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SUPERIOR COURT OF THE DISTRICT OF COLUMBIA  
CRIMINAL DIVISION

-----X  
UNITED STATES OF AMERICA :  
v. : Criminal Action No.:  
IDA CHASE, : F-07330-99  
Defendant. :  
-----X

Washington, D.C.  
Monday, August 9, 2004

The above-entitled action came on for a Jury Trial before the **HONORABLE BRODERICK**, Associate Judge, and a jury duly empaneled and sworn, in Courtroom Number 112, commencing at approximately 10:29 a.m.

THIS TRANSCRIPT REPRESENTS THE PRODUCT OF AN OFFICIAL REPORTER, ENGAGED BY THE COURT, WHO HAS PERSONALLY CERTIFIED THAT IT REPRESENTS THE RECORDS OF TESTIMONY AND PROCEEDINGS OF THE CASE AS RECORDED

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APPEARANCES:

On behalf of the Government:

DEBORAH SINES, Esquire  
KIM HERD, Esquire  
Assistant United States Attorney  
Washington, D.C.

On behalf of the Defendant:

RENEE RAYMOND, Esquire  
ALLISON FLAUM, Esquire  
Washington, D.C.

\* \* \* \* \*

Margary F. Rogers Telephone (202) 879-4635  
Official Court Reporter

1 THE COURT: Yes.

2 MS. HERD: The Government calls Alan Giusti.

3 \* \* \* \* \*

4 Thereupon,

5 **ALAN GIUSTI,**

6 having been called as a witness for and on behalf of the  
7 Government and having been first duly sworn by the Deputy  
8 Clerk, was examined and testified as follows:

9 **DIRECT EXAMINATION**

10 BY MS. HERD:

11 Q Good afternoon.

12 A Good afternoon.

13 Q Would you state your name and spell it for us.

14 A Yes. My name is Alan Giusti. The first name is  
15 A-L-A-N, last name is G-I-U-S-T-I.

16 Q And, sir, where are you currently employed?

17 A I'm currently employed by the FBI laboratory in  
18 Quantico, Virginia.

19 Q And what are your job duties there?

20 A Well, currently I'm a forensic examiner in the  
21 chemical/biological sciences unit in the FBI laboratory.  
22 Prior to that, I worked in the DNA Analysis Unit 1 of the  
23 FBI laboratory for approximately nine years. And for six  
24 years prior to that, I worked in the research unit at the  
25 FBI laboratory.

1 Q What is DNA Analysis Unit 1?

2 A Well, DNA Analysis Unit 1 is the DNA caseworking  
3 unit that conducts what's called nuclear DNA analysis, and  
4 basically the mission is to analyze body fluids that are  
5 identified on evidence and to conduct a form of DNA testing  
6 on those body fluids.

7 Q And, sir, can you please describe your education  
8 background, training, and experience for your position as a  
9 DNA analyst?

10 A Yes. I have a bachelor of science degree in  
11 molecular biology from Yale University and I have a  
12 master's of science degree in forensic science from the  
13 University of New Haven.

14 I have also been involved in the field of forensic  
15 DNA identification or human DNA identification for  
16 approximately 22 years, 16 with the FBI and six with a  
17 private company, located originally in New York state, but  
18 now located in Connecticut.

19 Q Did you have to undergo any specialized training  
20 for your position as a forensic DNA examiner?

21 A Yes. Upon accepting a position in the caseworking  
22 or the DNA Unit 1 of the FBI laboratory, I underwent a  
23 formal training program, and it involved extensive reading,  
24 working with a qualified DNA examiner in the unit at the  
25 time, going through a series of oral boards or oral

1 examinations, and also taking what are called moot courts  
2 or demonstrations to learn how to properly prepare for  
3 reports and to testify to the findings of those reports.

4 Q And, sir, can you tell us, please, approximately  
5 how many nuclear DNA analysis examinations you have  
6 conducted?

7 A Well, like I said, for about 22 years I have  
8 worked in the field of human DNA identification and nuclear  
9 DNA identification. So as both a research scientist, a  
10 caseworker, various positions, I have conducted several  
11 thousand, at least, DNA examinations.

12 Q And have you authored any publications on nuclear  
13 DNA analysis?

14 A Yes, I have. As a part of my work in the research  
15 field, I was involved in various research activities that  
16 led to scientific publications in scientific journals, peer  
17 review scientific journals. So I've published about 18  
18 articles in various scientific journals.

19 Q Can you tell us what peer review is?

20 A Well, peer review means that when the scientific  
21 paper is submitted to the editors of the journal, they send  
22 it out to a review board, other scientists involved in the  
23 field, and what they do is they go through the paper, look  
24 at the science, look at the content, and make sure that the  
25 work is valid, that the conclusions are accurate.

1           So basically it's refereed or examined for its  
2 accuracy and reliability before it's published in a  
3 scientific journal.

4           Q     And do you belong to any professional societies or  
5 scientific societies?

6           A     No, I don't.

7           Q     Sir, have you testified before as an expert  
8 witness on the field of nuclear DNA analysis?

9           A     Yes, I have.

10          Q     Approximately how many times?

11          A     Approximately, I think, 65 or 70 times in various  
12 federal, state, county courts across the United States.

13          MS. HERD: Your Honor, at this time the Government  
14 proffers Mr. Giusti as an expert in forensic DNA analysis.

15          MS. FLAUM: With respect to nuclear DNA, no  
16 objection, Your Honor.

17          THE COURT: It is on nuclear DNA?

18          MS. HERD: Forensic nuclear DNA analysis.

19          THE COURT: Okay. All right. He will be so  
20 qualified.

21                Ladies and gentlemen, I'm going to allow  
22 Mr. Giusti to testify as an expert and forensic nuclear DNA  
23 analysis, and the instruction I gave you earlier on experts  
24 applies. Give it as much weight as you feel it deserves.

25                BY MS. HERD:

1 Q Sir, could you please just briefly tell us what is  
2 DNA.

3 A Well, DNA is an abbreviation that stands for  
4 deoxyribonucleic acid. And DNA, at least the nuclear form  
5 of the DNA, is essentially the blueprint for every living  
6 organism, from humans to animal to plants. Every living  
7 organism has its own set or copy of DNA, of nuclear DNA.

8 And to think about how that works, nuclear DNA is  
9 found in virtually every cell in your body. Your body is  
10 made of billions of cells, you know, the brain cells,  
11 muscle cells, blood cells. Your whole body is made up of  
12 billions of cells. Each cell has a compartment, if you  
13 will, in the middle of it, called the nucleus, and that  
14 nucleus is the compartment that contains the nuclear DNA.

15 That nuclear DNA represents the blueprint for  
16 every living organism or every person. And every person,  
17 with the exception of identical twins, has a unique set of  
18 nuclear DNA.

19 Q And is there something other than nuclear DNA in  
20 your body?

21 A Yes, there is. There are various -- well, there's  
22 various sort of like what are called organelles. They are  
23 actually small compartments also located in the cell,  
24 called mitochondria, and those mitochondria also have their  
25 own DNA component, if you will, but they are distinct to

1 that -- to those little organelles, that DNA is distinct to  
2 them, and it's separate, physically separate, from the  
3 nuclear DNA.

4 Q Does mitochondrial DNA also have separate  
5 properties than nuclear DNA does?

6 A Yes. It's much -- it's much simpler. There is  
7 much less of it. A mitochondrion has about 16 and a half  
8 thousand units that make up its DNA. The nuclear DNA in  
9 the human being has roughly three billion units that make  
10 it up. So it has -- it has a different function and it  
11 serves a function within the mitochondria different from  
12 that of the nuclear DNA.

13 I believe mitochondrial DNA has various components  
14 that help the mitochondrion function as opposed to the  
15 nuclear DNA, which deals with the function of the entire  
16 cell and contains the blueprint for the entire, you know,  
17 person or organism.

18 Q Sir, can you tell us more about the structure of  
19 nuclear DNA?

20 A Well, actually any DNA. But nuclear DNA is in the  
21 shape of what's called a double helix, and all that means  
22 it's actually like a twisted ladder or a spiral -- two  
23 spiral staircases kind of intertwined around each other.  
24 That's -- as I said earlier, there's about three billion of  
25 those units, of the individual units, that make up that

1 twisted ladder or the double helix of the nuclear DNA. To  
2 fit inside each and every cell, that DNA is compacted  
3 through another process into structures that are called  
4 chromosomes.

5 So you can imagine this long, twisted ladder kind  
6 of compressed down into much smaller -- a smaller space,  
7 and those compressed forms are called chromosomes.

8 Each human being has 23 pairs of chromosomes in  
9 each nucleus of each cell of their body. So those 23  
10 pairs -- or a total of 46 chromosomes. But those 23 pairs  
11 of chromosomes represents the entire package of human DNA,  
12 all three billion units in one form. Those 23 -- and the  
13 significance of the 23 pairs is also that you get -- is  
14 based on the fact that you get half of the DNA -- half of  
15 your DNA from your mother and half from your father at  
16 conception. So when the sperm and the egg come together --  
17 there's 23 chromosomes in the sperm, 23 in the egg. They  
18 come together to make 23 pairs or 46 chromosomes, and in  
19 effect make a new unique individual.

20 Q And can you describe for us how DNA varies from  
21 person to person?

22 A Well, at the very -- at the very basic level, DNA  
23 varies according to its sequence. I mentioned earlier that  
24 there are three billion building blocks that make up human  
25 DNA. Each one of those building blocks -- well, I'm sorry.

1 There are four different building blocks that make up human  
2 DNA and they're abbreviated A, T, G, and C. Well, those  
3 four building blocks are attached one after another in what  
4 we call a sequence of DNA, and that sequence is what varies  
5 from person to person.

6 So you can imagine, it's like having a sentence  
7 that has three billion letters or three billion components  
8 all varying in the sequence of those four bases or those  
9 four units, the A's, T's, the G's and the C's. So all  
10 human variation really comes down to looking at the  
11 difference in the makeup or in the sequence of those  
12 building blocks of DNA.

13 Q And what aspects of DNA that you just described do  
14 forensic scientists use in their work with regard to DNA  
15 profiling?

16 A For forensic purposes, what we look at or what we  
17 look in the laboratory are regions of DNA that we know vary  
18 from person to person. Actually, most human DNA -- even  
19 though I said we're all unique, most of our DNA is actually  
20 almost identical. In fact, over 99 percent is the same  
21 from person to person. And that's because we all have the  
22 same basic configuration, you know, one head, two arms, two  
23 legs, nose in the middle of the face. All of that is  
24 what's called conserved throughout human beings.

25 So that -- the DNA that determines that is the

1 same from person to person. So you say one percent doesn't  
2 sound like a lot. But if you imagine three billion units  
3 that make up DNA, that's still, you know, anywhere from a  
4 million or three million to 30 million difference between  
5 individuals.

6 In the forensic laboratory, what we look at is  
7 to -- what we do is focus in on that one percent or that  
8 really less than one percent of human DNA that varies from  
9 person to person, so we ignore really over 99 percent of it  
10 and focus in on a portion of that one percent that varies  
11 from person to person. And by looking at that, we can  
12 distinguish or tell them -- basically distinguish people  
13 apart or tell people apart.

14 Q And can you briefly describe for the jury the  
15 procedures or the steps that are involved in DNA profiling?

16 A Well, DNA profiling, its very basis is a  
17 comparison test. What we start with are generally what we  
18 call either questioned or unknown samples and known samples  
19 and develop a DNA profile from those and do a comparison.

20 The basic process is to take a body fluid stain,  
21 such as you blood or semen or saliva or tissue, skin or  
22 tissue or something like that, and to extract the DNA from  
23 it. And, again, everything -- when we have a body fluid  
24 stain, like a blood stain or semen stain, those stains have  
25 cells in them and those cells have the nuclear DNA.

1           What we do is chemically treat those stains with  
2 detergents, enzymes, if you think about enzymes in  
3 detergents. What those chemicals do is to break open the  
4 cells, like breaking open a nut and getting at the meat or  
5 the -- the meat of the nut. That's what we do in the  
6 laboratory is to break open those -- break open the cells  
7 that are in those stains and then purify the DNA away from  
8 there, away from the debris.

9           So when you break open these cells, there's DNA in  
10 a liquid solution, and we just purify that DNA away from  
11 the debris and the left over cell material and that leaves  
12 with essentially a purified DNA solution.

13           From there, we then do various other chemical  
14 procedures or chemical and biological procedures to hone in  
15 on or focus in on these variable pieces of human DNA to  
16 develop what we call a DNA profile. And once we have  
17 developed a DNA profile from, say, our evidence samples or  
18 our unknown samples, we can then compare that to a DNA  
19 profile we generate from a known sample.

20           So if you were to take a tube of blood from  
21 somebody's arm or swab the inside of their cheek, that  
22 would represent a known sample collected from that person.  
23 You could develop the DNA profile from that and compare it  
24 to the DNA profile from your evidence to do a comparison.  
25 If you have -- if the person -- if the -- I'm sorry.

1           If the person represented by the known sample did  
2 not leave the DNA on the evidence, we call that an  
3 exclusion. And that person, by looking at the DNA  
4 profiles, you would see a different result from the  
5 evidence and the known sample, and that would tell you that  
6 this person could not have left that body fluid stain.

7           If you look at the DNA profiles from the unknown  
8 sample and the known and they are the same, we would call  
9 that an inclusion or a match, and what that means is that  
10 this person could have left that stain. And we say "could  
11 have" because the DNA matches are not necessarily  
12 absolutely identification.

13           There is always a probability that some other  
14 random person could have the same DNA profile as the  
15 evidence. So we would calculate that probability and say  
16 what is the probability that a random person would have the  
17 same profile. But basically that's what we mean by a match  
18 is that the person could have left that DNA.

19           In some cases, we don't have enough DNA to get a  
20 conclusive result and so we call those results  
21 inconclusive, and in the FBI laboratory, we don't make any  
22 statement about whether the person could have left that  
23 stain or not. The results are just not strong enough to  
24 make any definitive statement.

25           Q     And, sir, how long has the FBI laboratory been

1 effecting nuclear DNA profiling?

2 A We started doing nuclear DNA profiling back in  
3 December of 1988. The technology has changed over the  
4 years, but we first started doing case work in 1988.

5 Q And are there other laboratories in the country  
6 and in the world that do similar DNA profiling techniques  
7 as the FBI laboratory uses?

8 A Yes. I would say virtually every crime laboratory  
9 in the United States does the same type or a similar type  
10 of DNA testing as we do. And, in fact, as a result, that  
11 allows laboratories to share data between each other.  
12 Since they are all doing essentially the same type of DNA  
13 test, you can compare results nationwide. So it's a very  
14 widespread and common procedure.

15 And even laboratories across the world are doing  
16 this type of DNA testing. Many labs in Europe, Australia,  
17 New Zealand, South America. it's a very a global phenomena.

18 Q And, sir, what type of procedures do you employ to  
19 ensure that you're actually producing correct results in  
20 the laboratory?

21 A Our laboratory has a whole -- actually, a whole  
22 manual involved with -- that deals with quality assurance  
23 and quality control procedures. And what that means is  
24 that we have various procedures that are done during the  
25 test, during the DNA testing, to make sure that everything

1 is working properly, that everything is going as it should,  
2 that there's no errors being introduced during the  
3 laboratory performance of the test. And the entire  
4 laboratory itself has multiple review procedures.

5           So, say, the DNA analysis Unit I would institute,  
6 you know, various policies and procedures to make sure that  
7 they do or that we do the testing properly. Other units or  
8 other groups with a laboratory will come through and audit  
9 our procedures to make sure that they are proper procedures  
10 to be doing.

11           And, in fact, even outside laboratories will come  
12 in with DNA experience and look at our procedures to make  
13 sure that we are doing things properly and that our data --  
14 that our procedures are providing reliable results and that  
15 there are sufficient controls. So there's multiple layers  
16 of quality control that's applied during the process,  
17 starting with individual steps during the tests themselves,  
18 all the way up to outside review of our procedures by other  
19 laboratories.

20           Q     And how does the laboratory ensure that an  
21 individual examiner is properly performing the procedures  
22 for DNA profiling?

23           A     As part of the quality assurance procedure,  
24 individual examiners undergo what's called proficiency  
25 testing. And what that means is that, in the case of the

1 DNA Analysis Unit I, the unit will receive or the examiners  
2 will receive a test provided by an external or an outside  
3 laboratory, that the examiners don't know the answer to.  
4 That test has various samples and stains associated with  
5 it. Those stains or samples are taken through our  
6 analytical procedure and a report is generated, results are  
7 generated, and those results are transmitted back to the  
8 testing laboratory, to the outside laboratory.

9 And then they look at our work and our results and  
10 tell us if we have done the test properly, if we have  
11 gotten the proper results based on what they know about the  
12 samples they sent us.

13 So each examiner, each DNA examiner, undergoes at  
14 least two tests a year to make sure that he or she is  
15 performing the test properly and getting accurate results  
16 based on these outside tests or outside proficiency tests.

17 Q And, sir, to your knowledge, has anybody in the  
18 DNA Unit I, nuclear DNA unit of the FBI laboratory, ever  
19 failed a proficiency test?

20 A During my tenure there, not to my knowledge, no.

21 Q Now, sir, did you receive items of evidence to  
22 analyze in the case that's presently before the court?

23 THE COURT: Before you do all that, since I see a  
24 pile there, I think we'll take our afternoon break. I can  
25 hear the creaking from the chairs over in jury section. I

1 think it's time. And then we will get into all of the  
2 exhibits. All right. We'll take a break for about ten  
3 minutes.

4 Please don't talk about your testimony.

5 (The proceedings were recessed at 3:30 p.m. and  
6 reconvened at 3:50 p.m.)

7 (Jury Present.)

8 BY MS. HERD:

9 Q Thank you, sir. Did you have occasion to examine  
10 the evidence in this case for the purposes of DNA analysis.

11 A Yes, I did.

12 MS. HERD: May I approach the witness, Your Honor?

13 THE COURT: Yes.

14 BY MS. HERD:

15 Q Sir, I would like to show you what has been marked  
16 for identification as Government Exhibit 156. Can you take  
17 a look at that and tell me if you recognize it?

18 A Yes, I can. These are the envelopes that were  
19 identified to me as containing fingernail clippings taken  
20 from Julius Adelman, one envelope containing the right hand  
21 clippings, the other containing the left hand clippings.

22 Q And how do you know that that's what those  
23 envelopes are?

24 A Well, based on the information written on the  
25 envelopes themselves, plus they also have various

1 identifying information that was put on by our laboratory,  
2 such as a Q number, which mean questioned or unknown  
3 specimen number, the unique lab number that we assign to  
4 each case that comes in. It also has my symbols, which is  
5 a two-letter designation that identifies me as the FBI  
6 examiner on the case, along with personal initials from me  
7 and the technicians who worked with me.

8 MS. HERD: Your Honor, at this time, the  
9 Government moves 156 into evidence.

10 MS. FLAUM: No objection.

11 THE COURT: It will be admitted.

12 (Government's Exhibit Number 156 was admitted  
13 into evidence.)

14 BY MS. HERD:

15 Q Now, sir, when did you receive the items that were  
16 described in Exhibit 156? Approximately when did you  
17 receive those?

18 A According to my notes, I receive them in December  
19 of 1996.

20 Q And whom did you receive them from?

21 A From the examination team and the trace evidence  
22 unit.

23 Q Would that be at the FBI laboratory?

24 A Yes.

25 Q Sir, I would also like to show you what has been

1 marked for identification as Government Exhibit 11 and 12.  
2 I'm showing you first Government Exhibit 11. Can you  
3 please take a look at that and tell me if you recognize  
4 that?

5 A Yes. This is another item that was delivered to  
6 my examination team, again in December of '96. It's  
7 identified as our specimen Q6. It's a plastic bag that was  
8 identified to me as coming from the left hand of Julius  
9 Adelman.

10 Q And do your initials appear anywhere on that.

11 A Yes, they do, right here.

12 Q And is there a laboratory number on that?

13 A Yes. This number along here is our laboratory  
14 number.

15 MS. HERD: The Government moves Exhibit 11 into  
16 evidence, Your Honor.

17 MS. FLAUM: No objection.

18 THE COURT: It will be admitted.

19 (Government's Exhibit Number 11 was admitted  
20 into evidence.)

21 BY MS. HERD:

22 Q Sir, also showing what has been marked for  
23 identification as Government Exhibit 12. Can you please  
24 take a look at that and tell me if you recognize it. And  
25 I'm going to put back what I took out inadvertently.

1           A     Yes. This item also was also delivered to my  
2 team. It's identified as a plastic bag, taken from the  
3 right hand of Julius Adelman. And, again, it has our FBI  
4 laboratory number, my symbols and my initials, and the  
5 initials of the technicians that worked with me.

6           MS. HERD: Your Honor, at this time, the  
7 Government moves Number 12 into evidence.

8           MS. FLAUM: No objection.

9           THE COURT: It will be admitted.

10                   (Government's Exhibit Number 12 was admitted  
11 into evidence.)

12           BY MS. HERD:

13           Q     And, again, sir, when did you receive Government  
14 Exhibit 12?

15           A     In approximately December of 1996.

16           Q     Sir, I would also like to show you what has been  
17 marked as Government Exhibit 179 --

18           MS. HERD: And let me show counsel.

19           BY MS. HERD:

20           Q     -- and 179A. Sir, can you take a look at 179A and  
21 tell me if you recognize it?

22           A     Yes. This is an envelope that was identified to  
23 me as containing a blood patch prepared from Julius  
24 Adelman. Again, it has our laboratory number, my initials,  
25 and the initials of the technicians who worked with me.

1 MS. HERD: Your Honor, at this time, the  
2 Government moves 179A into evidence.

3 MS. FLAUM: No objection. --

4 THE COURT: It will be admitted.

5 (Government's Exhibit Number 179A was admitted  
6 into evidence.)

7 BY MS. HERD:

8 Q Sir, would you like gloves when you're handling  
9 exhibits?

10 A Yes. If I am going to be handling the actual  
11 items in this case. Thank you.

12 Q Sir, at this time I'm showing what has been --  
13 what is in evidence as Government Number 36 -- or, excuse  
14 me, has been marked as Government Number 36. Can you  
15 please take a look at that and tell me if you recognize it?

16 A Yes. This is an item identified in our laboratory  
17 as Q13. Again, it has the same laboratory number as was on  
18 the other items and it has my initials and the initials of  
19 my technicians that work with me.

20 Q And what is it, sir?

21 A It's a sort of beige, off-white towel.

22 MS. HERD: Your Honor, at this time, the  
23 Government moves 36 into evidence.

24 MS. FLAUM: Court's brief indulgence.

25 THE COURT: I couldn't hear you.

1 MS. FLAUM: Court's brief indulgence.

2 Just with respect to chain of custody, we would  
3 object to the admission of this exhibit at this time.

4 BY MS. HERD:

5 Q Sir, I am showing you what's been marked as  
6 Government Exhibit 37 for identification. Can you please  
7 take a look at that and tell me if you recognize it.

8 A Yes. Again, this was specimen labeled in our  
9 laboratory Q14. It appears to be like a white towel.  
10 Again, it has my initials, our laboratory number, and my  
11 technician's initials on it as well.

12 THE COURT: At this time, the Government moves  
13 Exhibit into evidence.

14 MS. FLAUM: We would have the same objection with  
15 respect to chain of custody.

16 THE COURT: The same objection.

17 BY MS. HERD:

18 Q Sir, I also would like to show you Government  
19 Exhibit 28. Can you please take a look at that and tell me  
20 if you recognize it?

21 A Yes. This is specimen Q12 from our laboratory  
22 labeling system, submitted from that lab number. And,  
23 again, it has my technician's initials. I don't see my  
24 initials on the bag, but if I could look at the items.

25 Q Yes, please do.

1           A     Okay. My initials are on the actual item itself,  
2 along with those of my technicians, the technicians that  
3 work with me, and the designation Q12 and the laboratory  
4 number.

5           Q     And what is that item, sir?

6           A     It appears to be a pair of brown or tan pants.

7           MS. HERD: I will note that Exhibit 28 is already  
8 in evidence.

9           THE COURT: Okay.

10          BY MS. HERD:

11          Q     Sir, I would also like to show you what has been  
12 admitted in evidence as Government 29. Can you please take  
13 a look at that and tell me if you recognize it?

14          A     Okay. This was an item designated as Q12B, as in  
15 boy. Same laboratory number. My initials and the initials  
16 of the technicians that work with me are on this item.

17          Q     Thank you. I would also like to show you  
18 Government Exhibit 31, which is already in evidence. Can  
19 you take a look at that and tell me if you recognize that?

20          A     Yes. This is specimen Q12C, as in Charlie.  
21 Again, it has the same laboratory number that we -- that  
22 was assigned to do this evidence and my initials and my  
23 technician's initials.

24          THE COURT: I'm sorry. What evidence number was  
25 that?

1 MS. HERD: That was item 31, Your Honor.

2 THE COURT: Thank you.

3 BY MS. HERD:

4 Q Sir, showing you what is in evidence as Government  
5 Exhibit 30. Can you please take a look at that and tell me  
6 if you recognize it?

7 A Yes. This is an item labeled Q12D, as in David,  
8 with our laboratory number, and my initials, and my  
9 technician's initials.

10 Q And what is it?

11 A It looks like a leather strap with a hook attached  
12 to it, or a metal hook.

13 Q Sir, I would also like to show you Government  
14 Exhibit 32 for identification. Can you please take a look  
15 at that and tell me if you recognize it?

16 A Yes. This is a pair of white underwear. It was  
17 labeled Q12A in our laboratory. And, again, it has our  
18 laboratory number, my initials and my technician's initials  
19 on it.

20 MS. HERD: Your Honor, at this time, the  
21 Government moves Exhibit 32 into evidence.

22 MS. FLAUM: No objection.

23 THE COURT: Admitted.

24 (Government's Exhibit Number 32 was admitted  
25 into evidence.)

1 BY MS. HERD:

2 Q Sir, I would also like to show you Government  
3 Exhibit 24, which is in evidence. Can you please take a  
4 look at that and tell me if you recognize it?

5 A Yes. This is specimen Q11. Same laboratory  
6 number, my initials and my technician's initials. It  
7 appears to be a -- it's a bluish-green shirt.

8 Q Thank you. Sir, I would also like to show you  
9 Government Exhibit 25, also already in evidence. Can you  
10 please take a look at this and tell me if you recognize it?

11 A Yes. This is a blue piece of material, which was  
12 labeled Q11A. My initials, my technician's initials, and  
13 our laboratory number are on it.

14 Q Thank you. Sir, showing Government Exhibit 17,  
15 again already in evidence. Can you please take a look at  
16 that and tell me if you recognize it.

17 A Yes. This is a white handkerchief, labeled Q10A,  
18 as in apple. Our laboratory number, my initials and my  
19 technician's initials are present.

20 Q Thank you. Sir, showing what has been marked as  
21 Government Exhibit 39. Can you please talk a look at that  
22 and tell me if you recognize that. And it's just for  
23 identification.

24 A It's a brown package that's labeled Q15, with our  
25 lab number, my technician's initials and my initials. The

1 label indicates it's a rug sample.

2 MS. HERD: Your Honor, at this time, the  
3 Government moves 39 into evidence. -

4 MS. FLAUM: We just object with respect to chain  
5 of custody at this point with respect to that item.

6 BY MS. HERD:

7 Q Sir, also showing you what's been marked as  
8 Government Exhibit 14, which is in evidence. Can you  
9 please take a look at that and tell me if you recognize it.

10 A Yes. This is our specimen Q9, our lab number, my  
11 initials, and my technician's initials. It appears to be  
12 just a piece of blue fabric or blue material.

13 Q Also, sir, I'm showing Government Exhibit 68. Can  
14 you please take a look at that and tell me if you recognize  
15 it?

16 A I don't see our laboratory number on it.

17 Q Do your initials appear anywhere on there?

18 A I'm not seeing them, no.

19 Q Thank you. Also, sir, showing you what has been  
20 marked as Government Exhibit 81, 82, and 83. With respect  
21 to 81, can you please take a look at that and tell me if  
22 you recognize that?

23 A Yes. Exhibit 81 is a manila envelope, what we  
24 call a coin envelope. It's labeled as Q10-1, which  
25 indicates it was a cutting taken in our laboratory from our

1 specimen Q10.

2 Q Now, sir, with respect to --

3 MS. HERD: The Government moves 81 into evidence,  
4 Your Honor.

5 MS. FLAUM: No objection.

6 THE COURT: 81 will be admitted.

7 MS. HERD: Thank you, Your Honor.

8 (Government's Exhibit Number 81 was admitted  
9 into evidence.)

10 BY MS. HERD:

11 Q Sir, with respect to 82, can you please take a  
12 look at that and tell me if you recognize it?

13 A Yes. 82 is our specimen Q11-1B. Again, it's a  
14 coin envelope that contains a cutting from that -- from  
15 specimen Q11.

16 Q Do your initials appear on that?

17 A Yes, they do.

18 MS. HERD: The Government moves Exhibit 82 into  
19 evidence, Your Honor.

20 MS. FLAUM: No objection.

21 THE COURT: It will be admitted.

22 (Government's Exhibit Number 82 was admitted  
23 into evidence.)

24 BY MS. HERD:

25 Q I am also showing you what's been marked as

1 Government Exhibit 83. Could you please take a look at  
2 that and tell me if you recognize it?

3 A Yes. 83 is labeled Q11-2B, which indicates that  
4 it's a stain cut from specimen Q11 and then placed into  
5 this envelope. So it's another stain that was cut from our  
6 specimen number Q11, and it has my initials on it.

7 Q I would ask you, sir, to please put those back in  
8 the envelope and we'll take it back from you. Thank you.

9 THE COURT: Are you moving 83?

10 MS. HERD: Yes, Your Honor. The Government moves  
11 83 into evidence.

12 MS. FLAUM: No objection.

13 THE COURT: It will be admitted.

14 (Government's Exhibit Number 83 was admitted  
15 into evidence.)

16 BY MS. HERD:

17 Q Now, sir, with respect to the items that I just  
18 showed you, did you conduct nuclear DNA analysis -- strike  
19 that.

20 Did you examine any of those items that I showed  
21 you for the presence of blood?

22 A Yes. In fact, all of those items were examined  
23 for the presence of blood, with the exception of the known  
24 blood patch. That was a known sample.

25 Q And how did you go about doing that?

1           A       Well, the testing procedures for blood are pretty  
2 much three-fold. The first thing we do is to test the  
3 stain. Well, we identify stains visually, based on their  
4 appearances. Could they be blood? Are they a reddish  
5 brown -- reddish-brown stains? We then do a chemical test  
6 on those stains, which will tell us whether or not blood is  
7 possibly present, and the reason -- we call that a  
8 presumptive test, and that just means that it is a very  
9 sensitive test, but it is not the -- it does not absolutely  
10 identify blood. Once we've got a possible blood stain  
11 identified, we then do what we call a confirmatory test,  
12 and that test will confirm or will tell you -- tell us  
13 absolutely that that is blood. And that test looks for a  
14 certain chemical that's found only in blood.

15                   After that, we can do a third test, which is to  
16 determine is it human blood. And that test involves  
17 looking for specific proteins that are found in human blood  
18 and only in human blood, to identify the stain as --  
19 ultimately, if the result is positive, as human blood.

20                   So it's really a -- it can be a three-step process  
21 to test for the possible presence of blood, to confirm if  
22 blood is present, and then confirm if human blood is  
23 present.

24           Q       And once you confirm that blood is present, what  
25 is the next step?

1           A       Well, once you have determined that blood is  
2 present, if it's suitable for DNA analysis, we can conduct  
3 DNA testing on that stain, on that blood stain.

4           MS. HERD: Your Honor, if I may approach with the  
5 witness with one last exhibit that I neglected to show him.

6           THE COURT: Yes.

7           BY MS. HERD:

8           Q       Sir, showing you what's in evidence as Government  
9 Exhibit 16. Can you please take a look at this and tell me  
10 if you recognize it?

11          A       Yes. According to the label, this item is our  
12 specimen Q10, with our lab number, my initials and my  
13 technician's initials on it. I believe Q10 was a  
14 comforter.

15          Q       Does that appear to be what is before you?

16          A       Yes. I would say, based on the size and  
17 consistency of the package, yes.

18          Q       That was yes to what question?

19          A       It looks like a comforter.

20          Q       Sir, did you conduct DNA testing on any of the  
21 items of evidence that you were just shown this afternoon?

22          A       Yes, on several items, specifically specimens, I  
23 believe it was, Q4 and Q5, the fingernail clippings; Q6 and  
24 Q7, the two plastic bags taken from the hands; and the  
25 known blood sample, K1, from Julius Adelman.

1 Q And what type of DNA test did you conduct, sir?

2 A Well, at that time, late 1996, early 1997, we  
3 conducted a test that was called the polymarker DQA1 series  
4 of tests. And those look at specific regions in the  
5 nuclear DNA, actually a total of six, that we know vary  
6 from person to person. And so those were six individual  
7 DNA regions or individual DNA characteristics, if you will,  
8 that we looked at that time. And, again, we call that the  
9 polymarker DQA1 test.

10 Q And, sir, what were the results of your test?

11 A Based on the results from -- actually, let me back  
12 up a minute. I'm sorry. The five fingernails were  
13 individually tested from both Q4 and Q5, so there are five  
14 fingernails in each of those -- in each one of those  
15 envelopes. From all ten fingernail clippings and as well  
16 as the Q7 bag, which is the bag from the right hands, when  
17 the DNA profile was developed and compared to the known  
18 sample from Julius Adelman, they were same. So to me that  
19 indicated that the source of the DNA from the fingernail  
20 clippings and the right hand plastic bag could have been  
21 Julius Adelman.

22 Q And what about with respect to the other plastic  
23 bag?

24 A The Q6 bag from the left hand did give human DNA,  
25 but the results were inconclusive. So, in other words,

1 there was simply not enough conclusive information from the  
2 test results to do a comparison.

3 Q Now, sir, were there any items of evidence that  
4 you looked at today that you identified blood on but did  
5 not submit for DNA testing?

6 A Yes. Actually, there were a number of items where  
7 both blood was identified or in fact even human blood that  
8 were not subjected to DNA testing. Those items were, I  
9 believe, a number of items, I think from Q9 through --

10 Q Sir, would it help you to look at your notes to  
11 refresh your recollection?

12 A Yes, if I may. Thank you.

13 Specimens Q9 through Q -- just a moment, please.  
14 Q9, which was a piece of cloth, I believe, as identified as  
15 being a piece of cloth; Q10, the comforter; Q11, the shirt;  
16 Q12, the pants; Q12B, which was the belt; and Q14, towel.  
17 All of those indicated blood or the possible presence of  
18 blood, but DNA was not conducted on those because, based on  
19 the information I had, those items were collected from the  
20 victim. With homicide cases, we generally don't test items  
21 like clothing or things taken from the victim that may have  
22 blood on them, because generally it's the victim's blood on  
23 those items. So there is no probative DNA information to  
24 obtain from those.

25 Q Now, sir, with respect to -- let me back you up a

1 little bit with respect to each of those items. If you  
2 conduct a test and you initially believe that there is  
3 blood on the item, is there a subsequent test that you use  
4 and you may find that in fact it is not human blood, as  
5 suspected?

6 A There is a -- if there is sufficient stain present  
7 in a bloodstain, there is another test that we can do in  
8 the laboratory that will determine whether or not it's  
9 human blood. And, I mean, the sole purpose of the test is  
10 to check the presence of human specific proteins in that  
11 blood stain. So if we identify a red stain as blood, to  
12 determine if it's human blood, we do -- if there is enough  
13 sample, we will do the additional test and we'll determine  
14 if it's human blood or -- potentially, it could be, you  
15 know, non-human or animal blood.

16 Q And if you did not find bloods in that subsequent  
17 test, would you submit it for DNA testing?

18 A In some cases, we'll do DNA testing on samples  
19 where we don't confirm the presence of blood, and that  
20 usually occurs -- well, it pretty much always occurs when  
21 we have a very small amount of stain.

22 The first test, the first blood test I mentioned,  
23 the presumptive test, is very sensitive and really consumes  
24 a very, very small amount of the stain. If that stain is  
25 so small that any additional blood testing would consume

1 it, we'll actually just take that stain and do DNA testing  
2 on it, because we get more information, more discriminating  
3 information, from a DNA profile than we do from just  
4 determining if the stain is blood or not. So in some  
5 cases, we may just do the first presumptive test for blood  
6 and the result would be that, you know, blood is possibly  
7 present. And then we may do DNA testing on it to determine  
8 is a DNA profile -- is it possible to get a DNA profile  
9 from that stain.

10 Since the DNA tests are specific for human, we may  
11 not be able to say conclusively it's blood. However, we do  
12 know that we have -- we do have human DNA from that stain.

13 Q Now, sir, if I could ask you about what is  
14 Government Exhibit Number 14, which you have described as  
15 Q9. Can you please tell us whether or not any DNA testing  
16 was conducted on this of evidence?

17 A No, it was not.

18 Q And why was that?

19 A Again, the information I had was that Q9 was  
20 collected from the deceased. So my opinion was that that  
21 was his blood on that item, so no DNA testing was done.

22 Q Now, sir, with respect to Government Exhibit  
23 Number 24, was any DNA testing on this -- conducted on this  
24 item of evidence, which you have labeled as Q11?

25 A No, it was not.

1 Q Now, sir, I would also like to ask you about  
2 Government Exhibit 36, which you have designated as Q13.  
3 Can you tell me whether any DNA testing was conducted on  
4 that item?

5 A Not based on the bloodstains that were present,  
6 no.

7 Q And why is that?

8 A Again, that item was identified as coming from the  
9 deceased's car. So, again, the information was that it  
10 was -- any blood present was most likely from the deceased,  
11 so therefore no DNA testing. In my judgment, there was no  
12 need to do DNA testing.

13 Q Sir, if I could ask you about Government  
14 Exhibit 37, which you have identified as Q14. Can you  
15 please tell me whether or not any DNA testing was conducted  
16 on that item?

17 A No DNA testing was conducted, no.

18 Q Was any test for the presence of blood conducted  
19 on that item?

20 A Yes. The initial screening test for blood was  
21 done, and a positive result for the possible presence of  
22 blood was obtained.

23 Q Was there a second test done on that item?

24 A If I could look at my notes again, please.

25 Q If it would refresh your recollection, please do

1 so.

2 THE COURT: Go ahead.

3 THE WITNESS: No, no additional testing was done.  
4 The notes indicate that there was very little staining  
5 obvious on that item. So while there may have been a very  
6 small amount of blood present, enough to give a result for  
7 the presumptive test, there wasn't enough material to do  
8 any further testing. And since I did not believe DNA  
9 testing would be probative, it was not attempted.

10 BY MS. HERD:

11 Q Now, sir, once you were done with all of the items  
12 of evidence that you identified here today, what did you do  
13 with them?

14 A Once all the examinations were conducted,  
15 including the DNA testing, the items were returned by --  
16 actually, I believe by me or someone on my examination team  
17 back to the trace evidence examiner in the FBI laboratory.  
18 His role was as the -- what we call the coordinating  
19 examiner. So he would be the person who would originally  
20 receive the evidence, then distribute it to other  
21 examiners, like myself, when -- which that would be an  
22 auxiliary examiner at the time. When I'm completed with my  
23 test, I return the evidence to him for either other  
24 transfers or return back to the contributor.

25 Q Now, sir, did there come a time where you were

1 requested to conduct additional nuclear DNA testing on  
2 evidence in this case?

3 A Yes. I received additional evidence in, I  
4 believe, September of 1999.

5 Q Sir, showing you what is in evidence as Government  
6 Exhibit 177B, can you please take a look at that and tell  
7 me if you recognize it?

8 A Yes. This is a plastic what we call pill box that  
9 is labeled with the original -- the lab number from the  
10 first submission in 1996, and it's also -- it's labeled as  
11 Q13.1, and it has my initials and the initials of my  
12 technician on it.

13 In the plastic pill box is a small plastic test  
14 tube that has my technician's initials on it and the Q13.1  
15 designation, and it has information about the material that  
16 was in that tube. This is a post-extraction purification  
17 hair.

18 Q And when did you receive that, what was in that  
19 tube?

20 A I believe we received it in September of 1999.

21 Q And whom did you receive it from?

22 A Again, from the examiner in the trace evidence  
23 unit in the FBI laboratory.

24 Q And what was your purpose in having that forwarded  
25 to you by the trace evidence unit?

1           A       The information I was given was that there was  
2 tissue at the bottom of the hair, and that tissue  
3 represents a source of nuclear DNA. Based on that and the  
4 submission of another known sample, I was asked to do a  
5 comparison, to attempt to do a DNA comparison between the  
6 DNA from this hair and another known sample.

7           Q       Sir, I would like to show you what's been marked  
8 as Government Exhibit 177 and 177A. Can you please take a  
9 look at these and tell me if you recognize them?

10          A       Yes. 177A is a manila coin envelope. It contains  
11 our specimen number K19, with the laboratory number from  
12 the 1999 submission. It's identified as a known sample  
13 from Charles Chase.

14               MS. HERD: Your Honor, at this time, the  
15 Government moves 177A into evidence.

16               MS. FLAUM: No objection.

17               THE COURT: Admitted.

18                       (Government's Exhibit Number 177A was admitted  
19 into evidence.)

20               BY MS. HERD:

21          Q       Could you please take a look at 177 and tell me if  
22 you recognize that.

23          A       Yes. Exhibit 177 is the plastic bag that the coin  
24 envelope was placed into. Again, it has our FBI laboratory  
25 number on it, the designation K19. It also indicates that

1 specimen Q13.1 was in the same bag, and it has my initials  
2 and my technician's initials on it.

3 Q Thank you, sir.

4 MS. HERD: The Government moves 177 into evidence.

5 MS. FLAUM: No objection.

6 THE COURT: It will be admitted.

7 (Government's Exhibit Number 177 was admitted  
8 into evidence.)

9 BY MS. HERD:

10 Q Now, sir, did you conduct nuclear DNA analysis  
11 with respect to the items mentioned in 177B and 177A?

12 A Yes. My technician and I conducted the  
13 examinations.

14 Q And can you tell us what you did, please?

15 A My technician extracted the DNA from those  
16 samples, from the Q13.1 hair and the K19 known sample from  
17 Charles Chase. At that time, in 1999, we had actually  
18 upgraded our DNA testing procedures. So instead of using  
19 the old polymarker DQA1 test, which looked at six DNA  
20 characteristics, we were now using a process called STR  
21 typing, and that actually looked at 13 different DNA  
22 characteristics, so different from the old test. So we  
23 were now looking at more DNA readings or more DNA  
24 characteristics, so it was able to give us even more  
25 information about the possible source of the DNA. We were

1 in effect basically generating a more powerful or more  
2 informative DNA profile.

3 Q And what is that type of testing called?

4 A We call it STR typing. STR is an abbreviation for  
5 the nature of the DNA readings that we look at. It stands  
6 for short tandem repeat, and it simply means a variable  
7 region of DNA that's found in all human beings but also  
8 that varies from person to person.

9 Q And is there a standard number of regions that you  
10 look at in STR testing?

11 A Well, we try to get as much information as  
12 possible. We try to get results from all 13 regions,  
13 because the more regions or more characteristics you look  
14 at, the better -- the better a picture you get of a  
15 person's DNA. So we try to get 13, all 13 regions.  
16 Sometimes the DNA may be limited in quantity, so we have to  
17 settle for maybe nine or even fewer, but generally we try  
18 too get all 13 to give us the best DNA picture we can get.

19 Q What are those 13 regions called?

20 A We call them the core loci. And what that simply  
21 means is loci is another word for region. It's another  
22 word for DNA region. We call them the core loci because  
23 those 13 are the core or basic 13 regions that the entire  
24 country or the entire forensic DNA testing community in the  
25 United States tries to get. So we can all -- so that

1 laboratories can compare information nationwide, we all try  
2 to get the same 13 regions. You can get more if you have  
3 enough DNA. But so that we can do effective comparisons  
4 nationwide, we consider those 13 as the core or, if you  
5 will, the minimum that each lab has to try to get to do  
6 nationwide comparisons.

7 Q Sir, showing you what has been marked for  
8 identification as Government Exhibit Number 227. Can you  
9 please take a look at this and tell me if you recognize it?

10 A Yes. It appears to be a copy of the table that I  
11 provided in one of my reports.

12 Q And which report are you referring to?

13 A Again, if I could --

14 Q If I can rephrase and ask, which report -- what  
15 was the subject of the report that you were referring to?

16 A That report dealt with the comparison between the  
17 Q13.1 hair or the DNA from that hair and the K19 known  
18 specimen from Charles Chase.

19 MS. HERD: Your Honor, at this time, the  
20 Government moves 227 into evidence.

21 MS. FLAUM: No objection.

22 THE COURT: It will be admitted.

23 (Government's Exhibit Number 227 was admitted  
24 into evidence.)

25 BY MS. HERD:

1 Q Now, sir, if I could ask you, please, to show the  
2 members of the jury using Government Exhibit 227 what the  
3 results of your conclusions were with respect to the  
4 comparison between Q13.1 hair for nuclear DNA testing and  
5 the K19 blood sample of Charles Chase.

6 A May I?

7 Q Yes.

8 A This chart represents our or the DNA typing that  
9 was obtained from those two specimens. So to break it down  
10 for you, the Q13.1 is the specimen of the DNA from the  
11 hair. The K19 is the known sample from Charles Chase.  
12 There are actually nine columns here and then repeated down  
13 here there's another six columns. Well, these represent  
14 actually the 13 different DNA regions, and there is  
15 actually two that overlap between these two sets. These  
16 two sets, the first one is called profiler plus. The  
17 second one is called cofiler. They look at all 13 regions.  
18 But the first and last region in both kits is the same. So  
19 there is a region that's D3S135A and then D7S820. See,  
20 that's repeated in the cofiler kit. This is actually one  
21 of the quality control steps that we incorporate in our  
22 process. If something happened, if samples get mixed up,  
23 these regions would probably look different. So that would  
24 alert us that something might have happened between the  
25 test for profiler plus, these nine regions, and the test

1 for these six in cofiler. So that would tell us if there  
2 was sample mixup or switching or something like that.

3 So the fact that these are the same and these  
4 numbers separated by a comma represent the DNA profile for  
5 that particular region. So in specimen Q13.1, at the  
6 D3S1358 region, the result is given at this numerical  
7 notation of 16, 16. And going back to what I said about  
8 inheriting half your DNA from your mother and half from  
9 your father, what this means is that this person or the  
10 source of this hair inherited a 16 type from the mother and  
11 a 16 type from the father, so they actually got the same  
12 type of DNA at that region from both parents.

13 If you look at the next one, the BWA, this person  
14 is a 16, 17, and that simply means that one of those, 16  
15 could have come from the mother or father, we really can't  
16 tell, and the 17 would have come from other parent.

17 So looking at this, this is just the DNA profile  
18 for these nine DNA regions. And then using the cofiler  
19 set, we have another six, but two are duplicate. So  
20 there's four new ones. So this represents the 13 different  
21 DNA regions, the profile results for those 13 regions.

22 And what we can tell from looking at it is, if you  
23 look at the DNA profile from Q13.1 and compare it to the  
24 DNA profile from K19, the known sample from Charles Chase,  
25 you can see right off the bat that they are different, that

1 this hair at the D3 -- we're just calling it for short D3  
2 region, is a 16, 16, whereas in the known sample from  
3 Charles Chase, it's a 15, 16. So right there I know that  
4 this individual is not the source of this hair.

5           If I go through the whole profile, you can see  
6 many examples where they are different. Here the hair's  
7 DNA type is a 16, 17. The known sample is a 14, 20.  
8 Again, different numbers, different DNA types. This person  
9 could not be the source of the DNA from this hair.

10           And, like I said this process, you have to go  
11 through whole set of profile, which, again, you can see  
12 very quickly that the DNA profiles are very different.

13           Q     Sir, is one different enough to be exclusion?

14           A     Yes. A difference at one region -- of one of  
15 these DNA regions would be enough to exclude.

16           Q     And, sir, can you tell anything about the sex of  
17 the contributor of the Q13.1 DNA?

18           A     Yes. One of the other DNA regions we look at is  
19 actually the -- we should make that as the 14th region, is  
20 a region of DNA that allows us to determine the sex of the  
21 DNA. The reason we can do that is that the sex of an  
22 individual is determined by two chromosomes, the X  
23 chromosome and the Y chromosome. Women have two X  
24 chromosomes. Men have an X and a Y. This DNA region that  
25 we look at is essentially the same between the X chromosome

1 and the Y chromosome, but in the Y chromosome that DNA  
2 region is just a little bit longer. So when we look at the  
3 results, we can see if it's a -- if it's female DNA, we'll  
4 see a single result, and that's because women have two X  
5 chromosomes, so you've got the same result from both, so it  
6 gives you one single result, the equivalent of having a  
7 single number, like a 16, 16. If you look at a male, you  
8 are going to see two results, one for the X chromosome that  
9 we have and the other for the Y chromosome. So by looking  
10 at that result, we can determine the sex of the DNA.

11 Q And were you able to determine the sex of the  
12 Q13.1?

13 A Yes. It was a male DNA.

14 Q Sir, were you asked to conduct a DNA analysis  
15 comparison of the known DNA profile of a person by the name  
16 of William Kevin Buckman to the Q13.1 hair?

17 A Yes, I was. I believe that in November of 2000.

18 Q And what were the results of your comparison, sir?

19 A The DNA profile for Mr. Buckman did not match the  
20 DNA profile that was obtained from that Q13.1 hair.

21 Q Sir, if I can show you, please, what has been marked  
22 for identification as Government Exhibit 228. Can you  
23 please take a look at this and tell me if you recognize it?

24 A Yes. That is a copy of the table that I included  
25 in my report, comparing the DNA profiles between the hair

1 and Mr. Buckman.

2 Q And is this the same type of format that was in  
3 the Government's previous exhibit, 227? --

4 A Yes. Again, it's a table that has the profiler  
5 plus set of DNA markers or DNA regions and the cofiler set  
6 of DNA regions, and it simply has the DNA profiles from the  
7 hair and Mr. Buckman.

8 MS. HERD: The Government moves Number 228 into  
9 evidence, Your Honor.

10 MS. FLAUM: No objection.

11 THE COURT: It will be admitted.

12 (Government's Exhibit Number 228 was admitted  
13 into evidence.)

14 BY MS. HERD:

15 Q And, sir, could you show us from Government  
16 Exhibit 228 how you supported your conclusion that  
17 Mr. Buckman was not the contributor of the Q13.1 sample?

18 A Yes. Again, just by looking at the DNA profile  
19 results from that known sample and comparing it to the DNA  
20 profile results from the hair, they are clearly different.  
21 So based on the DNA profile results, I excluded Mr. Buckman  
22 as the source of that hair.

23 Q Thank you. Sir, did you conduct any other nuclear  
24 DNA analyses in this case?

25 A No, I did not.

1 Q I just have a few exhibits to show you, sir. Sir,  
2 I would like to show you Government Exhibit 169 for  
3 identification. Can you look at that and tell me what that  
4 is?

5 A Yes. These are actually the materials that were  
6 generated from the DNA testing results in 1996. These are  
7 the -- a combination of the DNA from the polymarker DQA1  
8 tests. The foil envelope actually contains sort of like  
9 plastic strips that's contain the results, the actual  
10 testing result. So this is what we call secondary evidence  
11 or DNA evidence generated from stains or actual items of  
12 evidence.

13 MS. HERD: The Government moves 169 into evidence,  
14 Your Honor.

15 MS. FLAUM: Court's brief indulgence.

16 No objection.

17 THE COURT: 169 will be admitted.

18 (Government's Exhibit Number 169 was admitted  
19 into evidence.)

20 BY MS. HERD:

21 Q Now, sir, showing you what has been marked as  
22 Government Exhibit 153A. Can you take a look at that and  
23 tell us if you recognize it?

24 A This is the bag that contains DNA secondary  
25 evidence from the STR analysis conducted in 1999. Again,

1 there are extracted DNA and there are other tubes that are  
2 the result of the chemical reaction that I mentioned  
3 earlier to focus in on the DNA regions that we use to  
4 generate the DNA profile.

5 MS. HERD: The Government moves 153A into  
6 evidence, Your Honor.

7 MS. FLAUM: No objection.

8 THE COURT: 153A will be admitted. I think it's  
9 already admitted.

10 MS. HERD: Oh, okay. Thank you.

11 BY MS. HERD:

12 Q Now, sir, once you were finished with the items  
13 that you conducted the DNA testing on, what did you do with  
14 them?

15 A Again, they were returned to the trace evidence  
16 examiner in the FBI laboratory for either return or  
17 distribution to others.

18 MS. HERD: Thank you. I have no further  
19 questions.

20 **CROSS-EXAMINATION**

21 BY MS. FLAUM:

22 Q Good afternoon.

23 A Good afternoon.

24 Q I want to talk with you first with respect to the  
25 test that you conducted on the Q4, Q5, Q6, and Q7.

1 A Yes.

2 Q Q4 and Q5 are the fingernail clippings; is that  
3 correct?

4 A Yes, that's correct.

5 Q Q6 and Q7 were the bags that had been on  
6 Mr. Adelman's hands, correct?

7 A Yes.

8 Q And you indicated that the test that you performed  
9 with respect to those items was -- I may get this wrong --  
10 the DQA1 test?

11 A The polymarker DQA1, yes.

12 Q And that's a test that looks at, I believe you  
13 testified, six different parts of the DNA, correct?

14 A Yes, that's correct.

15 Q So, in contrast to the 13 different locations that  
16 you were just describing with respect to these blow-up  
17 exhibits, the DQA test only looks at six sites, right?

18 A Well, the combination DQA1 polymarker, yes, will  
19 look at six as opposed to 13.

20 Q Okay. And you indicated that reason that  
21 currently people do the 13 locations test, correct?

22 A Generally, yes, across the United States.

23 Q And the reason is that you indicated that sort of  
24 gives you a bigger, better picture; is that correct?

25 A That's correct. It's essentially like describing

1 an individual. If you describe six characteristics of a  
2 person, you get a pretty good description of them. If you  
3 describe 13, it's a better picture. It's more  
4 discriminating and it gives us more information to either  
5 tell samples apart or determine if they may be of common  
6 origin.

7 Q More discriminating because something can look  
8 like it's the same at six different point but, if you  
9 looked 13 points, it would turn out to be different. These  
10 two items?

11 A That's potentially the case, yes.

12 Q And you also indicated that, with respect to the  
13 13 location test or the STR test that we do nowadays, you  
14 have an additional advantage of sort of a quality control  
15 because there is some overlap in the 13 locations you look  
16 at, correct?

17 A In effect. Since we're using two separate  
18 reactions, one being sort of labeled the profiler plus  
19 reaction, the other the cofiler, since there's two  
20 reactions, yes, that allows us to check to make sure  
21 there's no sample mixup or error in between those to.

22 Q And when you were done the polymarker DQA1 test,  
23 you don't have the advantage of that sort of cross check  
24 for quality assurance?

25 A Well, no. But since all six were done at the same

1 time, there was no -- there wasn't the same need. I mean,  
2 all six were being looked at, if you will, at the same time  
3 in the same test tube. So there wouldn't be an issue of  
4 doing another test or another reaction and potentially  
5 mixing up the samples. So the need for it was really  
6 wasn't there with the polymarker DQA1.

7 Q But the polymarker DQA1 test that you conducted on  
8 Q4, Q5, Q6, and Q7, that's only looking at those six  
9 locations, not at the full 13?

10 MS. HERD: Objection. Asked and answered.

11 THE COURT: Move on.

12 BY MS. FLAUM:

13 Q You indicated that with respect to Q4, Q5, and Q7,  
14 your six location DQA1 tests indicated to you that the  
15 source of the blood on those items was Mr. Adelman,  
16 correct?

17 A Yes. The DNA profiles were the same. Therefore,  
18 in my opinion, he was most likely the source of those  
19 samples.

20 Q In your opinion, he was most likely the source?

21 A Well, as I said earlier, DNA testing is not  
22 absolute identification. So there is a possibility that  
23 some other individual might have the same profile. But,  
24 given the situation that it was -- they were his  
25 fingernails, the most likely conclusion to me would be that

1 it's his DNA.

2 Q And with respect to, I believe it's Q6 -- which  
3 would have been the bag on the left hand; is that rights?

4 A Yes, that's correct.

5 Q That item you couldn't say, according to your DNA  
6 testing, the blood came approximate Mr. Adelman, correct?  
7 That was inconclusive?

8 A That's correct. The results were not strong  
9 enough, if you will, to make a conclusive statement.

10 Q Now I want to talk to you about the items of  
11 evidence where you detected blood, according to your  
12 testing, but did not do further DNA examination.

13 A Okay.

14 Q With respect to item Q9, the piece of cloth, that  
15 was positive for blood, according to your notes; is that  
16 correct? And please feel free to refer to them, if that's  
17 all right with the Court.

18 THE COURT: Yes.

19 THE WITNESS: Thank you.

20 Yes. In fact, human blood was identified on Q9.

21 BY MS. FLAUM:

22 Q Human blood on Q9? Also on Q10, the comforter,  
23 correct?

24 A Actually, on Q10, the comforter, the possible  
25 presence of blood was determined, so the presumptive test

1 was positive.

2 Q Okay. Q11, the shirt?

3 A Human blood was identified on that.

4 Q Q12, the pants?

5 A Q12, the presence of blood was indicated and human  
6 protein was found. Because of the nature of the stain, I  
7 could not do or we could do the confirmatory test for  
8 blood, but the presumptive test was positive and human  
9 protein was identified. Based on that, my opinion would be  
10 that it was human blood. But we did not confirm the  
11 presence of blood, just human material.

12 Q Okay. Q12B, the belt?

13 A Q12B, the belt, the possible presence of blood was  
14 identified.

15 Q Q13, the towel?

16 A Q13, no blood was detected. The tests -- the  
17 presumptive test for blood was negative, so no additional  
18 testing was done.

19 Q And Q14, towel?

20 A Again, the presumptive test for the possible  
21 presence of blood was positive.

22 Q And with respect to those items that you just  
23 indicated blood was found or presumptively found, Q9, Q10,  
24 Q11, Q12, Q12B, and Q14, you don't have any idea whose  
25 blood that is, correct?

1           A     No.  No DNA -- well, no DNA testing was done on  
2     that.

3           Q     And you indicated you made that determination  
4     because you believed that, since those items -- since it  
5     was your understanding that those items had come from the  
6     decedent, you believed that the blood on those items  
7     probably came from the decedent, correct?

8           A     Yes, that's my opinion.

9           Q     But that's your opinion, based on nothing but that  
10    supposition, not based on any testing that you did?

11          A     No.  Simply based on the information I had.

12          Q     Now, with respect to Q4 and Q5, you referred to  
13    those as fingernail clippings from Mr. Adelman; is that  
14    right?

15          A     Yes.  That's how they were identified to me.

16          Q     But you weren't actually testing the fingernails  
17    themselves, correct?  You were testing any substances that  
18    were found underneath the fingernails?

19          A     That's correct.  Upon inspection of those  
20    fingernail clippings, there was reddish material observed.  
21    That was tested to see if it was blood and, based on the  
22    results, the DNA testing was conducted on that.

23          Q     It is possible to get a DNA profile from an actual  
24    fingernail, correct?

25          A     Yes, it's possible.

1 Q If you had, for example, been presented with a  
2 fingernail that had been recovered in this case, that had  
3 not been associated with anyone, you could have generated a  
4 DNA profile for that fingernail?

5 A Possibly. Generally, with fingernails, you're  
6 dealing with a less rich source of DNA. So it's possible  
7 to get a type, but it's not guaranteed.

8 Q Now, with respect to the hair that you --

9 THE COURT: If we're going to move on to hair, I  
10 think we'll take our break at this time. It's a nice place  
11 to jump, unless you have a lot more. Do you not have a lot  
12 more?

13 MS. FLAUM: It's actually very brief. I don't  
14 want to impose, but I --

15 THE COURT: Will that finish you with this  
16 witness?

17 MS. FLAUM: Absolutely.

18 THE COURT: Then why don't we do that. Okay. We  
19 won't have to bring him back tomorrow.

20 MS. FLAUM: I'll be quick.

21 BY MS. FLAUM:

22 Q The hair that you -- you tested one hair, correct?

23 A Yes, that's correct.

24 Q And the hair that you tested was labeled Q13.1,  
25 correct?

1 A Yes, that's correct.

2 Q And it's not the normal practice in the FBI to  
3 give more than one piece of evidence the same Q number,  
4 correct?

5 A No. We try to make sure that each individual item  
6 gets its own distinct identifying number or label, yes.

7 Q For example, you were talking about Q12, Q12A,  
8 Q12B, Q12B-2. Any time you take evidence off of an item,  
9 you are careful to delineate that evidence from all the  
10 other evidence in the case, correct.

11 A Yes. We try to be, yes.

12 Q And that's also something that's -- it's not just  
13 something you try to do. It's what the protocols require  
14 you to do, correct?

15 A That's correct. Each individual item should get  
16 its own or is supposed to get its own individual label?

17 MS. FLAUM: Nothing further. Thank you?

18 THE COURT: Any redirect?

19 MS. HERD: Just briefly, Your Honor.

20 **REDIRECT EXAMINATION \*\***

21 BY MS. HERD:

22 Q Sir, when you conducted the analyst of the Q4  
23 fingernail clippings from the decedent --

24 A Yes.

25 Q -- and the Q5 as well, did you detect the presence

1 of anybody else's DNA?

2 A No. Based on the results from those fingernail  
3 clippings, all ten of them, the DNA profile was the same as  
4 that of Mr. Adelman.

5 MS. HERD: Thank you. I have nothing further.

6 THE COURT: Thank you very much, sir. I  
7 appreciate it.

8 (Witness excused.)

9 THE COURT: Thank you, ladies and gentlemen.  
10 Appreciate it. We look forward to seeing you tomorrow.  
11 Remember not to talk about the case. Have a pleasant  
12 evening. Enjoy the beautiful weather. I don't think it's  
13 supposed to rain tonight. That will be nice. And we hope  
14 to see you tomorrow at ten o'clock. Thank you very much.

15 (The proceedings adjourned at 4:47 p.m.)

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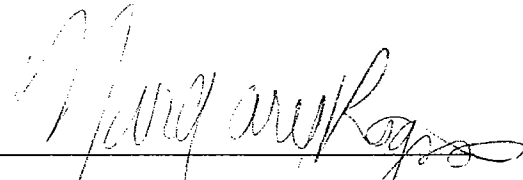
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CERTIFICATION

I, MARGARY F. ROGERS, an Official Court Reporter for the Superior Court of the District of Columbia, do hereby certify that I reported by machine shorthand, in my official capacity, the proceedings had and testimony adduced, upon the Jury Trial in the case of the **UNITED STATES OF AMERICA v. IDA CHASE**, Criminal Action No. F-7330-99 in said Court on the 9th day of August, 2004.

I further certify that the foregoing 196 pages constitute the official transcript of said proceedings, as taken from said shorthand notes, my computer realtime display, together with the audio sync and tape recording of said proceedings.

In witness whereof, I have hereto subscribed my name, this 23rd day of November, 2004.

  
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