denied 102 S.Ct. 1017, 454 U.S. 1150, 71 L.Ed.2d 305 ("In addition to the reasonable reliance requirement of Rule 703, a criminal defendant must therefore also have access to the hearsay information relied upon by an expert witness. Without such access, effective cross-examination would be impossible. Rule 705, which provides that an expert need not disclose the facts or data underlying his opinion prior to his testimony unless the court orders otherwise, recognizes this requirement. The Advisory Committee notes to that rule state that it 'assumes that the cross-examiner has the advance knowledge which is essential for effective cross-examination.' "); United States v. Williams, 447 F.2d 1285, 1290 (5th Cir. 1971), certiorari denied 92 S.Ct. 1168, 405 U.S. 954, 31 L.Ed.2d 231 (introduction of expert opinion without opportunityto cross-examine author as to bases of opinion would infringe confrontation clause rights of defendant);United States v. Robinson, 44 F. Supp. 2d 1345, 1346 (N.D. Ga. 1997)(excluding a fingerprint expert’s opinion because the government did not produce all the points of identification

An additional threshold objection to the firearms examiner testimony is that the government’s failure to provide an adequate summary and basis of Ms. Babcock’s testimony, including the points of comparison upon which she relies violates Federal Rule of Criminal Procedure Rule 16.

Rule 16(a)(1)(G) requires that, at the defendant's request, the government “must give to the defendant a written summary of any testimony that the government intends to use under Rules 702, 703, or 705 of the Federal Rules of Evidence during its case-in-chief at trial.” Fed.R.Crim.P. 16(a)(1)(G). “ The rule also stipulates the content of such a written summary: it must include the expert's qualifications, describe her opinions, and state the ‘the bases and

reasons for those opinions.’ ” United States v. Brown, 592 F.3d 1088, 1090 (10 Cir. 2009), quoting Rule 16(a)(1)(G) . “The government's failure to provide an appropriate summary describing the witness's opinions, the bases and reasons for those opinions, and the witness's qualifications is ... problematic. Without such a summary, Defendant cannot adequately prepare

for trial.” United States v. Lacy, 2011 WL 2600689 \*2 (D.Utah 2011) (providing the names and resumes of government experts was inadequate to comply with Rule 16(a)(1)(G)).

The law regarding Mr. McCluskey’s Rule 16 argument is generally set forth in his motion to exclude firearm identification motion on the same ground. That discussion will not be repeated

on which the government's expert would rely as a basis for her opinion that the defendant's prints appeared on evidence; "If a defendant does not have the bases for the government's opinion, there is no way the defendant's counsel can effectively cross-examine the expert. It is this issue, which goes to the fairness of the trial, that the court must always keep in mind in dealing with discovery issues in a criminal case."). See generally, Delaware v. Fensterer, 474 U.S. 15, 22-23, 106 S.Ct. 292, 296, 88 L.Ed.2d 15 (1985) (reserving the question of " whether the introduction of expert testimony with no basis could ... be so lacking in reliability, and so prejudicial, as to deny a defendant a fair trial.”)

here, but defendant incorporates it by reference in support of the present motion.

Two fingerprint cases are directly on point. In *United States v. Mitchell*, 365 F.3d 215, 245 (3d Cir.2004) the Third Circuit turned aside a *Daubert* challenge to the admissibility of the FBI’s methodology for conducting fingerprint comparisons, but in so doing the Court emphasized that

[D]istrict courts will generally act within their discretion in excluding testimony of recalcitrant expert witnesses–those who will not discuss on

cross-examination things like error rates or the relative subjectivity or objectivity of their methods. Testimony at the *Daubert* hearing indicated that some latent fingerprint examiners insist that there is no error rate associated with their activities or that the examination process is irreducibly subjective. This would be out-of-place under Rule 702. But we do not detect this sort of stonewalling on the record before us.

Here, by contrast, the government’s stonewalling of the defendant’s legitimate discovery requests calls for the Court to exercise its discretion to exclude the government’s palm print evidence. The only thing the defendant has been provided with are conclusory reports and notes documenting the examiner’s bare conclusion that various latent prints are being identified as belonging to various persons associated with this case. This is insufficient, as illustrated by *United States v. Robinson*, 44 F. Supp. 2d 1345, 1346 (N.D. Ga. 1997). There, the district court excluded a fingerprint expert’s opinion because the government did not produce all the points of identification on which the government's expert would rely as a basis for her opinion that the defendant's prints appeared on evidence: "If a defendant does not have the bases for the government's opinion, there is no way the defendant's counsel can effectively cross-examine the expert. It is this issue, which goes to the fairness of the trial, that the court must always keep in mind in dealing with discovery issues in a criminal case.".

As Robinson also holds, the government’s failure to comply with Rule 16 and this

Court’s order is alone sufficient to exclude the testimony of Ms. Knoll. See also, United States v.

Willock, 696 F.Supp.2d 536, 570 (D. Md. 2010)(“To ensure that defense counsel can make any challenges to the admissibility of toolmark identification evidence and that courts may conduct hearings to resolve these challenges based on sufficient record, the Government should be required to strictly and timely comply with its Fed.R.Crim.P. 16 obligations regarding the opinions to be offered by firearms examiners in sufficient detail and sufficiently far in advance of motions deadlines or trials as to enable defense counsel to evaluate the conclusions and bases,

determine whether to engage experts to test them, and if appropriate, challenge them.”); United

States. v. Monteiro, 407 F.Supp.2d 351 (D.Mass. 2006)(ballistics expert testimony was inadmissible because examiner failed to document the basis for his notation “positive ID” with any photograph or other documentation and thus failed to comport with the field's own standards

for documentation.) ; United States v. Green, 405 F.Supp.2d 104, 108 (D. Mass. 2005) (firearm examiner’s ultimate opinion excluded, in part because he “ took no notes, recorded no

measurements, made no photographs, and drew no diagrams.”); Commonwealth v. Pytou Heang, 458 Mass. 827, 847, 942 N.E.2d 927, 944 (2011)(“[B]efore trial, the examiner must adequately document the findings or observations that support the examiner's ultimate opinion, and this documentary evidence, whether in the form of measurements, notes, sketches, or photographs, shall be provided in discovery, so that defense counsel will have an adequate and informed basis to cross-examine the forensic ballistics expert at trial.”).

Turning to the substance of Ms. Knoll’s testimony, although the government’s supplemental and supporting documents do not in fact explain the bases and reasons for her opinions, defendant is able to surmise that the government proposes to have its expert identify

particular latents prints as having been deposited by particular individuals in this case, to the exclusion of all other persons in the world.. See, National Academy of Sciences, National Research Council, Committee on Identifying the Needs of the Forensic Science Community, *Strengthening Forensic Science in the United States: A Path Forward.* ( 2009) ("NAS 2009 Report") at 43 (“[A] conclusion of individualization implies that the evidence originated from

that source, to the exclusion of all other possible sources.”). 6 The government also seeks to have

6 The NAS 2009 Report, written by a group of distinguished scientists and other scholars on a Committee chaired by Harry T. Edwards, Judge, United States Court of Appeals for the District of Columbia Circuit, is discussed in more detail below. Because of the importance of the NAS 2009 Report to this motion it is being provided to the Court in its entirety as CD Exhibit 3. As the Court is probably aware, the NAS is generally considered the most prestigious scientific organization in the United States, "election to the Academy is considered one of the highest honors that can be accorded a scientist or engineer," and it holds a charter "to 'investigate, examine, experiment, and report upon any subject of science or art' whenever called upon to do so by any department of the government." Reports published bythe NAS's research arm, the National Research Council, "provide a public service by working outside the framework of government to ensure independent advice on matters of science, technology, and medicine. They enlist committees of the nation's top scientists, engineers, and other experts, all of whom volunteer their time to study specific concerns. The results of their deliberations have inspired some of America's most significant and lasting efforts to improve the health, education, and welfare of the population." See About the NAS, [http://www.nasonline.org/site/PageServer?](http://www.nasonline.org/site/PageServer)

pagename=ABOUT\_main\_page. The NAS 2009 Report , therefore, constitutes an assessment not by individual scientists or scholars but by a scientific institution, the first such assessment of forensic science evidence by a mainstream scientific institution of any kind.

When the NAS speaks, courts listen. See, Melendez-Diaz v. Massachusetts, U.S. , 129 S.Ct. 2527, 2536, 2537, 174 L.Ed.2d 314 (2009)(quoting the 2009 NAS Report for the propositions that "[f]orensic evidence is not uniquely immune from the risk of manipulation", and that " ‘[t]he forensic science system, encompassing both research and practice, has serious problems that can only be addressed by a national commitment to overhaul the current structure that supports the forensic science community in this country.'" ); United States v. Willock, 696 F.Supp.2d 536, 569 (D.Md.2010)(“Suffice it to say that the concerns expressed by the NRC [in its NAS 2009 Report] ought to be heeded by courts in the future regarding the limits of toolmark identification evidence, and courts should guard against complacency in admitting it just because, to date, no federal court has failed to do so.”) United States v. Taylor, 663 F. Supp. 2d at 1178 (quoting the 2009 NAS Report’s conclusion that “ “[e]ven with more training and experience using new techniques, the decision of the toolmark examiner remains a subjective decision based on unarticulated standards and no statistical foundation for estimation of error rates.”); *Commonwealth v. Gambora*, 457 Mass.

its expert testify equivocally that certain persons cannot be eliminated as the source of particular latent prints.

In the present posture of this case, the government’s position appears to be that a latent print examiner should be permitted to identify a particular latent merely on the say so of the examiner who, without resort to any statistical analysis or reliance on any minimum points of comparison, is willing to state that she can exclude all other persons in the world as having deposited the latent. The remainder of this memorandum is devoted to demonstrating that such

testimony is prohibited by Daubert v. Merrell Dow Pharmaceutical, 509 U.S. 579 (1993) and the Federal Rules of Evidence.

# Tenth Circuit Law On The Admissibility of Fingerprint Evidence

As the Court is aware, Mr. McCluskey has filed a lengthy motion challenging the admissibility of firearm identification testimony. Much of the discussion of the law in that motion is directly relevant to the present motion, so in the interest of brevity Mr. McCluskey incorporates by reference all of the arguments and law set forth in his motion to exclude firearm identification evidence.

One difference between that motion and the present one is that the Tenth Circuit has spoken on the admissibility of fingerprints, but has not yet reached the issue of the admissibility

of firearm testimony. See, United States v. Baines, 573 F.3d 979 (10th Cir.2009). Defendant therefore begins with a discussion of *Baines*.

In *Baines*, involving a New Mexico state fingerprint examiner who employed an ACE-V

715, 933 N.E.2d 50 (Mass.2010)("[C]ourts historicallyhave found fingerprint identification evidence to be admissible. We recognize, however, that the issues highlighted in the NAS report are important, and deserve consideration.")

methodology 7 to identify two latent prints, the Tenth Circuit concluded that the district court,

having conducted a *Daubert* hearing, did not abuse its discretion in admitting the testimony of the fingerprint examiner in that case. The most notable aspects of the decision are that the Tenth Circuit went out of its way to stress that it was not adopting any *per se* rule holding all fingerprint testimony admissible, and that the Court did not consider the impact of the then recently- released NAS 2009 Report, discussed below and in defendant’s motion to exclude firearm examination testimony.

Thus, the Tenth Circuit began its discussion of the fingerprint admissibility issue with the statement that “the only issue in this appeal is whether the trial court should have excluded the fingerprint evidence.” 573 F.3d at 985. After summarizing the arguments of the parties, the court reiterated that

Our task is not to determine the admissibility or inadmissibility of fingerprint analysis for all cases but merely to decide whether, on this record, the district judge in this case made a permissible choice in exercising her discretion to admit the expert testimony. Although this record raises multiple questions regarding whether fingerprint analysis can be considered truly scientific in an intellectual, abstract sense, nothing in the controlling legal authority we are bound to apply demands such an extremely high degree of intellectual purity. Instead, courts applying Fed.R.Evid. 702, Daubert, and Kumho Tire, are charged only with determining that the expert witness “employs in the courtroom the same level of intellectual rigor that characterizes the practice of an expert in the relevant field.” Kumho Tire, 526 U.S. at 152, 119 S.Ct. 1167.

573 F.3d at 989.

The Court then proceeded through an analysis of what the evidence showed as to each of

7 “The process used for determining whether a latent print matches a known print has been given the acronym ACE-V, with the letters standing for the steps in a four-stage process: (1) analysis,

(2) comparison, (3) evaluation, and (4) verification.” *Baines*, 573 F.3d at 983.

the *Daubert* factors before concluding that on balance the government had sustained its burden of proof. In the course of its discussion, the court noted that “[t]he defense presented no witnesses at the hearing”, and that “that appellant's counsel focuses his argument almost exclusively on fingerprint identification evidence in general, rather than on the specific identification in this case

by Mr. Fullerton.” (Id. at 984, 989). The court made observations as to each *Daubert* factor which stressed the factual and case-specific nature of the inquiry.

Regarding the first *Daubert* factor (“whether the technique can be and has been tested”), the court in part equated this factor with whether the particular analyst had been adequately tested, as opposed to the technique being tested.8 The court noted that “ Fingerprint analysts such

as Mr. Fullerton, who have been certified by the FBI, have undergone demanding training culminating in proficiency examinations, followed by further proficiency examinations at regular intervals during their careers. Although these proficiency examinations have been criticized on several grounds, most notably that they do not accurately represent conditions encountered in the field, we see no basis *in this record* for totally disregarding these proficiency tests.” (Id. at 990)(emphasis added). “In conclusion, *on this record* we believe that the first *Daubert* factor weighs somewhat in favor of admissibility, although not powerfully.” (Id. at 990)(emphasis added).

8 As to the technique being tested, the court did note that “the core proposition-that reliable identifications may be made from comparison of latent prints with known prints-is testable. And unquestionably the technique has been subject to testing, albeit less rigorous than a scientific ideal, in the world of criminal investigation, court proceedings, and other practical applications, such as identification of victims of disasters.” Id. at 990. Mr. McCluskey devotes a considerable amount of his brief on firearm evidence refuting the notion that adversarial testing is the same as scientific testing within the meaning of *Daubert*.

Regarding the second *Daubert* factor (“whether the theory or process has been subject to peer review and publication”), the court found “little in the record to guide us in consideration of this factor.” (Id.) The Court continued; “Defendant argues persuasively that the verification stage of the ACE-V process is not the independent peer review of true science. Agent Meagher's testimony included some references to professional publications, but these were too vague and sketchy to enable us to assess the nature of the professional dialogue offered. In short, the government did not show in this case that this factor favors admissibility.” (Id.)

Regarding the third *Daubert* factor (“the known or potential error rate of the procedure”), the court concluded that “testing has been done in training programs and other environments that are not shown to be accurate facsimiles of the tasks undertaken by fingerprint analysts in actual cases. Nevertheless, the accumulated data is impressive. Very few mistakes are reported in testing that trainees must complete before progressing to actual casework. Mr. Fullerton, who made the actual identification in this case, testified that he has always attained a perfect score in his proficiency tests.” (Id.) The court continued:

More significantly, Agent Meagher testified to an error rate of one per every 11 million cases, and the defense did not-either in the evidentiary hearing or in the briefs on appeal-challenge that testimony. There may have been erroneous identifications that never came to light. Defense attorneys rarely have the resources to hire independent experts for trial, and in the interests of finality our system has created obstacles to post-conviction review. But even allowing for

the likelihood that the actual error rate for FBI examiners may be higher than reflected in Mr. Meagher's testimony, the known error rate remains impressively low. We are not aware of any attempt to quantify the maximum error rate that could meet Daubert standards, but surely a rate considerably higher than one per 11 million could still pass the test. We conclude that the evidence of the error rate *on this record* strongly supported the judge's decision to admit the expert testimony.

(Id. at 990-991)(emphasis added)

Regarding the fourth *Daubert* factor (“the existence and maintenance of standards

controlling the technique's operation”) the court stated:

On this point, we are persuaded by the analysis of the Third Circuit in *United States v.*

*Mitchell*, [ 365 F.3d 215, 241 (3d Cir.2004)] The ACE-V system is a procedural standard but not a substantive one. Critical steps in the process depend on the subjective judgment of the analyst. We hasten to add that subjectivity does not, in itself, preclude a finding of reliability. But *in searching this record* for evidence of standards that guide and limit the analyst in exercise of these subjective judgments, we find very little. Because in the end determination of this factor is not critical to our decision, we will assume arguendo that this factor does not support admissibility.

(Id. at 990-991)(emphasis added)

Regarding the fifth *Daubert* factor (“whether the technique has attained general acceptance in the relevant scientific or expert community”), the court acknowledged that the distinction between the scientific community and the community of fingerprint examiners was a significant one “ because the field of fingerprint analysis is dominated by agents of law enforcement, with apparently little presence of disinterested experts such as academics.” (Id. at 991). The court continued: “while we acknowledge that acceptance by a community of unbiased experts would carry greater weight, we believe that acceptance by other experts in the field should also be considered. And when we consider that factor with respect to fingerprint analysis, what we observe is overwhelming acceptance.” (Id.)

The court concluded its analysis with the following observations:

In reaching a conclusion after this process of focusing on each of the *Daubert* factors in turn, we must return to two overriding principles. The first is that *our review here is deferential*, limited to the question of whether the district judge abused her *considerable discretion*. The second is that the Rule 702 analysis is a flexible one, as both *Daubert* and *Kumho Tire* teach. The *Daubert* factors are “meant to be helpful, not definitive,” and not all of the factors will be pertinent in every case. *Kumho Tire*, 526 U.S. at 150-51, 119 S.Ct. 1167. On the whole, it seems to us that *the record* supports the district judge's finding that fingerprint analysis is sufficiently reliable to be admissible. Thus, we find no abuse of discretion. We apply the Third Circuit's *Mitchell* standard: “[T]he usual precepts of abuse-of-discretion review over the District Court's decision to admit the

government's expert testimony.” 365 F.3d at 234.

In closing, we echo the thoughts of Judge Pollak, who said regarding the desirability of research to provide the scrutiny and independent verification of the scientific method to aid in assessing the reliability of fingerprint evidence, that such efforts would be “all to the good. But to postpone present in-court utilization of this ‘bedrock forensic identifier’ pending such research would be to make the best the enemy of the good.” *United States v. Llera Plaza*, 188 F.Supp.2d 549, 572 (E.D.Pa.2002).

(Id. at 992)(emphasis added).

There are a number of observations that need to be made about *Baines* as it relates to this case. First, it is clear beyond doubt that the court did not adopt any *per se* rule blessing the admissibility of the ACE-V fingerprint methodology in all future cases. The court repeatedly indicates that the inquiry is factual based and case specific.9 Thus, *Baines* does not foreclose the

present fingerprint challenge. See, *United States v. Gutierrez-Castro*, 805 F.Supp.2d 1218 (D.N.M. 2011)(entertaining a fingerprint challenge post-*Baines* and describing *Baines* as a case where the Tenth Circuit “conclud[ed], *on the record before it*, that the district court did not abuse its discretion in holding the United States' evidence of latent fingerprint identification admissible.”)(emphasis added). 10

9 The Tenth Circuit’s case-by-case approach to *Daubert* analysis is mandated bythe Supreme Court and is followed in other circuits. See, Kumho Tire Co. v. Carmichael, 526 U.S. 137, 150, 119 S.Ct. 1167, 143 L.Ed.2d 238 (1999)(“[W]e can neither rule out, nor rule in, for all cases and for all time the applicability of the factors mentioned in *Daubert*, nor can we now do so for subsets of cases categorized by category of expert or by kind of evidence. Too much depends upon the particular circumstances of the particular case at issue.”); *United States v. Prime*, 431 F.3d 1147 (9th Cir. 2005)(“In accordance with *Kumho Tire*, the broad discretion and flexibility given to trial judges to determine how and to what degree these factors should be used to evaluate the reliability of expert testimony dictate a case-by-case review rather than a general pronouncement that in this Circuit handwriting analysis is reliable.”)

10 In *United States v. Gutierrez-Castro*, Judge Browning denied the admissibility challenge without mention of the NAS 2009 Report discussed below. However, he also refused to endorse fingerprint evidence as scientific ruling that “[t]he Court will allow McNutt to testify, but it will not

Second, the defendant in *Baines* “presented no witnesses at the hearing”. (Id. at 984).

Here, by contrast, the defendant submits a detailed declaration of Dr. Simon Cole, an Associate Professor of Criminology, Law & Society at the University of California, Irvine who specializes in the historical and sociological study of the interaction between science, technology, law and criminal justice, and whose “research and publishing in the past fifteen years has involved the study of the scientific basis (or lack thereof) for the testimonial claims made by fingerprint examiners.” See, Declaration of Dr. Simon Cole, CD Exhibit 4. Dr. Cole’s article, *More Than Zero: Accounting For Error in Latent Fingerprint Identification*, 95 J.Crim. L. & Criminology 985, 993-94 (Spring 2005) is cited repeatedly in the Baines opinion. Dr. Cole’s declaration addresses the significance of the NAS 2009 Report not considered in *Baines* and he is prepared to testify at a *Daubert* hearing that fingerprint evidence does not meet the *Daubert* factors for the reasons stated in his declaration. *Baines* does not foreclose hearing from him and the cases cited in footnote 6, suggest that the views of the NAS are significant and should be considered in any Daubert challenge.

Third, the defendant in *Baines*“ focuse[d] his argument almost exclusively on fingerprint identification evidence in general, rather than on the specific identification in this case by Mr.

Fullerton.” (Id. at 989). Here, by contrast, and as outlined in defendant’s motion to exclude

put its imprimatur on him as an expert witness in the jury's presence. The Court will not allow the United States to offer him as an expert witness, the Court will not certify McNutt as an expert witness in the jury's presence, and the jury instructions will not refer to him as an expert. The issues that the United States and Gutierrez–Castro bring out during McNutt's direct examination and cross examination will go to the weight and credibility of McNutt's testimony.” 805 F.Supp.2d at 1234. Consistent with *Gutierrez-Castro*, in the event this Court denies his admissibility challenge, the defendant specificlly moves in the alternative for the relief granted in that case.

firearm identification testimony, defendant raises the general issue of whether the ACE-V methodology which was apparently employed in this case passes muster under *Daubert*, and also the issue of whether the specific testimony in this case is admissible under the amended version of Rule 702. 11 Even if *Baines* had held, which it did not, that fingerprint evidence generally or

the ACE-V methodology in particular was unassailable in all future cases that would not prevent an “as applied” challenge under Rule 702. Indeed, as pointed out above, in *United States v.*

*Mitchell*, 365 F.3d 215, 245 (3d Cir.2004), cited approvingly in Baines, the Third Circuit turned aside a *Daubert* challenge to the admissibility of the FBI’s methodology for conducting fingerprint comparisons, but in so doing the Court emphasized that

[D]istrict courts will generally act within their discretion in excluding testimony of recalcitrant expert witnesses–those who will not discuss on

cross-examination things like error rates or the relative subjectivity or objectivity of their methods. Testimony at the *Daubert* hearing indicated that some latent fingerprint examiners insist that there is no error rate associated with their activities or that the examination process is irreducibly subjective. This would be out-of-place under Rule 702. But we do not detect this sort of stonewalling on the record before us.

In this case, Mr. McCluskey has asked for evidence relevant to error rates and he has been

provided with a single proficiency test. Cf. Baines, 573 F. 3d at 990 (“Fingerprint analysts such as Mr. Fullerton, who have been certified by the FBI, have undergone demanding training culminating in proficiency examinations, followed by further proficiency examinations at regular intervals during their careers.”). Mr. McCluskey has been provided with no evidence that Ms.

Knoll has “been certified by the FBI” and the foundational data that has been provided does not

11 As elaborated upon in the firearm motion, Rule 702 states in part that an expert witness may testify if “(1) the testimony is based upon sufficient facts or data, (2) the testimony is the product of reliable principles and methods, and (3) the witness has applied the principles and methods reliably to the facts of the case.”

indicate that she relied upon a minimum number of points of similarity or other factual data to make her identification, or what methodology her peer reviewer followed. All we have is her undocumented conclusion that the prints belong to certain people. Cf, *Baines*, Id. at 984 (“Fullerton testified, he was able to conclude that the latent print was from Mr. Baines's left thumb, based on eleven points of comparison. Verification was accomplished by giving the data-and Fullerton's marks on the copies of the prints and other work notes-to another examiner in the same lab. Fullerton admitted that this was not an ‘independent identification’ and that his sharing of his work product with the second examiner had suggested findings.”).

As was concluded in *United States v. Willock*, 696 F.Supp.2d 536 (D.Md. 2010), citing fingerprint cases , “[t]he twin requirements of adequate documentation and peer review of the primary examiner's results are said to ‘ensure the reliability of the expert's results and the testability of the opinion.’... Without them, courts that have gone the farthest in undertaking an analysis of the reliability of ...identification methodology have been reluctant to admit such evidence.” Id. at 561, citing *United States v. Monteiro*, 407 F.Supp.2d 351 (D.Mass.2006)((ballistics expert testimony was inadmissible because it failed to comport with the field's own standards for documentation and peer review). See also, *United States v. Glynn*, 578 F.Supp.2d 567, 574 (S.D.N.Y. 2008) (distinguishing firearm identification evidence from fingerprint evidence because “whereas both a ballistics examiner and a fingerprint examiner are ultimately called upon to make a subjective judgment of whether the agreement between two pieces of evidence is ‘sufficient’ to constitute a ‘match,’ a fingerprint examiner may not declare a match unless a pre-specified number of ‘points’ of similarity exist between the two samples.”).

There is certainly strong evidence in the record already that whatever the validity of fingerprint

evidence in general or the ACE-V methodology in particular, the testimony in this case is not based upon sufficient facts or data, is not the product of reliable principles and methods, and the witness hasnot applied the principles and methods reliably to the facts of the case. Again, Baines does not forclose such a challenge.

Lastly, and perhaps most importantly, *Baines* did not consider the significance of the NAS 2009 Report, although, importantly, it did conclude that “ acceptance by a community of unbiased experts would carry greater weight.” (*Baines*, supra, at 991). Given this statement, had the court considered this new evidence there is every reason to believe that the *Daubert* calculus would have been tipped in defendant’s favor, as the court concluded that the first and fourth *Daubert* factors did not weigh in favor of admissibility, that the first factor only “weighs somewhat in favor of admissibility, although not powerfully”, and that only the third factor strongly weighed in favor of admissibility, although here too the court acknowledged that “ testing has been done in training programs and other environments that are not shown to be accurate facsimiles of the tasks undertaken by fingerprint analysts in actual cases.” (*Baines*, supra, at 990.)

In sum, given the emphasis in *Baines* on the district court’s considerable discretion in applying *Daubert*, its focus on a case-by-case approach, its acknowledgment that several factors weighed in defendant’s factor, it’s acknowledgment that the views of the community of impartial experts “would carry greater weight”, and the factual differences between that case and this one, the door is still open for this Court to consider defendant’schallenge both under Daubert and amended Rule 702. Defendant therefore turns briefly to a discussion of the sigificance of the NAS 220 Report as it relates to the present challenge.

# There Is No Reliable Scientific Basis for the Government’s Fingerprint Identification Testimony and Thus the Testimony Is Inadmissible under *Daubert and* Rule 702

Although neither the reports nor the foundational material reflect the methodology employed by Ms. Knoll, Mr. McCluskey has been provided with the New Mexico Department of Public Safety’s Latent Print Unit’s Standard Operating Procedures Manual. See, NM-DPS Latent Print Unit , *Standard Operating Procedures Manual* (Approved 7/13/09), CD Exhibit 5. He assumes, for purposes of his argument only, that the methodologies described in the Manual are the ones actually employed in this case, although he emphasizes that that is an important issue to be decided at an evidentiary hearing under amended Rule 702 and *Daubert*, as discussed in his firearm identification motion, incorporated herein by reference.

The Manual provides, contrary to the assumption in *United States v. Glynn*, 578 F.Supp.2d at 574, that “ a fingerprint examiner may not declare a match unless a pre-specified number of ‘points’ of similarity exist between the two samples”, as follows:

Friction ridge examinations are based on the fundamentals of the science of friction ridge identifications and the central premises are permanence and individuality. The comparison and identification of two areas of friction ridge skin impressions are based on the examination of infinite combinations of ridge structure, individual ridge appearance, pores, minutiae, and spatial relationships. There is no scientific basis for requiring that a minimum number of corresponding friction ridge features be present in two impressions in order to affect identification.

Exhibit 5, p. 4.

The only discussion in the Manual about how and by what standards a fingerprint examiner makes an identification is the following:

# E. Comparison utilizing the ACE-V methodology:

1. Analysis – determination of whether the latent impression contains sufficient

quality and quantity of information to perform a comparison.

1. Comparison – Side by side comparison of known exemplars and/or latent prints to questioned prints.
2. Evaluation – a determination is made as to the source of the unknown impression (i.e. elimination, individualization or inconclusive).
3. Verification – All individualizations will be verified by another latent print examiner and indicated in the analyst’s examination notes.

Exhibit 5, p. 13-14.

The Manual does not discuss how an analyst goes about determining “the source of the unknown impression” or describe any criteria for making an identification. The Manual discusses personnel qualifications and training, and only requires “an initial proficiency test”, not periodic proficiency testing. (Manual, p. 8). The Manual addresses the need for proper documentation of results, stating that “Examination documentation in case notes is the primary method for another competent examiner to evaluate what was done and to verify the interpretation / conclusions drawn. Another competent examiner should be able to determine from the case notes the activities conducted, the sequence of the activities and the results.” (Id. at 15). Lastly, the Manual addresses the issue of validation:

Validation is the process utilized by the scientific community to acquire the necessary information to assess the ability of a procedure to reliably obtain a desired result, determine the conditions under which such results can be obtained, and determine the limitations of the procedure. This process identifies the critical aspects of a procedure which must be controlled and monitored. This procedural evolution eventually emerges as a technique with which one can analyze unknown

samples and confidently determine the correct answer to the question for which the test was designed. (Exhibit 5, p. 10).

Mr. McCluskey asked to review any validation relevant to the DNA, firearms, and latent

print evidence in this case. On April 20, 2012, he received internal validation documents relating to the DNA evidence. Regarding other validation data, Bureau Chief Norreen Purcell responded in an email on April 12, 2012:

As for the Latent Print and Firearms Sections, there have been no developmental or internal validations of new or novel techniques in our Laboratory. Both sections utilize methods and procedures that have been

generally accepted in the scientific community and are referenced in published manuals and guidelines from the Federal Bureau of Investigation; Bureau of Alcohol, Tobacco and Firearms; Association of Firearms and Toolmark Examiners and the International Association for Identification. We will provide our technical standard operating procedures, as requested. We will not be able to provide copies of published reference material as these items may be copyrighted.

As will now be shown, and as is amply demonstrated in the attached declaration of Dr.

Cole, even if Ms. Knoll employed the ACE-V methodology in this case, that methodology is not reliable enough to “identify” a latent palm print to the exclusion of all other prints in the world.

# A. The ACE-V Methodology is Unreliable

TheACE-V methodology was carefully examined and studied in the NAS 2009 Report and found wanting in every respect. The NAS Report makes several important observations about fingerprint evidence in general and the ACE-V methodology in particular.

First, addressing fingerprint testimony generally, the NAS Report states:

Fingerprint identifications have been viewed as exact means of associating a suspect with a crime scene print and rarely were questioned. Recently, however, the scientific foundation of the fingerprint field has been questioned, and the suggestion has been made that latent fingerprint identifications may not be as reliable as previously assumed. The question is less a matter of whether each person’s fingerprints are permanent and unique—uniqueness is commonly assumed—and more a matter of

whether one can determine with adequate reliability that the finger that left an imperfect impression at a crime scene is the same finger that left an impression (with different imperfections) in a file of fingerprints. In October 2007, Baltimore County Circuit Judge Susan M. Souder refused to allow a fingerprint analyst to testify that a latent print was made by the defendant in a death penalty trial. In her

ruling, Judge Souder found the traditional method of fingerprint analysis to be “a subjective, untested, unverifiable identification procedure that purports to be infallible.”

(NAS Report, p. 43).

The Report reviews the circumstances of the FBI’s erroneous identification of Brandon Mayfield’s erroneous fingerprint identification in the Madrid bombing case and notes that investigations of that incident “concluded that the problem was not the quality of the digital images reviewed, but rather the bias and ‘circular reasoning’ of the FBI examiners.” Id. at 46, citing U.S. Department of Justice, Office of the Inspector General. 2006. *A Review of the FBI’s Handling of the Brandon Mayfield Case*. See also, R.B. Stacey, *Report on the Erroneous Fingerprint Individualization in the Madrid Train Bombing Case* (2005), available at www.fbi. gov/hq/lab/fsc/current/special\_report

/2005\_special\_report.htm. The Mayfield misidentification is discussed at length in defendant’s motion to exclude firearm identification testimony.

The Report notes broadly that “no forensic method other than nuclear DNA analysis has been rigorously shown to have the capacity to consistently and with a high degree of certainty support conclusions about ‘individualization’ (more commonly known as ‘matching’ of an unknown item of evidence to a specific known source).” (Report, p. 87).

The Report states that “not all fingerprint evidence is equally good, because the true value of the evidence is determined by the quality of the latent fingerprint image. In short, the interpretation of forensic evidence is not infallible. Quite the contrary. This reality is not always fully appreciated or accepted by many forensic science practitioners, judges, jurors, policymakers, or lawyers and their clients.” (Id. at 88).

The Report reviews the judicial disposition of questions relating to fingerprint analysis

and begins its analysis with the statement that “[o]ver the years, the courts have admitted fingerprint evidence, even though this evidence has ‘made its way into the courtroom without empirical validation of the underlying theory and/or its particular application.’” Id. at 102, quoting M.A. Berger, *Procedural paradigms for applying the Daubert test*, 78 Minn. L. Rev. 1345, 1354 (1994). The Report descibes as a “telling critique” of the decisional law the

following passage from David Faigma, et al, Modern Scientific Evidence: The Law and Science

Of Expert Testimony (2007-08 ed.) § 1.1,p. 4:

[M]any fingerprint decisions of recent years . . . display a remarkable lack of understanding of certain basic principles of the scientific method. Court after court, for example, [has] repeated the statement that fingerprinting met the Daubert testing criterion by virtue of having been tested by the adversarial process over the last one-hundred years. This silly statement is a product of courts’ perception of the incomprehensibility of actually limiting or excluding fingerprint evidence. Such a prospect stilled their critical faculties. It also transformed their admissibility standard into a Daubert permissive one, at least for that subcategory of expertise.

Reviewing the recent studies discussed in Mr. McCluskey’s firearm motion regarding fingerprint examiner’s being effected by “contextual bias”, the Report concludes that “[f]orensic scientists also can be affected by this cognitive bias if, for example, they are asked to compare two particular hairs, shoeprints, fingerprints—one from the crime scene and one from a suspect—rather than comparing the crime scene exemplar with a pool of counterparts.”(Id. at 123). The Report also notes: “ Another potential bias is illustrated by the erroneous fingerprint identification of Brandon Mayfield as someone involved with the Madrid train bombing in 2004. The FBI investigation determined that once the fingerprint examiner had declared a match, both he and other examiners who were aware of this finding were influenced by the urgency of the investigation to affirm repeatedly this erroneous decision.” (Id.).

Addressing specifically the ACE-IV methodology apparently employed in this case, the Report, after describing the methodology in some detail, the Report notes that

[T]he ACE-V method does not specify particular measurements or a standard test protocol, and examiners must make subjective assessments throughout. In the United States, the threshold for making a source identification is deliberately kept subjective, so that the examiner can take into account both the quantity and quality of comparable details. As a result, the outcome of a friction ridge analysis is not necessarily repeatable from examiner to examiner. In fact, recent research by Dror has shown 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.

Id. at 139, citing I.E. Dror and D. Charlton, *Why experts make errors*, Journal of Forensic Identification (2006) 56(4):600-616.

Noting that “subjectivity is intrinsic to friction ridge analysis”, the Report notes that in contrast to DNA evidence “population statistics for fingerprints have not been developed, and friction ridge analysis relies on subjective judgments by the examiner. Little research has been directed toward developing population statistics, although more

would be feasible.” (Id. at 139-140).

Addressing the often raised argument that AVE-V analysismust be reliable because it is used to exonerate people, the Report states:

The determination of an exclusion can be straightforward if the examiner finds detail in the latent print that does not match the corresponding part of the known print, although distortions or poor image quality can complicate this determination. But the criteria for identification are much harder to define, because they depend on an examiner’s ability to discern patterns (possibly complex) among myriad features and on the examiner’s experience judging the discriminatory value in those patterns. The clarity of the prints being compared is a major underlying factor Clearly, the reliability of the ACE-V process could be

improved if specific measurement criteria were defined. Those criteria become increasingly important when working with latent prints that are smudged and incomplete, or when comparing impressions from two individuals whose prints

are unusually similar.

(Id. at 141)

Addressing the issue of numerical standards, the Report states:

[T]hresholds based on counting the number of features that correspond, lauded by some as being more “objective,” are still based on primarily subjective criteria—an examiner must have the visual expertise to discern the features (most important in low-clarity prints) and must determine that they are

indeed in agreement. A simple point count is insufficient for characterizing the detail present in a latent print; more nuanced criteria are needed, and, in fact, likely can be determined.

(Id. at 141).

Describing how ACE-V adherents determine an identification, the Report states:

Latent print examiners report an individualization when they are confident that two different sources could not have produced impressions with the same degree of agreement among details. This is a subjective assessment. There has been discussion regarding the use of statistics to assign match probabilities based on population distributions of certain friction ridge features. Current published statistical models, however, have not matured past counts of corresponding minutia and have not taken clarity into consideration.(This area is ripe for additional research.) As a result, the friction ridge community actively discourages its members from testifying in terms of the probability of a match; when 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.

(Id. at 141-42).

Commenting on the propriety of this practice, the Report quotes at length from J.L.

Mnookin, *The validity of latent fingerprint identification: Confessions of*

*a fingerprinting moderate* (2008), Law, Probability and Risk 7:127, as follows:

Given the general lack of validity testing for fingerprinting; the relative dearth of difficult proficiency tests; the lack of a statistically valid model of fingerprinting; and the lack of validated standards for declaring a match, such claims of absolute, certain confidence in identification are unjustified.

(Id. at 142).

In its Summary Assessment of Friction Ridge Analysis, the Report reaches several important conclusions. First, the Report concludes that “[a]lthough there is limited information about the accuracy and reliability of friction ridge analyses, claims that these analyses have zero error rates are not scientifically plausible.” (Id. at 142).

Second, and importantly for the present case, the Report concludes:

ACE-V provides a broadly stated framework for conducting friction ridge analyses. However, this framework is not specific enough to qualify as a validated method for this type of analysis. ACE-V does not guard against bias; is too broad to ensure repeatability and transparency; and does not guarantee that two analysts following it will obtain the same results. For these reasons, merely following the steps of ACE-V does not imply that one is proceeding in a scientific manner or producing reliable results. A recent paper by Haber and Haber presents a thorough analysis of the ACE-V method and its scientific validity. Their conclusion is unambiguous: “We have reviewed available scientific evidence of the validity of the ACE-V method and found none.”

(Id. at 142-143, citing L. Haber and R.N. Haber, *Scientific validation of fingerprint evidence under Daubert, Law, Probability, and Risk* (2008) 7(2):87-109.

The Report also quotes this passage from the Haber & Haber study:

We have analysed the ACEV method itself, as it is described in the literature. We found that these descriptions differ, no single protocol has been officially accepted by the profession and the standards upon which the method’s conclusions rest have not been specified quantitatively. As a consequence, at this time the validity of the ACE-V method cannot be tested.

(Report at 143).

The Report also highlights a procedural issue with ACE-V which is directly relevant to defendant’s challenge in this case. The Report states:

Better documentation is needed of each step in the ACE-V process or its equivalent. At the very least, sufficient documentation is needed to reconstruct the analysis, if necessary. By documenting the relevant information gathered during the analysis, evaluation, and comparison of latent prints and the basis for the

conclusion (identification, exclusion, or inconclusive), the examiner will create a transparent record of the method and thereby provide the courts with additional information on which to assess the reliability of the method for a specific case.

Currently, there is no requirement for examiners to document which features within a latent print support their reasoning and conclusions.

(Id. at 143).

The Report also addresses two issues that are raised in the *Baines* case. The first issue relates to the testimony of the FBI agent in *Baines* regarding error rates. As described by the Tenth Circuit,

Agent Meagher was asked about the error rate for friction ridge identification. His answer (as to many questions during the hearing, all without objection) was a rambling narrative covering almost six pages of transcript. He began by positing that there are two types of errors, practitioner error and methodological error. He then pronounced by his ipse dixit that the subject of the hearing was methodological error, not practitioner error, and that the error rate for the method was “either no error, or it's a zero error.” III R. 87. He went on to acknowledge that practitioners do make mistakes, but then asserted that the “practitioner error rate goes to the individual, not to the whole of the practitioners applying the methodology.” It would be “inappropriate,” he testified, to “take the accumulation of those who have made errors and assign it to those who have not made errors,” thus at least implying that most practitioners have achieved a level of perfection that is rather rare, to say the least, in other complex human endeavors. Agent Meagher did go on to cite one published report in which 92 participants performed a total of 5,861 individualizations, out of which there were two errors, both of which were noticed and corrected by verifiers.

The Report’s response to this type of testimony is as follows:

Errors can occur with any judgment-based method, especially when the factors that lead to the ultimate judgment are not documented. Some in the latent print community argue that the method itself, if followed correctly (i.e., by

well-trained examiners properly using the method), has a zero error rate. Clearly, this assertion

is unrealistic, and, moreover, it does not lead to a process of method improvement. The method, and the performance of those who use it, are inextricably linked, and both involve multiple sources of error (e.g., errors in executing the process steps, as well as errors in human judgment).

(Report, p. 143)

The second issue relates to the statement in *Baines* that “[t]he field of fingerprint identification ultimately rests on two premises: that each individual's fingerprints are unique and that the unique pattern of a person's prints does not change over time.” *Baines*, supra, at 982. The Report notes:

Uniqueness and persistence are necessary conditions for friction ridge identification to be feasible, but those conditions do not imply that anyone can reliably discern whether or not two friction ridge impressions were made by the same person. Uniqueness does not guarantee that prints from two different people are always sufficiently different that they cannot be confused, or that two impressions made by the same finger will also be sufficiently similar to be discerned as coming from the same source. The impression left by a given finger will differ every time, because of inevitable variations in pressure, which change the degree of contact between each part of the ridge structure and the impression medium. None of these variabilities—of features across a population of fingers or of repeated impressions left by the same finger—has been characterized, quantified, or compared.

(Id. p. 144)

The Report ends its discussion of friction ridge by outlining several areas of empirical research which needs to be pursued. (Id. at 144-145).

In the attached Declaration, Dr. Cole highlights and expands upon many of the conclusions and findings in the NAS 2009 Report. As he concludes about the importance of te Report itself:

Although there is no institution with the sole authority to represent "the relevant scientific community," a National Research Council committee, appointed through a rigorous process used to convene committees on a wide variety of scientific issues, approved by several levels of review with in the National Academies, subjected to public comment and conflict of interest review, that spent more than two years, assisted by substantial staff and Congressional funding, reviewing the available research and data, has a stronger claim to being the "relevant scientific community" than any other body.

(Cole Declaration, Exhibit 4, p.8)

As he also concludes, and to summarize Mr. McCluskey’s argument here:

The NAS report leaves latent print analysis with a testimonial conclusion that is not accepted by the scientific community and a purported "methodology" that is not accepted by the scientific community. It dismisses claims that the error rate of latent print analysis is "zero" as "implausible," but notes that no one knows what the error rate is because there is only "limited information" about the accuracy (or reliability) of latent print individualization. The fact that the NAS Report did not opine as to the legal admissibility of latent print evidence is irrelevant. The NAS is a scientific institution, not a legal one. The NAS report concerns the validity of latent print individualization (or the lack thereof), not its admissibility.

(Exhibit 4, at 9).

Accordingly, and for all of the reasons discussed above and stated in the NAS 2009 Report and in Dr. Cole’s declaration, the Court should conclude that the fingerprint identification testimony in tis case is not admissible under Daubert or Rule 702.

# The Expert Should Not Be Allowed To Testify To Inconclusive Results

As indicated in Mr. McCluskey’s motion to exclude firearm identification testimony, Rule 702 requires that the evidence or testimony “assist the trier of fact to understand the

evidence or to determine a fact in issue.” Fed. R. Evid. 702. “Relevant expert testimony must logically advance a material aspect of the case, and be sufficiently tied to the facts of the case that

it will aid the jury in resolving a factual dispute. ” United States v. Garcia, 635 F.3d 472, 476 (10th Cir. 2011)(citations and internal quotations omitted). In other words, “[e]xpert testimony is admissible only if it is potentially helpful to the jury” and it satisfies the other requirements of

Rule 702. United States v. Baines, 573 F.3d 979, 985 (10th Cir.2009)

In this case, Ms. Knoll states in her report that individuals relevant to this case could not be eliminated as the source of various latents prints, an assessesment that is characterized as

“inconclusive” in the SOP. [Exhibit 5, p. 14].

An inconclusive result cannot be helpful to the jury, it does not logically advance a material aspect of the case, and it is not sufficiently tied to the facts of the case that it will aid the jury in resolving a factual dispute. Under the cases cited on this point above and in the firearms motion, this testimony should therefore be excluded.

# An Evidentiary Hearing Should Be Granted

As pointed out above, in response to the defendant’s motion to depose the government’s experts, the government took the position that depositions were unneccessary because “numerous

Daubert motions presumably will be heard by this Court wherein the experts for the Government will testify, as well as being available to testify at trial and subject to cross-examination.” (Id.) See also, Doc. 386 (“Specifically, the United States asks the Court make a finding, upon hearing testimony of the witnesses, that they have ‘a reliable basis in the knowledge and experience of

[their relevant] discipline[s].’ ”)(quoting Kumho Tire, 526 U.S. at 149).

As the government appears to acknowledge, the Court should hold an evidentiary evidentiary to resolve the present motion. Even in a non-capital civil case, the Tenth Circuit is

“concerned with the trial court's performance of its obligation under Rule 702 and Daubert, not

upon the exact conclusions reached to exclude or admit expert testimony.” Frederick v. Swift

Transp. Co. 616 F.3d 1074, 1082 (10th Cir. 2010). In that case, the Tenth Circuit concluded that

the district court had faithfully executed its gatekeeper role under the following circumstances:

First, as to the court's gatekeeper function, the record shows that for both witnesses the district court considered preliminary briefing, which included legal argument as well as deposition transcripts and full copies of the experts' reports. The court then held Daubert hearings where the witnesses were subjected to examination by both sides, and, as concerned Dr. Sperry, the court considered additional briefing following the hearing. Finally, the court issued detailed

opinions as to each witness containing “specific findings on the record,” [Dodge v. Cotter Corp., 328 F.3d 1212, 1223 (10th Cir.2003). ](emphasis and internal quotation marks omitted), concerning the reliability and relevance of the proffered testimony. After a careful review, we conclude there was no error in the manner in which the district court performed its role as a gatekeeper under Rule 702 and Daubert.

(Id. at 1082)

It is true that it is within the broad discretion of the Court to determine the means for

assessing an expert’s reliability and to make the ultimate determination of reliability. United

States v. Velarde, 214 F. 3d 1204, 1208-09 (10th Cir. 2000). However, here, as in Frederick, an

evidentiary hearing should be conducted because the factual and legal showing Mr. McCluskey makes in support of this motion is substantial, because the existing documentation provided by the government is insufficient to carry the government’s burden of proof, and because M. McCluskey faces the ultimate penalty.

# Conclusion

Under *Daubert*, *Kumho Tire* and Rule 702, the Court must now act as a gatekeeper when expert testimony is proposed by one side in a federal trial. When the “factual basis, data, principles, methods or their application are called sufficiently into question,...the trial judge *must* determine whether the testimony has a ‘reliable basis in the knowledge and experience of the

relevant discipline.’” *Kumho Tire*, supra., 526 U.S. at 149, 119 S.Ct. 1167 (emphasis added). Defendant has more than called “into question” the testimony of the proposed fingerprint examiner.

Defendant asks that the Court either exclude the government’s fingerprint testimony for all of the reasons stated above or conduct a *Daubert* hearing to consider whether the government

can sustain its burden of proof under *Daubert*, Rule 702, and 18 U.S,C. § 3592 (c).

Dated: April 22, 2012

Respectfully submitted,

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# CERTIFICATE OF CONFERENCE

I hereby certify that on April 22, 2012, I contacted Assistant United States Attorney Linda Mott to determine the government's position on this motion. Ms. Mott advised that the government is opposed to the motion.

/s/ Michael N. Burt Michael N. Burt