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IN THE  
**Supreme Court of Virginia**

RECORD NO. 082564

**MIGUEL ANGEL AGUILAR,**

*Appellant,*

**v.**

**COMMONWEALTH OF VIRGINIA,**

*Appellee.*

OPENING BRIEF OF APPELLANT

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**IN THE  
SUPREME COURT  
OF VIRGINIA**

**RECORD No. 082564**

**MIGUEL ANGEL AGUILAR,**

**Appellant**

**v.**

**COMMONWEALTH OF VIRGINIA,**

**Appellee.**

**OPENING BRIEF FOR APPELLANT**

Appellant, Miguel Angel Aguilar, Defendant in the Circuit Court for the City of Alexandria, and Appellant in the Court of Appeals and in the Supreme Court, respectfully represents to this Court that he is aggrieved by the trial court's judgment of conviction following his bench trial on January 16, 2008 and by the sentence imposed by the Honorable John E. Kloch on February 21, 2008.

## STATEMENT OF THE CASE

This case presents the question of whether the Confrontation Clause permits the prosecution to introduce testimonial statements of a nontestifying forensic analyst through the in-court testimony of a different forensic analyst. On January 16, 2008, following a bench trial, the Honorable John E. Kloch found Appellant guilty of one count of robbery, one count of rape, one count of use of a firearm during a robbery, and one count of object sexual penetration. (T. 347.)

During the trial, the Commonwealth called Nathan Himes as a DNA expert and introduced into evidence three DNA certificates of analysis establishing that Appellant could not be eliminated from the sample taken from the victim pursuant to Virginia Code §§ 19.2-187, 19.2-187.1 and 19.2-250.7. See Commonwealth's Exhibits 10, 11, and 12. Appellant objected, arguing that though Himes performed some of the analysis himself, he also relied on the testing and conclusions of other examiners whom were not called to testify, and that admission of the certificates therefore would violate Appellant's constitutional rights. (T 211-65, 312-13) The court overruled the objections, admitted the certificates of analysis and convicted Appellant.

On February 21, 2008, Appellant was sentenced to a total term of incarceration of eighty-eight (88) years of imprisonment with all but forty-three (43) years suspended. (ST. 26.) The suspended sentence was conditioned on indefinite supervised probation, uniform good behavior, and payment of the costs of prosecution. (ST. 26.) On March 18, 2008, Appellant noted his appeal in the Alexandria Circuit Court. On September 5, 2008, the Court of Appeals in a *per curiam* opinion denied the petition for appeal. After argument before a three-judge panel, the petition was again rejected by order dated November 24, 2008 for the reasons stated in the *per curiam* opinion. On July 22, 2009, the Supreme Court denied his petition for appeal. After a *pro se* petition to the United States Supreme Court, the order denying the appeal was vacated and the case was reopened for briefing and oral argument on the issue of whether the United States Supreme Court's decision in *Melendez-Diaz v. Massachusetts* requires a reversal of Appellant's case. This opening brief followed.

### **ASSIGNMENT OF ERROR**

I. The Virginia Supreme Court and the Court of Appeals erred in denying the petition for appeal and upholding the trial court's admittance of DNA lab reports in violation of Appellant's

Confrontation Clause and Fourteenth Amendment rights (Preserved at T. 211-65, *per curiam* order dated September 5, 2008, three-judge panel opinion dated November 24, 2008, Virginia Supreme Court orders dated July 22, 2009 and March 15, 2010)

### **QUESTION PRESENTED**

I. Did the trial court err in admitting testimonial DNA lab reports in violation of Appellant's rights under the Confrontation Clause and the Fourteenth Amendment where the DNA analyst who testified indicated that he relied on conclusions of other analysts? **(Assignment of error I)**

### **STATEMENT OF FACTS**

Elizabeth Arnez was a customer service representative and part-time teller for Burke & Herbert Bank located at 621 King Street in Alexandria, Virginia. (T. 88-89.) On November 8, 2006, Arnez was working alone as the night teller at this branch. (T. 90.) While counting her money to close her window, Arnez heard footsteps behind her, turned, and saw a man pointing a gun at her. (T. 93.) The man had a mask or hood covering his face except his eyes and he was wearing a dark winter coat. (T. 93-94.) Arnez testified at trial that the man was "normal" height, "[a]bout five something." (T. 108.) When police asked her that night for a description, Arnez stated that the man was six feet tall. (T. 124.)

The man stayed in a crouching position and approached Arnez and asked her to put money in a plastic bag he was holding. (T. 95.) Arnez put money from her cash drawer into the bag. (T. 95.) The man then told Arnez to open her vault (T. 95), which was unlocked. (T. 92.) The man took all the money in the vault (T. 96), which amounted to about \$20,000, and put it in his bag. (T. 96.)

The man then told Arnez to open another vault, which was closed. (T. 96.) Arnez told the man she did not have the combination for that vault. (T. 96.) The man said one word in Spanish: "abre," which means "open." (T. 97.) Arnez testified that she was surprised because until that point she believed the man to be Asian, but after hearing the Spanish word she decided he must be Hispanic. (T. 97.) Arnez believed the man had an Asian accent. (T. 117.) The man told Arnez to turn around and walk toward the bank's kitchen, following her and prodding her in the back. (T. 97.) The man told Arnez, "Keep going," until they reached the women's bathroom, when he told her, "Enter here." (T. 99.) The man pushed Arnez into the corner of the bathroom. (T. 99.) Arnez was standing in the corner with her back to the wall when the man tried to lower her pants. (T. 100-01.)

Arnez had her eyes closed but felt the man's penis enter her vagina.

The man then put his finger into Arnez's vagina (T. 102.) and wiped Arnez's vagina with his coat. (T. 104.) The man left, taking the bag of money with him. (T. 104). Almost immediately, Arnez called the police. (T. 104-05.) That night, police arrested a man named Jose Barrea Sanchez and questioned him. (T. 202.) The bank's security cameras showed someone just outside the bank at 6:15 p.m. (T. 148.) The footage also showed an individual outside the building at 6:21 p.m. (T. 149.)

Arnez was examined by a SANE nurse later that evening. The nurse took swabs from the area inside the labia minorum, vagina, and the right thigh. (T. 162.) She also packaged Arnez's underwear and panty hose into a physical evidence recovery kit (PERK kit). (T. 163.) Appellant was later arrested and charged with the robbery and rape.

At trial, Nathan Himes was certified by the court as an expert in DNA analysis and body fluid identification. (T. 219.) Some of the laboratory tests were not performed by Himes but by Catherine Columbo, another forensic examiner. (T. 225.) Other staff in the lab also performed examinations and analysis of the DNA. (T. 254-55.)

Melanie Morris, a forensic laboratory specialist, ran a product gel test to amplify the DNA that Himes relied upon in his subsequent testing of the samples. (T. 258-59.) Appellant objected to Himes's testimony on Confrontation Clause grounds as to the tests performed by other analysts. (T. 226, 255, 260.) Appellant also objected to the DNA lab reports on Confrontation grounds since Himes indicated he relied in part on other analysts' conclusions. (T. 260-262, 312-13.) The DNA lab certificates were admitted over objection. (T. 238.)

On the basis of his own analysis and that of the nontestifying analysts, Himes testified that this sample was 340 trillion times more likely to have originated from the combination of Arnez and Appellant than the combination of Arnez and some other unknown Hispanic individual. (T. 233.) This number was reached through a statistical analysis technique. (T. 244.) Himes testified that Columbo tested the swabs taken as part of Commonwealth Exhibit 6 for the presence of acid phosphatase, which is an indicator of seminal fluid. (T. 224-25.) Himes testified that the "thighs, external genitalia" sample was positive for acid phosphatase and the vaginal cervical sample was negative. (T. 224.)

## ARGUMENT

**I. The trial court erred in admitting testimonial DNA lab reports in violation of Appellant's rights under the Confrontation Clause and the Fourteenth Amendment where the DNA analyst who testified indicated that he relied on conclusions of other analysts.**

The Sixth Amendment gives the accused "the right . . . to be confronted with the witnesses against him." U.S. Const. amend. VI (emphasis added). This right is applicable to the States through the Fourteenth Amendment. *Melendez-Diaz v. Massachusetts*, 557 U.S. \_\_\_\_, slip op. at 3 (2009) (citing *Pointer v. Texas*, 380 U.S. 400, 403 (1965)). In *Crawford v. Washington*, 541 U.S. 36 (2004), the United States Supreme Court held that the right to confront one's witnesses against him requires the witnesses to appear in person and be subject to cross examination. *Id.* at 54. The Court enumerated various types of evidence that would be deemed "testimonial" and therefore subject to the provisions of the Confrontation Clause, including *ex parte* affidavits and "statements made under circumstances which would lead an objective witness to reasonably believe that the statement would be available for use at a later trial." *Id.* at 51-52.

In *Melendez-Diaz*, the Court considered whether *ex parte* certificates stating that the alleged drugs seized were in fact cocaine were “testimonial” and required the presence of the forensic examiner. *Melendez-Diaz*, slip. op. at 4. The Court held that the documents were testimonial and that the statute allowing the Commonwealth to introduce them into evidence as *prima facie* evidence of the nature of the items seized without a live witness was impermissible. *Id.* Though the documents were titled merely “certificates” – just as they are titled in this case – “there was little doubt” that they were affidavits of the type enumerated in *Crawford*. *Id.* In deciding that the drug certificates were testimonial, the Court considered that they provided the same information to which an analyst would have testified. In essence, the certificates were “functionally identical to live, in-court testimony” and therefore were testimonial. *Id.*

The Court also looked to the language of the statute that allowed for the admission of the certificates of analysis. Specifically, the Massachusetts statute stated that the certificates were “*prima facie* evidence of the quality and the net weight” of the analyzed

items. *Id.* at 5. Thus, the certificates were intended to establish an element of the prosecution's case and the defendant had the right to confront that evidence through live testimony.

The *Melendez-Diaz* analysis squarely applies to the DNA lab certificates at issue here. They are prepared in conjunction with a criminal investigation and after consultation with law enforcement. Himes testified on cross examination that he understands when he receives samples in PERK kits that his analysis can be used in subsequent litigation. (T. 256-57). Indeed, in *Anderson v. Commonwealth*, 274 Va. 469, 480, 650 S.E.2d 702, 708 (2007), the Virginia Supreme Court stated that the content of a DNA certificate of analysis is a "solemn declaration or affirmation made for the purpose of establishing or proving some fact." Thus the certificates of analysis were intended to take the place of live testimony and establish as true the identity of the perpetrator. In short, the DNA lab certificates are declarations "made for the purpose of establishing or proving some fact" and reflect the testimony that the analysts would have been expected to provide if called at trial. *Melendez-Diaz*, slip op. at 4. They are testimonial statements and as such under *Crawford* and

*Melendez-Diaz* Appellant “was entitled to ‘be confronted with’ the analysts at trial.” *Id.* at 5 (quoting *Crawford*, 541 U.S. at 54).

The only difference between this case and *Melendez-Diaz* is that one of the forensic analysts who performed a portion of the DNA analysis reflected in the certificates did testify. However, that is a distinction without a difference. The Confrontation Clause gives Appellant the right to confront *all* the witnesses against him. Here, Appellant was denied his right to confront all the witnesses who performed the forensic analysis of the DNA taken from him and Arnez’s PERK kit. Although the Commonwealth called Himes to testify as to the results, the record is clear that he did not simply testify about his own work, but instead relied on the work of at least two other analysts, Colombo and Morris.

Specifically, Himes testified that the initial testing of the samples was “done under his supervision.” (T.225) The examiner who performed the initial testing, which involved an initial screening test (called an “AP test”) on the external and vaginal samples, was Catherine Columbo. (T. 225). She was not a Commonwealth witness; however, Himes relied upon her results in forming his own

opinions. She also reached a different conclusion than Himes as to whether there was spermatozoa present in the initial screening. (T. 249-52, Defendant's exhibits 1A , 2 and 3). Had the Commonwealth called her to testify as to the testing she conducted – rather than simply having Himes testify to his interpretation of her work- then Appellant would have had the opportunity to confront the witness directly. He also would have had the opportunity to challenge Himes's testimony more forcefully.

Himes also admitted on cross examination that the DNA examination done in Appellant's case was conducted by a "team" which, in this case, included Himes, Columbo and other "support staff and technicians." (T. 253). Himes explained that he did not perform the robotic extraction of the DNA from the samples and stated that there is a "forensic laboratory specialist" who performs that series of steps in removing the DNA itself from the samples. (T. 253). In this case, one forensic laboratory specialist was Melanie Morris who did the tests for amplification of the DNA. On cross examination, Himes admitted that he "relies on the other team members to do their jobs correctly" and stated that he "relies on their conclusions." (T.255).

In short, though Himes performed some of the tests himself, he did not perform all of them and relied on the accuracy of the results obtained by other analysts. As such, Appellant was denied the opportunity to confront all the analysts whom performed the various examinations and analyses. This denial violates the Confrontation Clause as interpreted in *Melendez-Diaz*, and therefore Appellant's conviction must be reversed. *Melendez-Diaz* does not suggest that the Confrontation Clause problem there would have been cured if the defendant had been permitted to confront one (but not all) of the analysts whose testimonial certificates were admitted into evidence. On the contrary, *Melendez-Diaz*'s core holding is that confrontation is a fundamental procedural right that cannot be waived because of a subjective conclusion that the testimony in question is reliable, whether reliability is claimed because the testimonial evidence in question is "scientific" or because another analyst subject to cross-examination will vouches for the nontestifying analysts' work. Appellant is entitled to confront the witnesses against him. Because he was not afforded that right, his conviction must be reversed.

## II. Other Jurisdictions' Interpretations of the Confrontation Clause Support Reversal of Appellant's Conviction.

While other jurisdictions have been divided in determining whether the fact that a defendant was able to confront one of the forensic analysts presenting testimonial evidence against him cures the Confrontation Clause problem caused by failing to permit confrontation of another one, most courts to consider the question have concluded that it does not. Several courts have concluded that so-called "surrogate" forensic testimony – *i.e.*, where one forensic analyst's testimonial statement is introduced through the live testimony of another – violates the Confrontation Clause. *See, e.g.*, *Commonwealth v. Avila*, 912 N.E.2d 1014, 1029 (Mass. 2009) (Confrontation Clause forbids expert testimony that recites or otherwise testifies about underlying factual findings of an unavailable forensic analyst); *State v. Locklear*, 681 S.E.2d 293, 304-05 (N.C. 2009).<sup>1</sup>

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<sup>1</sup> A pending petition for certiorari argues that courts in Massachusetts, North Carolina, Michigan, California and Texas have found "surrogate" forensic testimony to be unconstitutional, while courts in Illinois, Indiana, and Georgia have found that it is not. *See* Petition for Certiorari, *Pendergrass v. Indiana*, No.09-866, (filed Jan. 19, 2010).

In *Roberts v. United States*, the D.C. Court of Appeals found it would violate a defendant's Confrontation right to allow a scientist to testify as to conclusions of another DNA examiner and analysts where the testifying scientist did not perform the underlying DNA analyses himself. 916 A.2d 922, 939-940 (D.C. App. 2007). In *Roberts*, the government had to concede that the testifying examiner "based his conclusions on foundation tests conducted by other [FBI] scientists." *Id.* at 938. Therefore, "[t]o the extent that their conclusions were used as substantive evidence against appellant at trial, he was therefore entitled to be 'confronted with' the conclusions in the manner the *Sixth Amendment* requires, that is, through the opportunity for cross-examination of the declarant." *Id.* (emphasis in original; affirming conviction where appellant failed to make Confrontation clause challenge at trial). Likewise, the Sixth Amendment required the prosecution in this case to produce the other members of Himes's team that contributed to the conclusions of the DNA testing—for example, the PCR/STR technician who prepared DNA samples for amplification. (T. 253-55)

### **III. The Commonwealth's Reliance on Defendant's Subpoena Ability Is Unwarranted After *Melendez-Diaz***

In responding to Appellant's objection, the Commonwealth stated that defense counsel "had the opportunity to subpoena and question them [the other analysts] just like they can Mr. Himes, if they so choose." (T. 261-62). The response to the objection is telling because it reflects the *Magruder* rationale that there is no Confrontation Clause problem so long as the defense can subpoena the analysts. Such rationale does not survive *Melendez-Diaz*, which squarely rejected the notion that a Confrontation Clause problem could be avoided if defendant "had the ability to subpoena the analysts." *Melendez-Diaz*, slip op. at 19. Subpoena power, held the Court, "is no substitute for the right of confrontation." *Id.* .

The Commonwealth may respond that Virginia Code §19.2-187.1<sup>2</sup> applies to lab certificates and that Appellant waived his right to

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<sup>2</sup> Virginia Code §19.2-187.1 states in pertinent part:

The accused in any hearing or trial in which a certificate of analysis is admitted into evidence pursuant to §19.2-187 . . . shall have the right to call the person performing such analysis or examination or involved in the chain of custody as a witness therein, and examine him in the same manner as if he had been called as an

confront the other analysts who assisted Himes because Appellant could have demanded, prior to trial, that those analysts be summoned to testify at the Commonwealth's expense. *Magruder*, 657 S.E.2d 113, 115, 275 Va. 283, 289 (finding "the procedure provided in Code § 19.2-187.1 adequately protects a criminal defendant's rights under the Confrontation Clause and because the defendants in these appeals failed to utilize that procedure, we conclude that they waived the challenges under the Confrontation Clause to the admissibility of the certificates of analysis."). Appellant argues that *Magruder* is no longer good law in the Commonwealth. In fact, in *Melendez-Diaz* the Court considered whether the fact that the defendant could have subpoenaed the analyst to testify in his case saved the statute. It held that it did not. *Melendez-Diaz*, 557 U.S. \_\_\_\_\_. Specifically, the Court stated, "the Confrontation Clause imposes a burden on the prosecution to present its witnesses, not on the defendant to bring those witnesses into court." *Id.*

Moreover, the Virginia Legislature's subsequent amendment to Virginia Code § 19.2-187.1 supports the argument that the previous

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adverse witness. Such witness shall be summoned and appear at the cost of the Commonwealth.

code section was unconstitutional. The Legislature adopted a legislative scheme in-line with the notice and demand language sanctioned by the Court in *Melendez-Diaz*. Had Appellant's trial occurred under the current Code section, he would only have had to demand the presence of not only Himes, but the other analysts he performed the examinations. Such a scheme would most likely pass muster with the *Melendez-Diaz* Court.

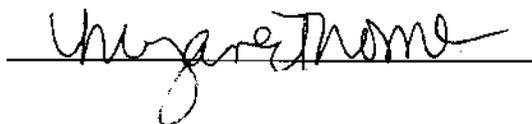
The previous scheme does not preserve defendant's Confrontation right because that right has already been denied in advance by Virginia Code §19.2-187, which makes certificates of analysis *prima facie* evidence of the facts contained therein whether the defendant calls the analyst or analysts in his case or not. 657 S.E.2d at 131-132, 275 Va. at 317 (Keenan, J., dissenting). As discussed by the dissent in *Magruder*, the majority in that case "confuses the issue whether a defendant may be required to produce evidence in a criminal trial with the issue whether the statutory mechanism at issue in this case, which requires a defendant to produce evidence, is capable of preserving his Confrontation Clause rights." 657 S.E.2d at 131, 275 Va. at 316 (Keenan, J., dissenting).

The Commonwealth may argue that Appellant's objections to the DNA lab certificates were improper because Virginia Code §19.2-270.5 requires defendants to give written notice of objections and "the basis for his objections at least ten days prior to commencement of the proceedings." And if the Commonwealth would have received such notice, it could have summoned the appropriate witnesses. Appellant contends that the failure to utilize Virginia Code §19.2-270.5 should not act as a waiver of Appellant's Confrontation right because it is not possible to anticipate in advance every possible objection that may arise during trial. See *State v. Miller*, 790 A.2d 144, 156 (N.J. 2002)("[A] defendant cannot, as a matter of constitutional imperative, be assigned any burden to detail an objection to the admission of a lab certificate."); *Miller v. State*, 472 S.E.2d 74, 79-80 (Ga. 1996)("Requiring a defendant to request the presence of the witnesses against him and to explain why he requires their presence in order to be afforded his constitutional right of confrontation places too heavy a burden on the assertion of a constitutional protection.").

## CONCLUSION

The Virginia Supreme Court and the Court of Appeals erred in upholding the trial court's erroneous decision affirming the trial court's ruling on the DNA certificates of analysis, which violated Appellant's right to confront the witnesses against him. Appellant respectfully requests that this Court reverse this erroneous ruling.

Respectfully Submitted,  
MIGUEL AGUILAR  
By Counsel

A handwritten signature in black ink, appearing to read "Megan Thomas", is written over a horizontal line.

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**CERTIFICATE OF SERVICE**  
**IN COMPLIANCE WITH RULE 5A:19(e) OF THE SUPREME**  
**COURT**

1. The Appellant's name is Miguel Angel Aguilar. He is currently incarcerated at the Powhatan Correctional Center, 3600 Woods Way, State Farm, VA 23160. Counsel for the Appellant is Megan Thomas, Esq, VSB # 48835. Her address is King & Campbell, PLLC, 526 King Street, Suite 213, Alexandria, Virginia 22314. Her telephone number is (703) 683-7070.
2. The Appellee is the Commonwealth of Virginia. Counsel for the Appellee is Stephen McCullough, Assistant Attorney General. His address is Office of the Attorney General, 900 E. Main Street, Richmond, VA 23219. His telephone number is (703) 786-2436.
3. Counsel filed by hand fifteen (15) copies of this opening brief to the Clerk of the Court, Supreme Court of Virginia, 100 North Ninth Street, Richmond, VA 23219, and hand-delivered three copies to Stephen McCullough, counsel for Appellee this 5<sup>th</sup> day of April, 2010. This brief was also electronically in PDF format by email to the Office of the Clerk of the Supreme Court of Virginia on the same day.
4. Counsel for the Appellant is appointed by the court.

4. Counsel for the Appellant is appointed by the court.
5. Counsel does wish to present oral argument.

  
\_\_\_\_\_  
Megan Thomas





DEPARTMENT OF FORENSIC SCIENCE

ORIGINAL

CERTIFICATE OF ANALYSIS

Northern Laboratory
9797 Braddock Road
Suite 200
Fairfax, VA 22032

January 25, 2007

Tel. No.: (703) 764-4600
Fax: (703) 764-4633

TO: V. IGNACIO
ALEXANDRIA POLICE DEPARTMENT
2003 MILL ROAD
ALEXANDRIA, VA 22314

FS Lab # N06-9683

Your Case #: 06-158220

Victim(s): ARNEZ, Elizabeth M.

Suspect(s): - - -

Evidence Submitted By: V. Ignacio Date Received: 11/13/2006

Item 1 Physical Evidence Recovery Kit from E. Arnez

METHODS:

- The method of deoxyribonucleic acid (DNA) analysis used was the Polymerase Chain Reaction (PCR).
The PCR amplification kit used was the PowerPlex® 16 BIO system.
The PowerPlex® 16 BIO system contains 16 genetic loci (FGA, TPOX, D8S1179, vWA, Penta E, D18S51, D21S11, TH01, D3S1358, Penta D, CSF1PO, D16S539, D7S820, D13S317, D5S818 and Amelogenin, a gender determining locus which is not used for statistical purposes).

RESULTS:

Item 1

Spermatozoa were identified and no blood was observed on the thighs/external genitalia sample. No seminal fluid was indicated, no spermatozoa were identified, and no blood was observed on the vaginal/cervical sample. Seminal fluid, but no spermatozoa, was identified in the interior crotch area of the underpants. No blood was observed on the underpants.

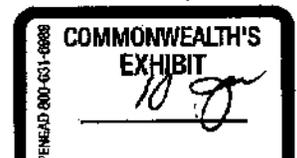
A DNA profile foreign to E. Arnez was developed from the thighs/external genitalia sample. This profile was searched against the Virginia DNA Data Bank and no profile consistent with the profile developed from the thighs/external genitalia sample was found. Future searches will be conducted on a periodic basis. This profile will be submitted to the National DNA Data Bank. A DNA type foreign to E. Arnez was developed from the interior crotch area of the underpants. Due to the limited information obtained, this profile is not suitable for comparison, searching against the Virginia DNA Data Bank or submission to the National DNA Data Bank.

A DNA profile was developed from the "oral buccal mucosa" sample from E. Arnez.

No analysis was conducted on the "scratches on Rt. thigh" and "hands" samples, head and pubic hair standards, pubic combings, debris collection, or "black pantyhose."

DNA comparisons can be conducted following the submission of two buccal (cheek) swabs from a suspect to the Laboratory.

The evidence will be available for personal pick-up at the Laboratory two weeks following the receipt of this Certificate of Analysis.





Commonwealth of Virginia

**DEPARTMENT OF FORENSIC SCIENCE**

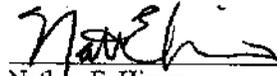
**ORIGINAL**

**CERTIFICATE OF ANALYSIS**

Alexandria Police Department  
FS Lab # N06-9683  
Your Case # 06-158220  
January 25, 2007

Attest:

I certify that I performed the above analysis or examination as an employee of the Department of Forensic Science and that the above is an accurate record of the results of that analysis or examination.

  
\_\_\_\_\_  
Nathan E. Himes  
Forensic Scientist

NEH







DEPARTMENT OF FORENSIC SCIENCE

ORIGINAL

CERTIFICATE OF ANALYSIS

Northern Laboratory
9797 Braddock Road
Suite 200
Fairfax, VA 22032

April 16, 2007

Tel. No.: (703) 764-4600
Fax: (703) 764-4633

TO: VICTOR IGNACIO
ALEXANDRIA POLICE DEPARTMENT
2003 MILL ROAD
ALEXANDRIA, VA 22314

FS Lab # N06-9683

Your Case #: 06-158220

Victim(s): ARNEZ, Elizabeth Mary

Suspect(s): AGUILAR, Miguel Angel

Evidence Submitted By: Victor Ignacio

Date Received: 03/20/2007

Item 2 Buccal swabs from M. Aguilar

METHODS:

- The method of deoxyribonucleic acid (DNA) analysis used was the Polymerase Chain Reaction (PCR).
The PCR amplification kit used was the PowerPlex® 16 BIO system.
The PowerPlex® 16 BIO system contains 16 genetic loci (FGA, TPOX, D8S1179, vWA, Penta E, D18S51, D21S11, TH01, D3S1358, Penta D, CSF1PO, D16S539, D7S820, D13S317, D5S818 and Amelogenin, a gender determining locus which is not used for statistical purposes).

RESULTS:

Item 2

A DNA profile was developed from the buccal swabs from M. Aguilar. M. Aguilar cannot be eliminated as a contributor of the foreign DNA profile previously developed from the thighs/external genitalia sample and reported in the Certificate of Analysis dated January 25, 2007. The DNA profile developed from the non-sperm fraction of the thighs/external genitalia sample at the PowerPlex® 16 BIO loci, with exception of CSF1PO, is:

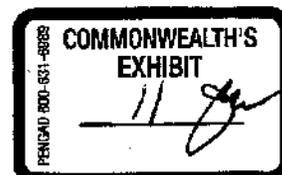
1.1 quadrillion times more likely to be observed if it originated from E. Arnez and M. Aguilar than if it originated from E. Arnez and an unknown individual in the Caucasian population.

76 quadrillion times more likely to be observed if it originated from E. Arnez and M. Aguilar than if it originated from E. Arnez and an unknown individual in the Black population.

340 trillion times more likely to be observed if it originated from E. Arnez and M. Aguilar than if it originated from E. Arnez and an unknown individual in the Hispanic population.

Refer to Appendix 1 for the PowerPlex® 16 BIO Typing Results and Appendix 2 for the Abbreviations.

The evidence will be available for personal pick-up at the Laboratory two weeks following the receipt of this Certificate of Analysis.





Commonwealth of Virginia

**DEPARTMENT OF FORENSIC SCIENCE**

**ORIGINAL**

**CERTIFICATE OF ANALYSIS**

Alexandria Police Department  
FS Lab # N06-9683  
Your Case # 06-158220  
April 16, 2007

Attest:

I certify that I performed the above analysis or examination as an employee of the Department of Forensic Science and that the above is an accurate record of the results of that analysis or examination.

  
\_\_\_\_\_  
Nathan E. Hines  
Forensic Scientist

NEH

CP



**COMMONWEALTH of VIRGINIA**  
**DEPARTMENT OF FORENSIC SCIENCE**

**Appendix 1: Table of Typing Results**  
 FS Lab # N06-9683  
 April 16, 2007

Sample	TH01	TH02	TH03	TH04	TH05	TH06	TH07	TH08	TH09	TH10
N06-9683 / 1 TEG SP	***	***	***	***	***	***	***	***	***	***
N06-9683 / 1 TEG NS	21 (23) (25)	(9) 11	(8) (11) 13	(16) 17 (18)	X (Y)	12 14	(13) (16) 17	(27) (29) 30		
N06-9683 / 1 EA vic	23 25	9 11	11 13	17 18	X X	12	13 16	27 30		
N06-9683 / 2 MA SUS	21	11	8 13	16 17	X Y	12 14	17	29 30		

Sample	TH01	TH02	TH03	TH04	TH05	TH06	TH07	TH08	TH09	TH10
N06-9683 / 1 TEG SP	***	***	***	***	***	***	***	***	***	***
N06-9683 / 1 TEG NS	6 9.3	17 18	12	10 (11)	10 11 12 (13)	(10) 11 (12)	(9) 11	9 11 13		
N06-9683 / 1 EA vic	7 9.3	15 18	12	11	12 13	10 11	9 11	9		
N06-9683 / 2 MA SUS	6 9.3	17 18	12	10 12	10 11	11 12	11	11 13		

( ), indicates types are lesser in intensity  
 INC, indicates no conclusive types detected  
 ---, indicates no type detected  
 \*\*\*, indicates no amplification results obtained



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DEPARTMENT OF FORENSIC SCIENCE

Appendix 2: Abbreviations

FS Lab # N06-9683

April 16, 2007

ANO	Anorectal sample
BLD	Blood stain
ELIM	Elimination
ENV	Envelope
FNC	Finger Nail Clippings
FNS	Finger Nail Scrapings
K	Known
L	Left
LLA	Lips/Lip Area sample
MAT	Material
NSP	Non-sperm fraction
OR	Oral Rinse sample
PA	Pubic Area sample
PB	Perianal/Buttocks sample
PH	Pubic Hair
Q	Questioned
R	Right
SC	Stain Card
SMPL	Sample
SP	Sperm fraction
STN	Stain
STND	Stained
SUS	Suspect
SWB	Swab
TEG	Thighs/External Genitalia sample
UPS	Underpants
VC	Vaginal/Cervical sample
VIC	Victim





DEPARTMENT OF FORENSIC SCIENCE

ORIGINAL

CERTIFICATE OF ANALYSIS

Northern Laboratory  
9797 Braddock Road  
Suite 200  
Fairfax, VA 22032

December 10, 2007

Tel. No.: (703) 764-4600  
Fax: (703) 764-4633

TO: V. IGNACIO  
ALEXANDRIA POLICE DEPARTMENT  
2003 MILL ROAD  
ALEXANDRIA, VA 22314

FS Lab # N06-9683

Your Case #: 06-158220

Victim(s): ARNEZ, Elizabeth Mary

Suspect(s): AGUILAR, Miguel Angel

Evidence Submitted By: Victor Ignacio

Date Received: 11/29/2007

Item 3 Buccal swabs from Jovel Aguilar

METHODS:

- The method of deoxyribonucleic acid (DNA) analysis used was the Polymerase Chain Reaction (PCR).
- The PCR amplification kit used was the PowerPlex<sup>®</sup> 16 BIO system.
- The PowerPlex<sup>®</sup> 16 BIO system contains 16 genetic loci (FGA, TPOX, D8S1179, vWA, Penta E, D18S51, D21S11, TH01, D3S1358, Penta D, CSF1PO, D16S539, D7S820, D13S317, D5S818 and Amelogenin, a gender determining locus which is not used for statistical purposes).

RESULTS:

Item 3

A DNA profile was developed from the buccal swabs from Jovel Aguilar. Jovel Aguilar is eliminated as a contributor of the foreign DNA profile previously developed from the thighs/external genitalia sample and reported in the Certificate of Analysis dated January 25, 2007.

The evidence will be available for personal pick-up at the Laboratory two weeks following the receipt of this Certificate of Analysis.

Attest:

I certify that I performed the above analysis or examination as an employee of the Department of Forensic Science and that the above is an accurate record of the results of that analysis or examination.

Nathan E. Himes  
Forensic Scientist

NEH



KE







Virginia Division of Forensic Science

VICTIM PHYSICAL EVIDENCE RECOVERY KIT EXAMINATION WORKSHEET

Exams on 12/05/06 conducted under my supervision. 12/05/06 NHT  
Exam on 12/07/06 conducted under my supervision 12/07/06 NHT

CONTAINER# 1 ANALYST: KC DATE: 12.05.06 FS LAB#: NOL-9683  
Type of seal: Classed PERK

PRELIMINARY RESULTS

DESCRIPTION	APPEARANCE	SPERM / SEMINAL FLUID		BLOOD	NOTES
		AP 12.05.06	EXTR 12.06.06		
State-earr <sup>ed</sup> "oral buccal mucosa"		Name: Sample cut by KML on 01/03/07. See additional sheet. NHT			
Oral rinse					
Lips/lip area					
Thighs/external genitalia					
Vaginal/cervical	2, 1+ gray yellow KC	(+)			Ut-entire remaining outer sheath of both swabs; placed in 2 single tube for PCR Samples consumed 12/05/06 NHT
Perianal/buttocks	4, yellow				
Anorectal					
Add't:					
Add't:					
Underpants					
Controls:		Semen: (+)	Semen: (+)	Blood: (+)	
		Blank: (0)	Blank: (0)	:Blank: (0)	
		ABA CARD LOT#: 23250902			





**VIRGINIA DEPARTMENT OF FORENSIC SCIENCE  
PRODUCT GEL RESULTS**

ANALYST: MEM

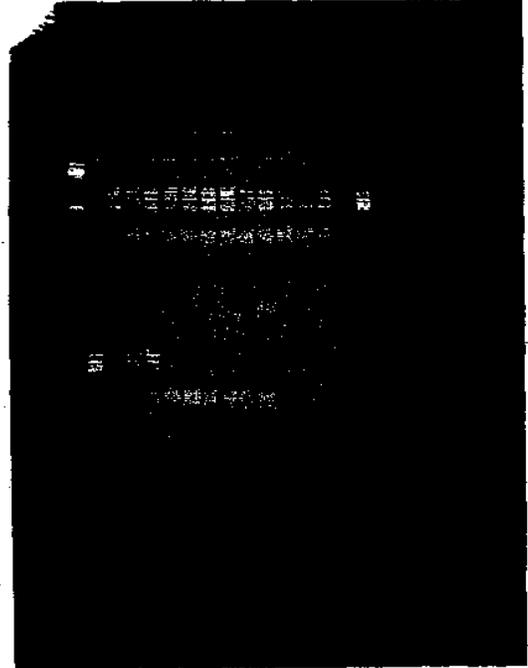
FS LAB#: N06-9683 <sup>NH</sup>

DATE: 01.08.07

PRODUCT GEL 2 WELL	SAMPLE	VISIBLE PRODUCT? <sup>NH</sup>	TYPE VOL (uL)
	123 bp LADDER		
	PB-E5 010507	N	3.0
	N06-5705 / 7 MDS sus buc	Y	0.75
	N06-6419 / 1 LS vic bld	Y	
	N06-6419 / 2 CEM sus buc	Y	
	N06-7157 / 2 CLB sus buc	Y	
	N06-8051 / 1 MS vic bld	Y	
	N06-8051 / 61 MA sus buc	Y	
	N06-9683 / 1 EA vic buc	Y	
	N06-1927 / 39 L shoe	Y	
	N06-1927 / 39 R shoe	Y	
	N06-7157 / 1 glove	Y	
	N06-8051 / 34 underarm	Y	
	N06-8051 / 34 collar	Y	
	RBM 010407	N	3.0
	N06-9683 / 1 udpts NS	Y	0.5
	N06-9683 / 1 TEG NS	Y	1.5
	N06-6419 / 2 penis NS	Y	0.75
	NSRBM 010407	N	3.0
	9947A+ 010507 (1)	Y	0.75
	9947A+ 010507 (2)	Y	0.75
	9947A+ 010507 (3)	N	
	9947A+ 010507 (4)	N	
	Neg 010507 (1)	N	3.0
	Neg 010507 (2)	N	
	Neg 010507 (3)	N	
	Neg 010507 (4)	N	

N06-9683 NH

②



CBR V8107

After speaking w/ robot operator & observing volume remaining in amp tubes, it was determined that no 9947A + dilution was added to these samples during PCR set-up. Analysis will continue with 9947A + s #1 & #2. KCA consulted & agrees.  
01/08/07 NH



REAGENT	LOT# / SOURCE
PRODUCT GEL	010307 CBR
AGAROSE	AG6093 / Cambrex
0.5X TBE GEL BUFFER	102606 KML

REAGENT	LOT# / SOURCE
ETHIDIUM BROMIDE	091306 MK
LOADING BUFFER	011105 RL
0.5X TBE TANK BUFFER	102306 KML
123 bp LADDER	1201597 / Invitrogen



1 THE COURT: Call your next  
2 witness.

3 MS. SULLIVAN: The Commonwealth  
4 will call Nathan Himes.

5 THE COURT: All right.

6 THE CLERK: Nathan Himes, please  
7 report to courtroom one.

8 THE COURT: Mr. Himes, will you  
9 come this way, please. If you'd stand there,  
10 and raise your right hand, the Clerk will  
11 administer the oath.

12 (THE WITNESS WAS SWORN.)

13 THE COURT: Mr. Himes, if you'll  
14 take the witness stand, please. I ask you to  
15 keep your voice up.

16 THE WITNESS: Yes, sir.

17 THE COURT: Go ahead, Ms.  
18 Sullivan.

19 MS. SULLIVAN: Thank you, Your  
20 Honor.

21 WHEREUPON,

22 NATHAN HIMES

1 WAS CALLED AS A WITNESS BY AND ON BEHALF OF  
2 THE COMMONWEALTH AND, AFTER HAVING BEEN FIRST  
3 DULY SWORN, WAS EXAMINED AND TESTIFIED AS  
4 FOLLOWS:

5 VOIR DIRE EXAMINATION

6 BY MS. SULLIVAN:

7 Q Sir, would you state your name for  
8 the Court, please.

9 A Yes. My name's Nathan Himes.  
10 Last name spelled H-i-m-e-s.

11 Q And what is your occupation?

12 A I'm a forensic scientist.

13 Q Where are you employed?

14 A I'm employed with the Virginia  
15 Department of Forensic Science, in the  
16 Northern Laboratory in Fairfax.

17 Q Could you briefly describe your  
18 educational background for the Court.

19 A Yes. I have a master's of  
20 forensic science degree, with a concentration  
21 in forensic molecular biology, from George  
22 Washington University. I also have a

1 bachelor's degree in biology, with a minor in  
2 chemistry from Lebanon Valley College in  
3 Annville, Pennsylvania.

4 Q And what specific training have  
5 you had for your current position as a  
6 forensic scientist?

7 A I completed a one-year training  
8 program with the Virginia Institute of  
9 Forensic Science and Medicine in Richmond,  
10 Virginia. During that time, I completed six  
11 months of training in body fluid  
12 identification and six months in DNA analysis.

13 Q And approximately how many DNA  
14 samples have you analyzed?

15 A Thousands.

16 Q Are you a member of any  
17 professional organizations?

18 A I am. I'm a member with the Mid-  
19 Atlantic Association of Forensic Scientists.  
20 I'm also a training affiliate with the  
21 American Academy of Forensic Scientists, and  
22 I'm a fellow with the American Board of

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1 Criminalistics.

2 Q Have you previously been qualified  
3 as an expert in forensic DNA analysis in the  
4 courts of the Commonwealth?

5 A I have; yes.

6 Q Do you know approximately how many  
7 times?

8 A Sixteen.

9 MS. SULLIVAN: Your Honor, at this  
10 time, I would move for the witness to be  
11 qualified as an expert in the area of forensic  
12 DNA analysis.

13 THE COURT: Do you wish to voir  
14 dire?

15 MR. KING: Yes, Your Honor.

16 THE COURT: All right.

17 VOIR DIRE EXAMINATION

18 BY MR. KING:

19 Q Mr. Himes, you indicated that you  
20 have a master's degree from George Washington  
21 University?

22 A That's correct.

1 Q You do not hold a PhD?

2 A No. I do not.

3 Q Do you have any publications in  
4 DNA analysis?

5 A No. I do not.

6 Q Or any publications in serology?

7 A No. I do not.

8 Q In your master's courses, did you  
9 take any courses specifically on serology?

10 A I took a forensic biology class  
11 which concentrated on the techniques of  
12 serology such as identifying spermatozoa.

13 Q You indicated that you took the  
14 one-year course through the Virginia Institute  
15 of Forensic Science. Is that who you  
16 indicated what it was?

17 A That's correct.

18 Q And what was the coursework there  
19 on serology?

20 A There was six months training in  
21 body fluid identification. During that time,  
22 I tested samples for the various types of body

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1 fluids in an attempt to identify and indicate,  
2 where possible, blood, seminal fluid, any  
3 other of the various body fluids that can be  
4 tested for, and then take those samples  
5 through DNA analysis, and which I spent six  
6 months training in that DNA analysis of those  
7 samples.

8 Q You indicated that you've been  
9 qualified 16 times as an expert in forensic  
10 DNA analysis?

11 A In forensic biology, consisting of  
12 body fluid identification and DNA analysis.

13 Q Have you ever not been qualified  
14 by a Court?

15 A No. I have not.

16 Q Have you ever been qualified  
17 specifically as an expert in forensic  
18 serology?

19 A No. I have not.

20 MR. KING: Thank you. I have no  
21 further questions.

22 Your Honor, there's an objection

1 to him being qualified as a forensic  
2 serologist, but in general forensic DNA  
3 analysis, as in the examination and  
4 interpretation of materials, there's not an  
5 objection.

6 THE COURT: Are you objecting or  
7 not?

8 MR. KING: Yes, Your Honor.  
9 There's an objection.

10 THE COURT: What are you offering  
11 him as, Ms. Sullivan?

12 MS. SULLIVAN: Your Honor, I  
13 offered him as an expert in forensic DNA  
14 analysis, which the Commonwealth would submit  
15 includes his examination of body fluids and  
16 taking it through to DNA analysis. So I would  
17 clarify and ask that--he is an expert in  
18 forensic serology as well.

19 THE COURT: Do you want to voir  
20 dire further, or--

21 MR. KING: Your Honor, I would  
22 like to ask a few followup questions regarding

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1 the forensic serology.

2 THE COURT: All right.

3 MR. KING: Just a few, though.

4 FURTHER VOIR DIRE EXAMINATION

5 BY MR. KING:

6 Q Mr. Himes, what type of continuing  
7 training do you do in forensic serology, if  
8 any?

9 A The training that I've done in  
10 forensic--it's not necessarily forensic  
11 serology. Serology is more of a classical  
12 interpretation of ABO typing, enzyme typing.  
13 What I'm an expert in is body fluid  
14 identification, where I'm actually just  
15 identifying body fluids, blood, seminal fluid,  
16 then taking them forward to DNA analysis.

17 Q Are you a member of any  
18 organizations, or hold any certificates with  
19 regard to body fluid identification?

20 A No; not specifically.

21 Mr. KING: Your Honor, that's all  
22 the questions that I have.

1 THE COURT: All right.

2 MR. KING: We would offer an  
3 objection to forensic serology, as to whether  
4 he's an expert in body fluid identification  
5 itself. He doesn't indicate that there's been  
6 continuing education in that area, whether he  
7 holds certificates in that particular area,  
8 and he had indicated he's not specifically  
9 been identified as an expert in that area  
10 before.

11 THE COURT: He will be deemed an  
12 expert in DNA analysis and body fluid  
13 identification.

14 MS. SULLIVAN: Thank you, Your  
15 Honor.

16 DIRECT EXAMINATION

17 BY MS. SULLIVAN:

18 Q Mr. Himes, what is DNA?

19 A DAQ simply stands for  
20 deoxyribonucleic acid, and basically it's the  
21 blueprint of life. It codes for all the  
22 information that is used to build and maintain

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1 our bodies. And we get half of our DNA from  
2 our mothers and half of our DNA from our  
3 fathers. That's why you might hear someone  
4 say you have your mother's eyes or your  
5 father's nose.

6 Q And where is DNA found in our  
7 bodies?

8 A DNA's found in the nucleus or the  
9 control center of cells, which are the  
10 building blocks of our bodies.

11 Q And is a person's DNA different if  
12 found in different cells of the body?

13 A No. DNA is the same from one body  
14 fluid to the next. This is how we can compare  
15 DNA from blood to DNA from seminal fluid, or  
16 DNA from saliva.

17 Q And is DNA different from person  
18 to person?

19 A DNA does differ from person to  
20 person, although roughly--with the exception  
21 of identical twins. Roughly 99 percent of our  
22 DNA is the same. This is what counts for the

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1 fact that we're all born with two arms, two  
2 legs, we're all human. There is that one  
3 percent of DNA that makes us very unique, and  
4 it's that one percent of DNA that the analysis  
5 focuses on.

6 Q Did you perform testing on items  
7 submitted to the lab in this case?

8 A I did; yes.

9 Q If I could show you those items  
10 for identification.

11 MS. SULLIVAN: Your Honor, I will  
12 need to retrieve Commonwealth's Exhibits 7 and  
13 8 from the Clerk.

14 THE COURT: All right. Do you  
15 have the--

16 MS. SULLIVAN: I have six.

17 THE COURT: I think we need the  
18 swabs and the--

19 MS. SULLIVAN: Thank you. May I  
20 approach, Your Honor?

21 THE COURT: Swabs from the  
22 Defendant and from his brother, I believe.

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1 You may approach.

2 BY MS. SULLIVAN:

3 Q I'm first showing you what's been  
4 identified as Commonwealth's Exhibit No. 6.

5 Did you receive that item?

6 A Yes. I recognize it by both my  
7 unique case number and my initials on the  
8 item.

9 Q And can you tell the Court what  
10 kind of evidentiary samples were included in  
11 the PERK kit, Commonwealth's Exhibit No. 6.

12 A This is the physical evidence  
13 recovery kit. It's all of the samples that  
14 are collected from the clinician in instances  
15 of alleged sexual assault, and they're brought  
16 to the laboratory for our analysis. This  
17 particular physical evidence recovery kit--if  
18 I may refer to my notes?

19 Q Yes, sir.

20 A --consisted of information check  
21 list, an information form, thighs, external  
22 genitalia sample, a vaginal cervical sample,

1 an oral buccal mucosa sample, scratches on the  
2 right thigh sample, hands sample, head hair  
3 standard, pubic hair standard, pubic combings,  
4 debris collection, underpants, black  
5 pantyhose.

6 Q Directing your attention to  
7 Commonwealth's Exhibit No. 7, which has been  
8 identified as the buccal swab from Miguel  
9 Aguilar, did you receive that item?

10 A Yes. Again I recognize it by the  
11 unique case number and my initials on the  
12 item.

13 Q All right. I'm showing you  
14 Commonwealth's Exhibit No. 8, which has been  
15 identified as the buccal swab from Jovel  
16 Aguilar. Do you recognize that?

17 A Yes. Again, unique case number  
18 and my initials are on the item.

19 MS. SULLIVAN: I can return those  
20 to the Clerk.

21 BY MS. SULLIVAN:

22 Q Beginning with the PERK kit,

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1 Commonwealth's Exhibit No. 6, that you  
2 collect--that was collected from Ms. Arnez,  
3 can you describe your analysis of the evidence  
4 in that kit.

5 A Yes. The initial testing that was  
6 done on the kit was on the thighs, external  
7 genitalia sample, and the vaginal cervical  
8 sample. The first test that was performed is  
9 a preliminary screening test called an AP  
10 test. It's just a chemical test to  
11 potentially indicate the presence of seminal  
12 fluid. So both of those tests were conducted  
13 on the vaginal cervical and on the thighs,  
14 external genitalia samples, and the thighs,  
15 external genitalia sample was positive for the  
16 screening test for acid phosphatase, which is  
17 the AP screening test for seminal fluid.

18 The vaginal cervical sample was  
19 negative.

20 Q All right.

21 MR. KING: Your Honor, there's an  
22 objection to foundation as to whether Mr.

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1 Himes is testifying from personal knowledge or  
2 someone else conducted the test. I'd ask for  
3 a clarification of that, Your Honor.

4 MS. SULLIVAN: Was the testing,  
5 the initial assessment of these items, done  
6 under your supervision?

7 THE WITNESS: They were done under  
8 my supervision; yes.

9 BY MS. SULLIVAN:

10 Q And by whom was that done?

11 A The test was done by another  
12 examiner--Catherine Columbo.

13 Q Okay. And at this point you're  
14 talking about the initial analysis of whether  
15 there was spermatozoa?

16 A No. The initial--this is the  
17 initial screening test, the chemical test.

18 Q Okay.

19 MR. KING: Your Honor, we would  
20 renew our objection to that testimony as being  
21 testimony on that nature. He's testifying as  
22 to results of what another examiner or analyst

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1 did, not from his own personal knowledge but  
2 relying on what her conclusions were. We  
3 would submit that that is testimony and with  
4 regard to that, I could hand up the Anderson  
5 case which does indicate--well, it's not the  
6 exact point--that the results of DNA evidence  
7 do appear to be testimonial, a 2007 case from  
8 the Virginia Supreme Court, which I could  
9 supply a copy to the Court as well as a copy  
10 to the Commonwealth attorney.

11 MS. SULLIVAN: Your Honor, if I  
12 could continue to question the witness, he  
13 will testify about personal knowledge as to  
14 the DNA testing that was done in the case, and  
15 if I can lay a foundation as to--

16 THE COURT: All right. You may.

17 MS. SULLIVAN: --the screening.

18 BY MS. SULLIVAN:

19 Q Regarding the screening, did you  
20 review what was done regarding the screening?

21 A The initial screen, the chemical  
22 tests were done under my direct supervision.

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1 So I did physically see the tests being  
2 performed. In addition, I screened the  
3 smears, which were the microscope slides that  
4 were submitted along with the swabs in the  
5 physical evidence recovery kit for both of the  
6 samples, and I screened those myself and  
7 identified a single spermatozoa head on the  
8 thighs, external genitalia sample, and nothing  
9 on the vaginal cervical sample.

10 All right. Your Honor, I think  
11 it's been established he does have personal  
12 knowledge of the facts he's testifying to.

13 THE COURT: Well, he's testified  
14 to it, so--

15 MS. SULLIVAN: All right. Thank  
16 you, Your Honor. All right.

17 BY MS. SULLIVAN:

18 Q Can you describe what was done  
19 after spermatozoa was determined to be present  
20 in the thighs, external genitalia swab.

21 A Yes. That sample was cut and  
22 taken forward to DNA analysis.

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1 Q Did you develop a DNA profile from  
2 the thighs, external genitalia swab?

3 A I did. I developed a profile  
4 foreign to Ms. Arnez from that sample.

5 Q Before moving on to that, you  
6 described no seminal fluid in the vaginal  
7 cervical swab; is that correct?

8 A That's correct. There was no  
9 seminal fluid indicated, no spermatozoa  
10 identified, and no blood observed in that  
11 vaginal cervical sample.

12 Q All right. And as to the  
13 underpants that were submitted with the PERK  
14 kit, did you examine those?

15 A Yes, I did.

16 Q And what, if anything, did you  
17 find there?

18 A Seminal fluid but no spermatozoa  
19 were identified in the interior crotch area of  
20 the underpants.

21 Q And was there any DNA profile  
22 obtained from the sample on the underpants?

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1           A       There was a single DNA type that  
2           was foreign to Ms. Arnez, but that type was  
3           not suitable for comparison or drawing any  
4           conclusions.

5           Q       Okay. So as far as what you took  
6           forward for DNA testing, that is the thighs,  
7           external genitalia swab only?

8           A       Well, the thighs, external  
9           genitalia swab was taken forward as well as  
10          the interior crotch area of the underpants--

11          Q       Okay. I'm sorry.

12          A       --which we just discussed, as well  
13          as the known from Ms. Arnez.

14          Q       All right. Can you describe the  
15          DNA analysis on the thighs, external genitalia  
16          swab.

17          A       Yes. In that sample, I developed  
18          a DNA profile that was foreign to Ms. Arnez.  
19          In comparing the DNA profile from Mr. Miguel  
20          Aguilar, I was unable to eliminate him as a  
21          contributor of that foreign DNA profile.

22          Q       Okay. And can you explain how

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1 that sample is separated prior to the testing.

2 A Yes. In a sample such as the  
3 thighs, external genitalia, where I've  
4 identified spermatozoa, I then take that  
5 forward to DNA analysis and essentially split  
6 that one sample into two separate samples, the  
7 first sample being attempting to isolate the  
8 spermatozoa itself, and the second sample  
9 being everything else other than spermatozoa.

10 So I end up with a sperm fraction  
11 and a nonsperm fraction from the very same,  
12 one thighs, external genitalia sample.

13 Q And as far as the nonsperm  
14 fraction, can you explain to the Court what is  
15 included in the nonsperm fraction. I realize  
16 it doesn't include sperm. But what about  
17 seminal fluid?

18 A Yes. It could potentially contain  
19 the nonsperm components of seminal fluid as  
20 well as any other body fluid such as saliva,  
21 vaginal fluid, anything else that's not a  
22 sperm cell, that may be present.

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1 Q All right. Were there any results  
2 of a DNA profile from examining the sperm  
3 fraction?

4 A There was no amplification results  
5 from that sperm fraction.

6 Q So the DNA profile came from which  
7 fraction?

8 A The DNA profile came from the  
9 nonsperm fraction.

10 Q Now did you also develop a DNA  
11 profile from the known sample or buccal swab  
12 from Ms. Arnez?

13 A I did; yes.

14 Q All right. It was listed as the  
15 oral buccal mucosa sample.

16 Q Okay. Did you also develop a DNA  
17 profile from the known sample, or buccal swab  
18 collected from Miguel Aguilar?

19 A I did; yes.

20 Q And did you develop a DNA profile  
21 from the buccal swab collected from Jovel  
22 Aguilar?

1           A     Yes.  I did.

2           Q     Are all of these DNA profiles  
3 different?

4           A     Yes.  They are.

5           Q     All right.  And then you mentioned  
6 that you did compare the known DNA profiles  
7 with the DNA profile developed from the  
8 thighs, external genitalia swab?

9           A     I did; yes.

10          Q     And do you have an opinion, to a  
11 reasonable degree of scientific certainty,  
12 whether Miguel Aguilar can be eliminated as a  
13 contributor to that foreign DNA profile?

14          A     I was unable to eliminate Mr.  
15 Miguel Aguilar as a contributor to that  
16 foreign DNA profile developed from the thighs,  
17 external genitalia sample.  I was able to  
18 eliminate Mr. Jovel Aguilar as being a  
19 contributor to that foreign DNA profile,  
20 thighs, external genitalia sample.

21                   And when a conclusion such as  
22 that's given, statistics are associated to

1 determine how common or how rare a DNA profile  
2 may be within the population at large, and for  
3 the DNA profile developed from the nonsperm  
4 fraction of the thighs, external genitalia, at  
5 the PowerPlex 16 loci, which are the areas of  
6 DNA that we test at, with the exception of one  
7 of those areas, CSF1PO, it was 1.1 quadrillion  
8 times more likely to be observed if it  
9 originated from Ms. Arnez and Mr. Miguel  
10 Aguilar than if it originated from Ms. Arnez  
11 and an unknown individual in the Caucasian  
12 population. 76 quadrillion times more likely  
13 to be observed if originated from Ms. Arnez  
14 and Mr. Miguel Aguilar than if it originated  
15 from Ms. Arnez and an unknown individual in  
16 the black population. And 340 trillion times  
17 more likely to be observed if it originated  
18 from Ms. Arnez and Mr. Miguel Aguilar than if  
19 it originated from Ms. Arnez and an unknown  
20 individual in the Hispanic population.

21 Q Okay. Can you explain to the  
22 Court, the number, the last statistic that you

1 provided was 340 trillion times more likely  
2 regarding the Hispanic population.

3 Can you describe what that number  
4 looks like for the Court--340 trillion.

5 A Three hundred forty trillion is  
6 roughly 340 million times a million. It's  
7 roughly 340 with 12 zeroes after it.

8 Q All right. Thank you. Your  
9 comparison of the DNA profile from the thighs,  
10 external genitalia swab, and Ms. Arnez and  
11 Miguel Aguilar--did you create a table that  
12 documents the result and your comparison?

13 A I did; yes.

14 Q Before I get to that, did you  
15 prepare certificate of analysis documenting  
16 your conclusions in these cases?

17 A I did; yes.

18 MS. SULLIVAN: May I approach the  
19 witness, Your Honor?

20 THE COURT: You may.

21 BY MS. SULLIVAN:

22 Q Again, the Commonwealth's Exhibit

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1 No. 10. I ask you to take a look at that and  
2 tell the Court what that is.

3 (WHEREUPON, THE DOCUMENT  
4 REFERRED TO WAS MARKED  
5 AS COMMONWEALTH'S  
6 EXHIBIT NO. 10 FOR  
7 IDENTIFICATION.)

8 A Yes. This is my certificate of  
9 analysis dated January 25th, 2007, regarding  
10 the physical evidence recovery kit from Ms.  
11 Arnez. I recognize it by the unique case  
12 number and my signature on that second page.

13 Q And was that the certificate that  
14 covered your initial analysis of the PERK kit  
15 only?

16 A It is; yes.

17 Q Is that prior to any suspect  
18 buccal swabs being submitted to you?

19 A That is.

20 MS. SULLIVAN: All right. I move  
21 for admission of Commonwealth's Exhibit No.  
22 10.

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1 THE COURT: Any objection?

2 MR. KING: Your Honor, we would  
3 ask that that the admission be reserved until  
4 after cross examination, please.

5 THE COURT: Why isn't it  
6 admissible now?

7 MR. KING: Well, we intend to  
8 question on cross examination whether all the  
9 conclusions within that particular certificate  
10 of analysis are based on his personal  
11 observations, or if they're also based on  
12 observations of other analysts or scientists  
13 who worked on it.

14 MS. SULLIVAN: As about the results  
15 of his personal observations.&

16 THE COURT: All right. I overrule  
17 the objection. Ten will be admitted.

18 (WHEREUPON, THE DOCUMENT  
19 REFERRED TO, PREVIOUSLY  
20 MARKED COMMONWEALTH'S  
21 EXHIBIT NO. 10 FOR  
22 IDENTIFICATION, WAS

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1 RECEIVED IN EVIDENCE.)

2 BY MS. SULLIVAN:

3 Q I'm showing you Commonwealth's  
4 Exhibit No. 11 and ask if you recognize that.

5 (WHEREUPON, THE DOCUMENT  
6 REFERRED TO WAS MARKED  
7 AS COMMONWEALTH'S  
8 EXHIBIT NO. 11 FOR  
9 IDENTIFICATION.)

10 A Yes. This is my certificate of  
11 analysis dated April 16, 2007, regarding the  
12 buccal swabs from Miguel Aguilar. I recognize  
13 it by the unique case number and my signature  
14 on the second page.

15 Q And does this certificate of  
16 analysis contain the table that shows your  
17 comparison of the thighs, external genitalia  
18 profile with the profiles from the victim and  
19 the suspect?

20 A Yes; it does.

21 MS. SULLIVAN: All right. I move  
22 for admission of Commonwealth's Exhibit No.

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1 11.

2 THE COURT: Any objection?

3 MR. KING: Your Honor, we make the  
4 same objection we made with regard to ten.

5 THE COURT: All right. Eleven  
6 will be admitted.

7 (WHEREUPON, THE DOCUMENT  
8 REFERRED TO, PREVIOUSLY  
9 MARKED COMMONWEALTH'S  
10 EXHIBIT NO. 11 FOR  
11 IDENTIFICATION, WAS  
12 RECEIVED IN EVIDENCE.)

13 BY MS. SULLIVAN:

14 Q I'm showing you Commonwealth's  
15 Exhibit No. 12. Do you recognize that?

16 (WHEREUPON, THE DOCUMENT  
17 REFERRED TO WAS MARKED  
18 AS COMMONWEALTH'S  
19 EXHIBIT NO. 12 FOR  
20 IDENTIFICATION.)

21 A Yes. Again I recognize it by a  
22 unique case number and my signature on the

1 front page here. It is a certificate of  
2 analysis dated September 10th, 2007.

3 Q And does that concern the  
4 comparison of the swab from Jovel Aguilar?

5 A Yes; it does:

6 MS. SULLIVAN: All right. I move  
7 for admission of Commonwealth's Exhibit No.  
8 12.

9 THE COURT: Any objection?

10 MR. KING: The same objection,  
11 Your Honor.

12 THE COURT: All right. Twelve  
13 will be admitted.

14 (WHEREUPON, THE DOCUMENT  
15 REFERRED TO, PREVIOUSLY  
16 MARKED COMMONWEALTH'S  
17 EXHIBIT NO. 12 FOR  
18 IDENTIFICATION, WAS  
19 RECEIVED IN EVIDENCE.)

20 MS. SULLIVAN: Your Honor, may I  
21 publish the table and have him answer some  
22 questions about the table?

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1 THE COURT: You may. All right.

2 MS. SULLIVAN: I'll hand these  
3 others to the Clerk.

4 BY MS. SULLIVAN:

5 Q They're a little hard to see but  
6 I'll try to orient the Court, so when the  
7 Court looks at it later, what is shown. Can  
8 you explain to the Court what the top column,  
9 all these initials represent.

10 A Those are the different areas of  
11 DNA, the sixteen different areas that were  
12 tested along the DNA strand. So looking at  
13 all of the numbers that are associated with  
14 each of those areas, as a whole, constitutes  
15 a single DNA profile.

16 Q And on the left-hand column--it's  
17 hard to read from this distance--but the top  
18 column says T-E-G-S-P. What does that stand  
19 for?

20 A That stands for thighs, external  
21 genitalia, the sperm fraction.

22 Q And so there were no--as you

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1 testified earlier, there were no DNA results  
2 from the sperm fraction?

3 A There were no amplification  
4 results from that sample. That's correct.

5 Q All right. And then the next  
6 column is T-E-G-N-S. What does that stand  
7 for?

8 A That would be the thighs, external  
9 genitalia nonsperm fraction.

10 Q And is that the sample we're  
11 talking about from which you developed a DNA  
12 profile?

13 A It is; yes.

14 Q Okay. The next line, it says EA,  
15 Vic?

16 A Yes. That is the known sample  
17 from Ms. Arnez.

18 Q All right. And the next column  
19 below that is FUS?

20 A And that is the known sample from  
21 Mr. Aguilar.

22 Q So E-A stands for Elizabeth Arnez

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1 and M-A is Miguel Aguilar?

2 A That's correct. Those are their  
3 initials.

4 BY MS. SULLIVAN:

5 Q All right. And then this is the  
6 profile along each of those columns, that you  
7 developed from them ?

8 A Yes. They're read across,  
9 starting where the description is. If you  
10 read across, there are eight areas at the top,  
11 and then it continues down in the same  
12 position on the bottom, and eight more areas.  
13 Just a continuation. You could string them  
14 all out in one long line but it wouldn't fit  
15 on the page, so they're split into two  
16 separate charts, or just a continuation of the  
17 DNA profile.

18 Q And the numbers that are in the  
19 column, what do they represent?

20 A They represent the different DNA  
21 types that were detected at each of those  
22 areas of DNA.

1           Q     When you examined these  
2 evidentiary samples, did you find any types in  
3 the thighs, external genitalia sample that  
4 were foreign to Ms. Arnez and Miguel Aguilar?

5           A     There were types foreign to Ms.  
6 Arnez, but looking at both of their DNA  
7 profiles as a whole, there were no types that  
8 were different from both of their profiles.

9           MS. SULLIVAN: I'll hand that up  
10 to the Clerk.

11           BY MS. SULLIVAN:

12           Q     Can you explain--you talked about  
13 the statistical result. Can you explain to  
14 the Court why in this case you used the type  
15 of statistical analysis you did with the  
16 mixture.

17           A     Sure. The type of statistical  
18 analysis that was done is called a likelihood  
19 ratio, and in this instance we have a sample  
20 that is from the body of an individual, being  
21 from her thighs, external genitalia, we can  
22 expect in her DNA profile maybe showing up in

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1 that sample.

2 So we're looking for anything  
3 foreign to her.

4 This statistic essentially is a  
5 bow of two theories. You have, the first  
6 theory is the DNA profile that I'm developing  
7 is from the victim and the individual that was  
8 not eliminated, Mr. Miguel Aguilar. And the  
9 second scenario is the victim and an unknown  
10 individual from the population. So we're  
11 going to figure out how much more--or how many  
12 times more likely it is that scenario F, if  
13 the the DNA profiles were from Ms. Aguilar  
14 and--I'm sorry--Ms. Arnez and Mr. Aguilar than  
15 it is if it was from Ms. Arnez and an unknown  
16 individual.

17 So the statistic basically weighs  
18 those two options and determines how much more  
19 likely it is--scenario A versus scenario B.

20 THE COURT: 340 trillion is how  
21 much more likely it comes from she and the  
22 Defendant than anyone else?

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1                   THE WITNESS:    Than she and an  
2                   unknown--

3                   THE COURT:    Than somebody else.  
4                   And what's the estimated population of the  
5                   world?

6                   THE WITNESS:    The population of  
7                   the world is roughly 6.5 billion.  But these  
8                   are different numbers, these are likely than  
9                   how many times more, rather, that we're  
10                  talking how many people.  So there are two  
11                  different statistics.

12                  BY MS. SULLIVAN:

13                  Q       And Jovel Aguilar was eliminated  
14                  altogether?

15                  A       As the contributor of the foreign  
16                  profile from the thighs, external genitalia.

17                  Q       And based on your training and  
18                  experience with the likelihood ratio and  
19                  number like 340 trillion times more likely,  
20                  would you expect to find another person in the  
21                  world population who could contribute to that  
22                  foreign DNA profile?

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1           A       Unfortunately, that statistic  
2           isn't, doesn't really lend you to determining  
3           whether or not another individual has that  
4           profile. You're just looking to determine how  
5           much more likely it is that someone else  
6           contributed that profile, and it's simply 340  
7           trillion times more likely that it originated  
8           from Ms. Arnez and Mr. Aguilar than it is Ms.  
9           Arnez and some other unknown individual.

10           MS. SULLIVAN: Thank you. That's  
11           all the questions I have.

12           THE COURT: Do you wish to cross  
13           examine?

14           MR. KING: Yes, sir.

15           THE COURT: All right.

16           MR. KING: Your Honor, May I  
17           approach the witness?

18           THE COURT: You may indeed.

19           CROSS EXAMINATION

20           BY MR. KING:

21           Q       Mr. Himes, I wanted to show you  
22           two documents.

1           A     Yes, sir.

2                                 (WHEREUPON,     THE  
3                                 DOCUMENTS   REFERRED   TO  
4                                 WERE        MARKED    AS  
5                                 DEFENDANT'S EXHIBIT NO.  
6                                 1A     and   NO.   1B   FOR  
7                                 IDENTIFICATION.)

8           Q     Do you recognize the documents?

9           A     I do.    These are the internal,  
10           within-the-laboratory transfer sheets of the  
11           evidence.

12           Q     So it's a chain-of-custody log--

13           A     It is; yes.

14           Q     --of the victim PERK kit?

15           A     Of item--as submitted to me, item  
16           one, the victim PERK kit and item two, the  
17           buccal swabs from Mr. Miguel Aguilar.

18           Q     For example, it shows on December  
19           5th it was in Catherine Columbo's custody?

20           A     Which item are you referring, sir?

21           Q     To the first one, the victim PERK  
22           kit.   1A.

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1           A     Yes.

2           MR. KING:   Your Honor, I'd move  
3 Defendant's Exhibit 1A and 1B into evidence?

4           THE COURT:   Any objection.

5           MS. SULLIVAN:    Objection to  
6 relevance.

7           MR. KING:    Your Honor, I will  
8 clear that up in two ways. First, the reason  
9 why they're relevant is that indicates the  
10 chain of custody of the evidence, and with  
11 regard to the chain of custody, it shows that  
12 there's a break in chain of custody at one  
13 point in November to December 2006, and hence,  
14 it doesn't show whose custody that it was in  
15 during that time.

16                       We'd indicate that 1A is relevant  
17 in that regard, and I will show it again to  
18 the Commonwealth, if she'd like to see it. I  
19 will withdraw 1B at this time as, based--

20           THE COURT:   All right. Overruled,  
21 and 1A will be admitted.

22           MR. KING:   Thank you, Your Honor.

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1 THE COURT: All right.

2 [(WHEREUPON, THE  
3 DOCUMENT REFERRED TO,  
4 PREVIOUSLY MARKED  
5 DEFENDANT'S EXHIBIT NO.  
6 1A FOR IDENTIFICATION,  
7 WAS RECEIVED IN  
8 EVIDENCE.)

9 BY MR. KING:

10 Q Mr. Himes, I wanted to ask you  
11 about some of the analysis that was done in  
12 this case of the victim PERK kit. And the  
13 chain-of-custody log, it indicated that the  
14 victim PERK kit was in the custody of  
15 Catherine Columbo on the 5th of December 2006?

16 A Yes, sir. That's correct.

17 Q And did she participate in  
18 analysis in this case?

19 A She did; yes.

20 MR. KING: Your Honor, may I  
21 approach the witness?

22 THE COURT: You may.

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1 BY MR. KING:

2 Q Did she conduct a serology  
3 analysis in this case?

4 A She did some of the preliminary  
5 screening for the presence of body fluids;  
6 yes.

7 Q I wanted to show you what's marked  
8 as Defendant's Exhibit 2 and ask if you  
9 recognize that document.

10 (WHEREUPON, THE DOCUMENT  
11 REFERRED TO WAS MARKED  
12 AS DEFENDANT'S EXHIBIT  
13 N O . 2 F O R  
14 IDENTIFICATION.)

15 A I do; yes. This is my physical  
16 evidence recovery kit examination worksheet.  
17 This is where all the notes are taken  
18 regarding the analysis of the physical  
19 evidence recovery kit from a body fluid  
20 identification standpoint.

21 Q Did Catherine Columbo make notes  
22 on that?

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1 A She did; yes.

2 Q And did she make notes on that on  
3 December the 5th?

4 A She also made notes on December  
5 the 5th, December the 6th, and December the  
6 7th.

7 Q Does that show results of serology  
8 analysis that she made?

9 A It does; yes.

10 Q Did she initially indicate that  
11 she didn't find any presence of spermatozoa  
12 when she first looked at the sample?

13 A That's correct. In the smear and  
14 the extract.

15 Q And then you looked at it again?

16 A That's correct.

17 Q And you found that it was  
18 positive?

19 A I did; yes. I found that--one  
20 spermatozoa head in each of the smear and the  
21 extract from the thighs, external genitalia  
22 sample.

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1                   Mr. KING:    Your Honor, I would  
2                   move Defendant's Exhibit 2 into evidence.

3                   THE COURT:  Any objection?

4                   MS. SULLIVAN:  No, Your Honor.

5                   THE COURT:  Two will be admitted.

6                                   (WHEREUPON, THE DOCUMENT  
7                                   REFERRED TO, PREVIOUSLY  
8                                   MARKED        DEFENDANT'S  
9                                   EXHIBIT     NO.     2     FOR  
10                                  IDENTIFICATION,     WAS  
11                                  RECEIVED IN EVIDENCE.)

12                   BY MR. KING:

13                   Q     Mr. Himes, her initial results  
14                   were that she didn't see spermatozoa.

15                   A     That's correct.     The initial  
16                   screening that was done by Ms. Columbo, she  
17                   did not detect anything.  At this time was the  
18                   beginning of her coming on as an examiner, so  
19                   she was in a position where her case work was  
20                   being done under my supervision.

21                                   So I went then behind her, as I  
22                   did--

1 Q My question was that she did not,  
2 when she first examined it, she did not see  
3 spermatozoa?

4 A That's correct, sir.

5 Q Is it fair to say when a DNA  
6 examination is done, that it's done as a team?  
7 There's several analysts working on the  
8 project?

9 A At times; yes.

10 Q In this particular case, how many  
11 team members were there that worked on this  
12 project?

13 A If I may refer to my notes?

14 Q Sure.

15 A For DNA examiners, only Catherine  
16 Columbo was the initial examiner on the  
17 physical evidence recovery kit, on the sheet  
18 you have in front of you. I was the only  
19 other examiner working on this case. There  
20 was some support staff that handled and  
21 processed some samples further.

22 Q Who was the PCR/STR technician?

1 And what does that mean, if you could describe  
2 that?

3 A There's a, what they call--what  
4 they're called in the laboratory is forensic  
5 laboratory specialist, and they're trained on  
6 the robotic extraction, operation of the  
7 robot, the robotic quantitation, just  
8 basically doing the processing of the samples,  
9 once I've determined them suitable for DNA and  
10 I've done the initial processing, and  
11 preparation of the sample itself. They  
12 actually run the machines that will ultimately  
13 begin the DNA analysis take-out process.

14 Q So in this case, yourself, when  
15 you speak about who's running the machines,  
16 you didn't operate the robot yourself, or you  
17 weren't the robot operator?

18 A No. Initially, I load the plate,  
19 essentially, that goes on the robot. I place  
20 the samples on to that robot itself, and then  
21 the lab specialists will then take it from  
22 there, and operate the robot in order to

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1       conduct the analysis portion where the DNA's  
2       being pulled out of cell, the DNA's being  
3       amplified, and then returns to me again in  
4       order to do the analysis of the actual DNA.

5               Q       So there's a technician which aids  
6       in the amplification of the DNA?

7               A       She prepares--in this instance,  
8       she prepared the samples for amplification,  
9       and then ultimately placed them on a gel in  
10       order to determine how much amplified DNA  
11       there was, and then the sample's returned to  
12       me to perform the DNA typing process, where  
13       they're placed on a larger gel in order to  
14       actually determine DNA fragments.

15              Q       But you rely on your other team  
16       members?

17              A       Yes.

18              Q       You rely on them to do their job  
19       correctly?

20              A       Yes.

21              Q       And you rely on their conclusions?

22              A       Yes.

1           Q     I wanted to ask you some questions  
2 about the victim PERK kit.

3                     When you received that, that  
4 signaled to you that someone had been a victim  
5 of a crime?

6           A     The evidence is submitted to the  
7 laboratory and the laboratory accepts evidence  
8 on the basis that there's potentially a crime  
9 committed, it was involved in a criminal act,  
10 so at that time I have the request for lab  
11 exam on what potentially were the statement of  
12 facts, and what evidence is being submitted to  
13 the laboratory at that time.

14          Q     So you understand when you receive  
15 a victim PERK kit, that the results of your  
16 DNA analysis could be used in litigation later  
17 on?

18          A     Yes.

19          Q     And in this particular case, for  
20 instance, before you prepared the DNA sample  
21 for Jovel Aguilar, you had talked to the  
22 prosecution?

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1           A     That's correct.

2           Q     And you'd talked to Detective  
3 Ignacio?

4           A     Yes. At some point, yes.

5           Q     And yet you understood that that--  
6 that there was a criminal investigation that  
7 was ongoing?

8           A     Yes, and part of that criminal  
9 investigation is the evidence which was  
10 submitted to the laboratory for my analysis.  
11 Yes.

12                   MR. KING: The Court's indulgence.  
13                   The Court's indulgence, Your  
14 Honor.

15                   Your Honor, may I approach the  
16 witness?

17                   THE COURT: You may.

18                   BY MR. KING:

19           Q     Mr. Himes, I want to show you a  
20 document marked as Defendant's Exhibit 3. Do  
21 you recognize that document?

22                                   (WHEREUPON, THE DOCUMENT

1 REFERRED TO WAS MARKED  
2 AS DEFENDANT'S EXHIBIT  
3 N O . 3 F O R  
4 IDENTIFICATION.)

5 A Yes. I do. This is what's called  
6 a product gel, a page of my notes, essentially  
7 where the sample's, following amplification,  
8 which is the second step after the DNA's been  
9 pulled out of the cell, amplified, or  
10 essentially a copying process where we make  
11 multiple copies of just the areas of DNA we  
12 want to look at.

13 This small gel in here shows the  
14 amount of amplified product that was  
15 determined after amplification process, and  
16 then prior to taking it forward to DNA typing.

17 Q And it shows initials in the top  
18 left corner. M.E.M. Those are not your  
19 initials?

20 A Those are not.

21 Q Whose initials are those?

22 A Those are Melanie Morris's

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1 initials. She's a, again, a forensic  
2 laboratory specialist who actually ran this  
3 product gel.

4 Q And she got those results when she  
5 ran it?

6 A That's correct. These are the  
7 results that you see photographed in the area  
8 to the right.

9 MR. KING: Thank you. Your Honor,  
10 I would offer Defendant's Exhibit 3 into  
11 evidence.

12 THE COURT: Any objection?

13 MS. SULLIVAN: No, Your Honor.

14 THE COURT: Three will be  
15 admitted.

16 [(WHEREUPON, THE  
17 DOCUMENT REFERRED TO,  
18 PREVIOUSLY MARKED  
19 DEFENDANT'S EXHIBIT NO.  
20 3 FOR IDENTIFICATION,  
21 WAS RECEIVED IN  
22 EVIDENCE.)

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1 MR. KING: Your Honor, I have no  
2 further questions for Mr. Himes.

3 THE COURT: Any redirect?

4 MS. SULLIVAN: Yes, Your Honor.

5 MR. KING: Your Honor, at this  
6 time we would renew our objections to the  
7 certificates of analysis that have been  
8 offered into evidence on the basis that there  
9 are other analysts who worked on the project,  
10 and Mr. Himes relied on them, relied on their  
11 conclusions, and those conclusions we would  
12 argue are testimonial, and that they form a  
13 basis of his opinion, and being that we're not  
14 able to cross examine those analysts because  
15 they're not here today, we'd argue that it  
16 violates the confrontation clause and as  
17 explained in the Crawford case, where it's a  
18 constitutional right and mandate that a  
19 Defendant be able to examine all the witnesses  
20 against him, and we believe that these other  
21 witnesses, these other analysts that are not  
22 here for testimony today, and helped to form

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1 the basis of Mr. Himes' conclusion

2 THE COURT: Do you wish to address  
3 the objection?

4 MS. SULLIVAN: Your Honor, the  
5 certificate of analysis is admissible by  
6 statute. As far as the proffered objection,  
7 I would direct the Court to the case of  
8 Anderson v. Commonwealth, which was referred  
9 to by defense counsel, which states that the  
10 presumption of chain of custody within a  
11 laboratory is not covered by Crawford, it's  
12 not testimonial.

13 Finally, Your Honor, the witness  
14 is here to be cross examined not only about  
15 the handling of the evidence but about all  
16 steps of the analysis and what their  
17 conclusions were, which are contained in the  
18 certificate of analysis. He obviously had  
19 access to information of other lab techs or  
20 the person working under the supervision of  
21 Mr. Himes, who may have handled the evidence  
22 and they did have the opportunity to subpoena

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1 and question them, just like they can Mr.  
2 Himes, if they so choose.

3 And according to the case of  
4 Anderson v. Commonwealth, for those reasons,  
5 the contents of the certificate of analysis  
6 are admissible and are not testimonial or  
7 barred under Crawford.

8 For all those reasons, we would  
9 ask that the objection be overruled and that  
10 the certificates of analysis be received.

11 THE COURT: All right. The  
12 certificate of analysis has already been  
13 admitted. The objection will be overruled.

14 MR. KING: Your Honor, I'd ask to  
15 briefly be heard for the record on the  
16 Anderson case.

17 THE COURT: You may put your  
18 objection on the record at any time we're at  
19 recess. All right.

20 MR. KING: Thank you, Your Honor.

21 THE COURT: I think your  
22 objections are already on the record as a

1 matter of fact.

2 MS. SULLIVAN: Your Honor , if I  
3 could just follow up on redirect with the  
4 witness regarding one of the matters  
5 concerning the chain of custody.

6 THE COURT: All right.

7 REDIRECT EXAMINATION

8 BY MS. SULLIVAN:

9 Q Regarding Defense Exhibit 1A that  
10 was shown to you regarding the chain of  
11 custody, can you explain how the chain of  
12 custody is maintained in the lab.

13 A Yes. Not only is the paper that  
14 you see in front of you maintained along with  
15 the item of evidence, there's also a physical  
16 computer that we log the evidence in but the  
17 official record is this paper record that we  
18 have in front of us.

19 And when an item of evidence is  
20 turned over to an individual, by a hand-to-  
21 hand transfer, it's indicated as H-H in the  
22 "via section" of that document.

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1           Looking across the top of that  
2 document, we see signatures, hand-to-hand, to  
3 another individual on the same date. There's  
4 also individuals followed by an SX. That  
5 indicates that the individual placed that item  
6 in the section storage, which is secured  
7 storage within that section.

8           And then the individual signed to  
9 the right of that SX would be the individual  
10 that retrieved it from that section storage.

11           Q     So when there's what has been  
12 characterized as a break in the chain of  
13 custody, that's when it's in the storage?

14           A     That's correct.

15           Q     So they might be put in one date  
16 but taken out another date?

17           A     Correct.

18           Q     Okay. And was the evidence which  
19 you examined in this case ever lost or  
20 unaccounted for during the time it was in your  
21 laboratory?

22           A     No; it was not.

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1 MS. SULLIVAN: Okay.

2 THE COURT: Do you need this  
3 witness any further?

4 MS. SULLIVAN: No, Your Honor.  
5 Thank you.

6 THE COURT: All right. You are  
7 excused, Mr. Himes. You may stay or go as you  
8 please. Please don't discuss your testimony  
9 with any other witness.

10 THE WITNESS: Yes, Your Honor.

11 MS. SULLIVAN: The Commonwealth  
12 will next call John Hardy.

13 THE COURT: All right. John  
14 Hardy.

15 THE CLERK: John Hardy, please  
16 report to courtroom one.

17 THE COURT: Mr. Hardy, if you'd  
18 stand about there and raise your right hand,  
19 the Clerk will administer the oath.

20 (THE WITNESS WAS SWORN.)

21 THE COURT: Sir, if you'd take the  
22 witness stand here. I ask you to please keep

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1 THE COURT: All right. Thank you.  
2 Reviewing the evidence in a light most  
3 favorable to the Commonwealth, the motion will  
4 be denied.

5 Are you prepared to go forward?

6 MS. THOMAS: Yes, Your Honor. If  
7 I could just have a brief second.

8 THE COURT: All right. We'll take  
9 about a ten minute recess. You can have a lot  
10 of seconds.

11 MS. THOMAS: Thank you.

12 (A SHORT RECESS WAS TAKEN.)

13 (4:11 p.m.)

14 MR. KING: These are objections,  
15 for the record, to the certificates of  
16 analysis that were introduced showing the DNA  
17 results. The additional defense objections,  
18 or to clarify, is that those certificates of  
19 analysis are based on testimonial conclusions  
20 of other analysts, which were relied on by  
21 Nathan Himes, the examiner, in order to make  
22 his conclusions as to the results of the DNA.

1 That violates the Defendant's confrontation  
2 rights, because he wasn't able to confront  
3 those witnesses, or those other analysts who  
4 also performed work in this particular case.

5 The Commonwealth had argued that  
6 the defense could have subpoenaed those  
7 witnesses in order to confront them. The  
8 defense responded that would be shifting the  
9 burden to defense in order to have to subpoena  
10 witnesses, which would be unconstitutional and  
11 would also violate due process, that they had  
12 to do that. The Sixth Amendment to the  
13 Constitution indicates that the defense will  
14 be confronted--or the Defendant will be  
15 confronted by the witnesses against them, and  
16 hence, any shifting of the burden would be  
17 unconstitutional.

18 Defense was put in a position to  
19 have to subpoena witnesses. And lastly, that  
20 the Anderson case cited by the Commonwealth  
21 deals with the chain of custody and not to the  
22 content of the certificates of analysis.