

UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF COLUMBIA

UNITED STATES OF AMERICA,

v.

MIQUEL MORROW, *et al.*,

Defendants.

Criminal Action No. 04-355 (CKK)

**MEMORANDUM OPINION**

(June 9, 2005)

On April 25, 2005, this Court issued a Memorandum Opinion and Order addressing preliminary issues relating to the Government's planned use of certain DeoxyriboNucleic Acid ("DNA") evidence at trial. *See United States v. Morrow*, Crim. No. 04-355, 2005 U.S. Dist. LEXIS 8327 (D.D.C. Apr. 25, 2005). Specifically, the Court concluded that (1) PCR/STR DNA testing, the laboratory typing process used in this case by the FBI Laboratory to "match" Defendants to specific DNA samples collected, is -- as a general rule -- in accordance with the Supreme Court's guidelines set forth in *Daubert v. Merrell Dow Pharmaceuticals*, 509 U.S. 579, 113 S.Ct. 2786, 125 L.Ed.2d 469 (1993), and may lead to admissible DNA evidence at trial; and (2) even DNA evidence with relatively low statistical significance may be admitted as probative evidence, provided that certain safeguards are afforded. *Morrow*, 2005 U.S. Dist. LEXIS 8327, at \*52.

However, the Court emphasized that its ruling was limited in many respects, noting that "the Court has not determined that all of the Government's DNA evidence may now be introduced into evidence." *Id.* at \*53. Rather, the Court observed that "Defendants have not yet

received their own DNA expert reports, have not contested the FBI's protocols, have not argued that the protocols were not followed, and have not singled out any laboratory errors that may rise to sufficient significance that exclusion of DNA evidence is warranted.” *Id.* Moreover, the Court itself questioned the probative value of some of the Government's planned DNA evidence -- specifically, DNA evidence that the Government identified as showing a 1:1 random match probability in all populations. *Id.* Accordingly, the Court ordered “that, upon receipt of their own DNA experts’ reports, Defendants notify the Court as to precisely what challenges, if any, they shall make to the admissibility of the Government’s DNA evidence so that the Court can determine what issues, if any, will require a hearing before presentation of that evidence to the jury.” *Id.* at \*53-\*54.

During the time that has passed since the Court’s April 25, 2005 Memorandum Opinion and Order, several developments have created the need for the Court to address the issues left outstanding by its previous Order and to resolve other related matters. The Court, in this memorandum opinion, will address: (1) recent events that have altered the scope of the Government’s DNA evidence put before the jury; and (2) Defendant Aaron Perkins’ Motion to Exclude Contaminated DNA Samples Obtained From the Brinkley Road Search (“Def. Perkins’ Mot.”), with the Government’s subsequent Opposition. In addition to tying up the previous Opinion’s loose ends, the Court, upon an analysis of the parties’ filings, the relevant case law, and the entire record herein, concludes that Defendant Perkins’ Motion to Exclude shall be denied.

## I: DISCUSSION

The Court shall commence its analysis by focusing initially on recent developments regarding the DNA evidence at issue in this trial, including events that have altered the predicted scope of the DNA evidence put before the jury and have resolved -- in part -- the issues left outstanding by the Court's previous Opinion. The Court shall then turn its attention to Defendant Perkins' Motion to Exclude based on certain allegations of evidence contamination that are alleged to have occurred during the collection of evidence from his apartment at Brinkley Road.

### A. *Recent Developments*

The Court's April 25, 2005 Memorandum Opinion and Order dealt with two specific issues: (1) whether the PCR/STR DNA process employed by the Government satisfied the principles inherent in *Daubert*; and (2) whether DNA evidence resulting in a relatively low level of statistical significance may still be admissible under both *Daubert* and the strictures inherent in Federal Rule of Evidence 403. Importantly, the Court answered both questions with a qualified "yes" -- i.e., the PCR/STR DNA typing process and resulting matches of low levels of statistical probability were both admissible, "contingent upon a showing by the Government that the techniques, methods, and practices used in the testing in this case, as well as the expert's qualifications, meet with the generally accepted and established protocols." *Morrow*, 2005 U.S. Dist. LEXIS 8327 at \*30-\*31.

Several important developments have tied together the loose ends created by the Court's contingent, preliminary ruling of April 25, 2005. First, although the Court's ruling specifically authorized the introduction of DNA evidence with relatively low levels of match probability significance, e.g., evidence showing a 1:12 likelihood of a random match as compared to

evidence showing a 1:16 billion likelihood of a random match, *id.* at \*41-\*43, the Government agreed not to introduce on direct testimony through its DNA expert those instances in which the random match probability showed only that “a specific defendant could not be excluded as a potential minor contributor.” *See* 5/25/05 Tr. at 5836:22-5837:17, 5846:3-25. When presented with this offer, the Court ordered that the Government share with defense counsel which DNA samples and random match probabilities it would not bring out through its expert on direct examination. *Id.* at 5838:1-4. Therefore, the DNA evidence presented to the jury on direct in this case revolved around samples with a high statistical significance.<sup>1</sup> For instance, the Government presented various DNA samples where the probability of selecting an unrelated individual at random having the same STR profile as the contributor detected was 1:16 billion in the African-American population, *see* 5/26/05 Tr. at 5221:14-20, 1:110 million in the African-American population, *id.* at 5223:1-7, and 1:4.7 billion in the African-American population, *id.* at 5224:4-10. However, the Government did not introduce DNA evidence where the probabilities of selecting an unrelated individual were 1:12, 1:7, 1:6, 1:3, or 1:1, as Defendants had previously feared and anticipated. *See Morrow*, 2005 U.S. Dist. LEXIS 8327, at \*9-\*10. As such, one section of the Court’s earlier ruling did not come into play in practice. *See id.* at \*33-\*43.<sup>2</sup>

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<sup>1</sup> As permitted by the Court’s earlier ruling, however, some Defendants chose to use cross-examination as a platform upon which to question the Government’s DNA expert as to specimens that revealed matches with low levels of statistical significance even though the Government had consciously avoided these samples in its direct examination. *See, e.g.*, 6/1/05 Tr. at 5312:13-5315:8 (counsel for Defendant Aguiar questions the Government’s expert regarding specimen “K6,” a sample for which Defendant Aguiar could not be excluded as a potential contributor, although the probability that an unrelated individual selected at random from the Hispanic population was between 1:8 and 1:10).

<sup>2</sup> The Court’s April 25, 2005 ruling explicitly questioned the probative value of one of the Government’s planned DNA samples -- a specimen identified as “K5” that purportedly showed

Second, and more importantly, Defendants -- with one limited exception -- chose not to challenge the Government's DNA techniques, methods, and practices used in the testing in this case -- even after they received reports from their own DNA experts. *See* 5/25/05 Tr. at 5829:14-5835:13. Defendants also decided not to object to having Ms. Heather Seubert, who is currently employed as a DNA examiner at the Federal Bureau of Investigation laboratory within the DNA analysis unit of the FBI lab, located in Quantico, Virginia, qualified as a DNA expert for the Government. *See* 5/26/05 Tr. at 5135:15-5141:20. Rather, Defendants primarily resorted to cross-examination techniques in an attempt to undermine the weight of the DNA evidence presented by Ms. Seubert, not its admissibility.

However, Defendant Aaron Perkins did challenge the admissibility of a limited number of allegedly contaminated DNA samples. *See* Def. Perkins' Mot.; Def. Perkins' Revised Mot. A discussion of the issues underlying Defendant Perkins' motion is necessary in order to definitively resolve all DNA-related issues in this case.

*B. Defendant Perkins' Motion to Exclude*

1. Background

Prior to the Government's introduction of its DNA expert, Ms. Seubert, Defendant Aaron Perkins, on May 25, 2005, filed a Motion to Exclude Contaminated DNA Samples Obtained From the Brinkley Road Search. When alerted as to the existence of this newly-filed motion, the

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that Defendant Morrow could not be excluded as a contributor, although the probability of selecting an unrelated individual was 1:1 in *all* populations. *Morrow*, 2005 U.S. Dist. LEXIS 8327, at \*8. The Court implicitly suggested that a preliminary hearing was likely to be necessary on this issue. *Id.* at \*53. The Government's agreement to avoid this and similar evidence obviously obviated the need for such a hearing. This specimen was not introduced in the Government's direct examination of its DNA expert, Defendant Morrow's cross-examination of the Government's expert, or the Government's re-direct.

Court held a brief discussion with counsel for Defendant Perkins and the Government on the morning of May 25, 2005, and then set out a briefing schedule for supplemental filings. *See* 5/25/05 Tr. at 5841:7-5853:9. Defendant Perkins then filed a Revised Motion to Exclude, and the Government responded with a subsequent Opposition. In his Revised Motion, Defendant Perkins attached a report created by his DNA expert, Dr. Ronald S. Ostrowski, in support of his argument in favor of exclusion. *See* Def. Perkins' Revised Mot., Attach. at 1-3.

Importantly, Defendant Perkins does “not question the use of PCR/STR typing or the probative value of DNA evidence which is only of ‘a relatively low level of statistical relevance,’” Def. Perkins' Revised Mot. at 2 -- the chief concerns of the Court's April 25, 2005 Memorandum Opinion and Order. Instead, Defendant Perkins notes that FBI Special Agent Michael McCoy admitted, upon cross-examination by Defendant Palmer's counsel, Mr. Atiq Ahmed, that “certain pieces of evidence from Mr. Perkins' apartment were placed on a sheet from Mr. Perkins' bed during the search” in order to be photographed prior to collection. *Id.* at 1. According to Defendant Perkins, “[p]lacing the evidence on the bed sheet was done in violation of generally accepted forensic protocols and FBI forensic protocols.” *Id.* Based on this alleged contamination, Defendant Perkins contends that “once the evidence in question was wrapped in Mr. Perkins' bed sheet and thus contaminated by Mr. Perkins' DNA, the probative value of said evidence was vitiated.” *Id.* at 2. As such, Defendant Perkins stresses two important points: (1) “[c]ontamination of the evidence by Mr. Perkins' DNA ensures that it is now, as a logical and scientific matter, impossible to exclude Mr. Perkins as a possible contributor,” *id.* (emphasis in original); and (2) because “[t]here is no probative value to DNA contamination,” the evidence in question must be excluded from admission, *id.*

In support of his argument, Defendant Perkins cites two cases, *State v. Scott*, 33 S.W.3d 746, 758-59 (Tenn. 2000), and *State v. Morel*, 676 A.2d 1347, 1356 (R.I. 1996), and one article, John E. Smialek, *The Microscopic Slide: A Potential DNA Reservoir*, FBI Law Enforcement Bull. 18, 19 (Nov. 2000), that “have stepped up to firmly address the seriousness of the contamination issue.” Def. Perkins’ Revised Mot. at 2. Moreover, Defendant’s DNA expert, Dr. Ostrowski, identifies several FBI protocols that were allegedly violated in the collection of this evidence. *See id.*, Attach. at 1-3. According to Dr. Ostrowski, the “Special Precautions” violated by the FBI’s Special Agents include commandments to “[u]se a clean cutting surface for each piece of evidence,” “wear[] gloves that are changed regularly,” and “[u]se disposable bench paper to cover work area used to perform specimen preparation steps to prevent accumulation of amplified DNA on permanent work surfaces . . . . Diluted bleach should be used to periodically wash exposed work areas.” *Id.*, Attach. at 2. Based on the fact that certain items were placed on Mr. Perkins’ bed sheet when collected, Dr. Ostrowski claims that the procedures outlined in the FBI Laboratory Protocol for handling items to be tested were “negated,” thereby “rendering the items collected useless for DNA analysis.” *Id.*

In conclusion, Defendant Perkins suggests that the Court should take action to exclude the identified DNA evidence from consideration by the jury. In doing so, Defendant Perkins admits that the great weight of legal precedent indicates that possible contamination issues go towards the weight -- rather than the admissibility -- of DNA evidence and should be brought out during cross-examination. *See* Def. Perkins’ Mot. at 1 (citing *Morrow*, 2005 U.S. Dist. LEXIS 8327; *United States v. Trala*, 162 F. Supp. 2d 336 (D.Del. 2001); *United States v. Lowe*, 954 F. Supp. 401 (D. Mass. 1996)). However, Defendant Perkins contends that the Court should set

new legal precedent in this area and actually exclude DNA evidence based on contamination concerns for policy reasons. Essentially, Defendant Perkins focuses on incentives, arguing that “[i]f the Government is permitted to contaminate DNA evidence and then introduce it on the theory that its probative value will be addressed upon cross-examination, then there is no incentive on the part of the Federal law enforcement agents to follow their own rules and regulations.” Def. Perkins’ Revised Mot. at 3. By adopting such an exclusionary rule, “[f]ederal [c]ourts [will] affirmatively compel federal law enforcement agents to strictly adhere to forensic protocols” and thereby ensure proper due process. *Id.*

## 2. Problems With Defendant Perkins’ Position

Three major problems exist to doom Defendant Perkins’ argument in favor of exclusion. First, and perhaps most importantly, the items placed on the bed sheet garnered from Defendant Perkins’ bed were not linked to Defendant Perkins’ DNA and were not used to directly connect Defendant Perkins with any of the charged crimes. *See* 5/2/05 Tr. at 3000:21-3035:2 (McCoy testimony). Instead, the items placed on the bed sheet in question were matched with DNA from defendants Carlos Aguiar and Bryan Burwell. *See* Brinkley Exs. 23, 24, 26. There were jackets found in Defendant Perkins’ closet, arguably connected to bank robberies at issue, that were ultimately matched with Defendant Perkins’ DNA; however, these jackets were not placed on the sheet at the time of the relevant search and collection. *See* Brinkley Exs. 25, 34, 36.<sup>3</sup> As such,

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<sup>3</sup> Perhaps realizing that the jackets were never placed on the sheet and never came into direct contact with the DNA on the sheet, counsel for Defendant Perkins raised orally the possibility that when the agents and technicians conducting the search of Defendant Perkins’ residence removed the bed sheet from Defendant Perkins’ bed, DNA from the sheet might have been released into the air and then contaminated the jackets hanging in the closet. There are four issues that undermine this specific argument: (1) Defendant Perkins has offered no evidence to suggest that the door to the closet containing the jackets ultimately matched to his DNA was



Defendant Perkins' contamination argument is without foundation: Defendant Perkins cannot link the items on which his DNA was found to the items placed on the bed sheet. Because of this lack of causation, Defendant Perkins cannot maintain an argument that contamination through the use of his bed sheet would lead to a flawed connection between his DNA and an item of evidence.

Second, the FBI Protocols cited by Dr. Ostrowski, and allegedly violated by the Special Agents during their collection of the Brinkley Road evidence, relate to the laboratory analysis of evidence, not the collection of evidence. A review of the "Special Precautions" subsection of the FBI Laboratory's "Short Tandem Repeat Analysis Protocol" cited by Dr. Ostrowski makes plain his error in conflating two very different types of protocols. For instance, on multiple occasions, these identified precautions cite the need to "[c]hange gloves frequently. Prior to leaving *lab area*, always remove gloves and wash hands." *See* Def. Perkins' Revised Mot., Attach. at 2 (emphasis added). The precautions also make reference to the fact that technicians should "[s]tore the DNA amplification reagents in a refrigerator separate from evidentiary samples," and that special care should be taken when opening and touching "test tubes." *Id.* Finally, along with

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open during the time period in which the bed sheet was removed -- a fact that might have enhanced the possibility of contamination; (2) Dr. Ostrowski, in his report, declined to address the possibility of airborne contamination, preferring instead to focus solely on the allegation that "when Mr. Perkins' personal effects were collected, they were placed on a bed sheet at his residence," Def. Perkins' Revised Mot., Attach. at 2; (3) Defendant Perkins offered no testimony or evidence supporting the idea that any DNA, let alone sufficient DNA to produce a match, could have traveled from a bed sheet through the air onto jackets during the removal process; and (4) Ms. Seubert, the Government's DNA expert, offered extensive testimony establishing the inherent implausibility of DNA transfer from the bed sheet to objects within its vicinity. *See* 6/1/05 Tr. at 5360:16-5366:12. This dearth of evidence and wealth of speculation on the part of Defendant Perkins as to airborne contamination is insufficient to establish an argument for preclusion of the evidence.

periodically washing “exposed work areas” with “[d]iluted bleach,” technicians are also advised to “[u]se disposable bench paper to cover work area used to perform specimen preparation steps to prevent accumulation of amplified DNA on permanent work surfaces.” *Id.* Given the plain reading of the provisions cited to by Defendant Perkins’ DNA expert, it is evident that the protocols identified relate to steps that FBI Laboratory technicians should take *in the laboratory* when running the delicate PCR/STR typing process. These protocols are not, however, guides for the collection of evidence possibly infused with a suspect’s DNA in the field. Accordingly, the protocols referenced by Defendant Perkins are not the precautions relevant to the alleged contamination that is the focus of his motion. Defendant Perkins has not located these relevant field collection protocols, nor has he established that any violation of the field collection protocols occurred through the temporary use of his bed sheet.

The National Research Council, in its second major treatise on the collection of DNA evidence, does not specifically identify the proper steps necessary to avoid the contamination of DNA-related evidence during collection in the field. *See generally* National Research Council, *The Evaluation of Forensic DNA Evidence* (1996) (“NRC II”). Instead, the NRC simply notes that “[s]afeguards against sample mishandling in the field include proper training of personnel involved in sample collection (such as crime-scene personnel) and submission of complete evidence items (rather than clippings or scrapings) to the laboratory.” *Id.* at 81.<sup>4</sup> The NRC emphasizes that “[g]iven the great individuating potential of DNA evidence and the relative ease with which it can be mishandled or manipulated by the careless or the unscrupulous, the integrity

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<sup>4</sup> In this case, (1) the complete evidence items were collected and submitted to the FBI Laboratory, and (2) the FBI agents in the field wore gloves when collecting the items involved in subsequent DNA testing.

of the chain of custody is of paramount importance.” *Id.* at 82. Having established the chain of custody in this case, the Government still must guard against the kind of “inadvertent contamination” identified by Defendant Perkins. *Id.* at 83. According to the NRC, “[t]he best safeguard against inadvertent contamination is to have rigorous procedures for sample-handling from field to laboratory. Particular attention should be given to keeping evidence samples separated from reference samples.” *Id.* As an increased check against inadvertent contamination, the NRC focuses on three methods of reducing possible error: (1) “background control testing,” where samples collected from areas adjacent to the evidence sites can be tested to determine whether background contamination is present; (2) testing for multiple loci to increase the chances of differentiating between contaminant and the true sources of a sample, while at the same time using knowledge of the genetic types of people who might contribute contaminating material to assess the possibility of contamination from those people; and (3) redundancy in testing, i.e., retesting material to provide a consistency check, as it is unlikely that multiple samples would all be contaminated in the same way. *Id.*

Based on the generalized wording of the NRC’s suggestions, it is not at all clear that the Government’s collection of evidence from Defendant Perkins’ Brinkley Road residence, or its use of a bed sheet on which to temporarily place certain items, contravened any of the NRC’s cautionary admonishments. Moreover, Defendant Perkins has identified no FBI field protocols that were violated. Rather, the only protocols mentioned by Defendant Perkins were not relevant to the controversy at hand. Simply, Defendant Perkins has failed to show (1) that any contamination affected him and wrongfully linked him to the evidence set out on the bed sheet, and (2) any violation of generally accepted or FBI-specific protocols in the field collection of his

DNA-related evidence. Given these failings, Defendant Perkins' argument for exclusion appears to be without merit.

Third, and finally, the great weight of previous precedent indicates that cross-examination, not exclusion, is the proper province for a contamination inquiry. Indeed, the two cases cited by Defendant Perkins, *State v. Scott* and *State v. Morel*, do not stand for the proposition that DNA evidence should be precluded due to the alleged contamination of a sample. The language Defendant Perkins cites from *State v. Scott*, 33 S.W.3d 746, 757 (Tenn. 2000), relates to the shortcomings of mitochondrial DNA ("mtDNA") analysis, compared with analysis of nuclear DNA, and the need to be more careful as to issues of contamination regarding mtDNA. This case, in contrast, involves nuclear DNA analysis. Moreover, the *Scott* court concluded that the defendant was not entitled to a pre-trial hearing on the reliability of mtDNA analysis, but rather could cross-examine the State's expert as to the trustworthiness and reliability of such analysis, and be provided the services of his own expert. *Id.* at 759-61. The language Defendant Perkins cites from *State v. Morel*, 676 A.2d 1347, 1356 (R.I. 1996) also ultimately fails to support his preclusion argument. While the *Morel* court did mention general concerns that often arise regarding the presentation of DNA evidence, the specific issue before the court was the statistical relevance of DNA testing. *See id.* The *Morel* court found that the trial court had properly admitted the DNA evidence in question because "the methods used to determine the statistical probabilities of a match derived from DNA analysis affects the *weight* to be accorded the DNA evidence, not the admissibility of the evidence itself, and the determination of that weight is a question for the jury." *Id.* As such, Defendant Perkins has cited no precedent indicating that contamination issues go to the admissibility of DNA evidence, not the weight it

should ultimately be afforded.

Defendant Perkins' failure to identify supporting case law for his position is not the result of an accident or oversight. Rather, courts have consistently found that "an allegation of failure to properly apply a scientific principle should provide the basis for exclusion of an expert opinion only if 'a reliable methodology was so altered . . . as to skew the methodology itself . . . .'"

*United States v. Martinez*, 3 F.3d 1191, 1198 (8th Cir. 1993) (quoting *In re Paoli R.R. Yard PCB Litig.*, 916 F.2d 829, 858 (3d Cir. 1990), *cert. denied*, 499 U.S. 961, 111 S.Ct. 1584, 113 L.Ed.2d 649 (1991)); *see also United States v. Beasley*, 102 F.3d 1440, 1448 (8th Cir. 1996), *cert. denied*, 520 U.S. 1246, 117 S.Ct. 1856, 137 L.Ed.2d 1058 (1997); *United States v. Ewell*, 252 F. Supp. 2d 104, 106 (D.N.J. 2003). However, testimony that a proper protocol was not followed, or that possible contamination occurred, generally goes to the weight, rather than the admissibility, of the evidence. *See United States v. Johnson*, 56 F.3d 947, 953 (8th Cir. 1995); *Beasley*, 102 F.3d at 1148 ("In every case, of course, the reliability of the proffered test results may be challenged by showing that a scientifically sound methodology has been undercut by sloppy handling of the samples, failure to properly train those performing the testing, failure to follow the appropriate protocols, and the like."); *see also NRC II, supra*, at 6-12. Indeed, as the district court suggested in *Lowe*,

[t]he potential for and the significance of contamination, the adequacy of proficiency testing, accreditation, and the significance of whether a laboratory estimates error rates all concern the issue of quality control. Absent evidence demonstrating that the particular quality control procedures followed by the FBI laboratory violated a statute, regulation or a generally accepted industry requirement, these issues impact the weight of the evidence rather than its admissibility.

*Lowe*, 954 F. Supp. at 420 (citing cases). As such, the great weight of existing case law suggests

that in situations such as the current one, cross-examination as to potential contamination defects, rather than wholesale exclusion, remains the proper recourse for a defendant.

In sum, the Court concludes that Defendant Perkins' motion must be denied because Defendant Perkins (1) has failed to adduce any evidence suggesting that the alleged contamination of DNA-related specimens through placement on his bed sheet impacted him and connected him to the crimes charged; (2) has failed to establish that the use of the bed sheet as a temporary holding station for certain objects constituted a violation of the FBI's forensic protocols or generally accepted practice; and (3) to the extent that Defendant Perkins has identified a contamination issue, the issue is not sufficient to skew the otherwise-reliable PCR/STR typing process, and is therefore best left as a matter to be dealt with on cross-examination rather than subjecting the evidence to total preclusion. While the Court certainly concurs with Defendant Perkins' concern that FBI field technicians follow their own rules and regulations, and that contamination is to be avoided where possible, the Court finds that the current practice of allowing defendants to undermine the weight of questionable evidence gathered through a generally reliable methodology is sufficient to compel overall compliance. Given these findings, Defendant Perkins' Motion to Exclude shall be denied.

## **II: CONCLUSION**

The Court's previous DNA-related Memorandum Opinion and Order, dated April 5, 2005, left several evidentiary issues open that required resolution before the close of evidence in the Government's case-in-chief. Events subsequent to the Court's April 25, 2005 ruling have combined with this decision to close out all remaining concerns. Since the last DNA-related Memorandum Opinion and Order, Defendants have been furnished with expert reports from their

DNA experts, have been informed that the Government shall not introduce DNA evidence indicating a relatively low level of statistical evidence in its case-in-chief, have decided not to object to the formal qualification of Ms. Seubert as a DNA expert, and have generally shied away from filing any motions that challenge the admissibility of evidence garnered through the PCR/STR DNA typing process on the basis of the Government's techniques, methods, and practices employed in this case. These developments obviated the need for a DNA-related hearing before this Court preceding the testimony of Ms. Seubert.

The only motion filed by Defendants challenging the admissibility of certain DNA-related evidence proffered by the Government was the Motion to Exclude filed by Defendant Perkins. As indicated above, Defendant Perkins' argument for exclusion fails due to (1) his inability to establish causation; (2) his general failure to identify a relevant FBI protocol or accepted practice violated during the collection of the limited identified specimens; and (3) the general trend against preclusion and in favor of cross-examination as to the weight of the evidence on contamination issues.

Given these developments and findings, the Court concludes that Ms. Seubert, the Government's DNA expert, is qualified as an expert in PCR/STR DNA testing. Moreover, the Court finds that the FBI Laboratory's techniques, methods, and practices vis-à-vis the PCR/STR typing process were in compliance with generally accepted standards, and therefore formed the basis for a reliable methodology whose admission is in conformity with *Daubert* and Rules 702 and 403 of the Federal Rules of Evidence. Further, as noted in the Court's previous opinion, the Government's use of random match probability data to explain the significance of Defendants' DNA-related results to the jury was both proper and necessary, and in accordance with accepted

practice. Finally, the Court holds that the alleged errors identified by Defendants, either in their filings or during cross-examination, are insufficient to skew the otherwise reliable PCR/STR methodology. Instead, any alleged errors strike at the weight of the evidence introduced by the Government, and may be considered by the jury for that purpose. An Order accompanies this Memorandum Opinion.

Date: June 9, 2004

/s/  
COLLEEN KOLLAR-KOTELLY  
United States District Judge