

1 MS. FALK: Pass the witness, Judge.

2 THE COURT: Mr. Davis.

3 MR. DAVIS: No questions, Your
4 Honor.

5 THE COURT: Thank you, ma'am. You
6 may stand down. May this witness be excused?

7 MS. FALK: Yes, Judge.

8 MR. DAVIS: Yes, Your Honor.

9 THE COURT: Call your next.

10 MS. FALK: State calls Jennifer
11 Clay.

12 THE BAILIFF: Your Honor, this
13 witness has been previously sworn.

14 THE COURT: Thank you. Ms. Falk.

15 JENNIFER CLAY,

16 After having been duly sworn, testified as follows:

17 DIRECT EXAMINATION

18 Q. (By Ms. Falk) Good afternoon. Will you
19 tell the ladies and gentlemen your full name?

20 A. My name is Jennifer Clay.

21 Q. We got to get it out of the way. When
22 are you due?

23 A. Next week.

24 Q. Did you go to the doctor today?

25 A. Yes, I did.

1 Q. So, we will try to get through this as
2 quickly as we possibly can.

3 MR. DAVIS: Your Honor, again, we
4 stipulate she's an expert.

5 MS. FALK: Great.

6 THE COURT: Thank you.

7 Q. (By Ms. Falk) We're not going to go
8 through your background, but can you tell me where
9 you work and what you do?

10 A. Yes. I work at the Houston Police
11 Department Crime Laboratory in the biology section.
12 I specifically write cases, DNA reports for cases.

13 Q. Can you tell us just kind of some
14 background information about DNA? What does it
15 stand for?

16 A. Yes. DNA stands for deoxyribonucleic
17 acid. It's basically the blueprint of who makes you
18 who you are. So, half of your DNA is inherited from
19 your mother, and half is inherited from your father.

20 Q. What is DNA profiling or analysis?

21 A. DNA analysis in courtrooms like this are
22 really just taking an unknown sample from a crime
23 scene and comparing it to a known sample from
24 whether that's a suspect or complainant or maybe
25 eyewitness or somebody who was at the scene. So,

1 it's a comparative analysis between unknown samples
2 collected at the scene and known samples from
3 individuals.

4 Q. Can you tell us what the purpose is
5 behind performing some sort of DNA comparison or
6 analysis?

7 A. Well, the purpose is different for every
8 case, but it's to help in cases to say if an item
9 had DNA from a certain individual or another
10 individual or just to identify maybe somebody had
11 handled an item or was at a particular location
12 maybe.

13 Q. Can DNA testing and analysis be used in
14 like a criminal court setting as well?

15 A. Yes. DNA can be used for medical
16 reasons. The areas that we look at as far as for in
17 a courtroom setting don't code for anything in
18 particular. Like I couldn't tell that somebody was
19 predisposed to cancer or other medical factors, but
20 I could -- the only physical characteristics I could
21 tell about an individual is whether they're male or
22 female.

23 Q. Now, I'm going to direct your attention
24 really just to move forward to your involvement in
25 this case. Were you assigned a DNA analysis or

1 review assigned to Case No. 038095711?

2 A. Yes, ma'am.

3 Q. Did you actually do multiple lab reports
4 and -- multiple lab reports and testing with this
5 case?

6 A. Yes, I did several reports.

7 MS. FALK: Your Honor, may I
8 approach the witness?

9 THE COURT: Yes, ma'am.

10 Q. I'm going to show you what I've marked
11 as State's 7 and State's 8. Are you familiar --
12 these are just two of the several reports you did,
13 right?

14 A. Yes. This one -- that one's dated
15 December -- these two reports have -- let me make
16 sure they coincide with the ones I have. Yes.
17 Sorry. I'm just checking. This one's under a
18 different incident number. So, there's two
19 different incident numbers but, yes, they're two
20 reports I issued.

21 Q. Just to be clear for the jury and for
22 the record, State's 7 is -- the main reference
23 number is 038095711, right?

24 A. Yes.

25 Q. Then in State's No. 8 the main incident

1 number is 035286911?

2 A. Correct.

3 Q. But each of them have a cross reference
4 of the other case, correct?

5 A. Yes.

6 Q. That's because in this case somehow, not
7 related to you, but there were two case numbers that
8 got put together?

9 MR. DAVIS: I'd object to the
10 leading, Judge.

11 THE COURT: Sustained. Don't lead
12 the witness.

13 Q. (By Ms. Falk) You've got these
14 cross-referenced, right?

15 A. Yes. There was two incident numbers
16 that were cross-referenced with each other. So, on
17 each of the reports are mentioned -- the other
18 incident number is mentioned.

19 Q. Now, looking at State's 7 and State's 8,
20 are both of these documents the type of item that
21 are regularly kept in the course of business?

22 A. Yes.

23 Q. Is it the regular course of business to
24 keep these two items?

25 A. Yes. They're maintained within the case

1 file.

2 Q. Okay. Then you've got your case file
3 here, right?

4 A. Yes.

5 Q. These are copies from within the report
6 system of your --

7 A. Yes.

8 Q. -- case file?

9 A. Yes.

10 Q. And each of the -- basically, each of
11 the entries within here, the results and
12 interpretation is -- or are made by someone with
13 personal knowledge at or near the time of the entry,
14 correct?

15 A. I am the one who writes and generates
16 the reports and draws the conclusions and makes the
17 interpretations. Then the date is generated at the
18 end when my report is completed and has been
19 reviewed by another analyst as well.

20 MS. FALK: Your Honor, at this time
21 State would offer State's 7 and State's 8.

22 MR. DAVIS: No objection, Your
23 Honor.

24 THE COURT: State's 7 and 8 are
25 admitted without objection.

1 MS. FALK: Your Honor, may I have
2 permission to publish these to the jury?

3 THE COURT: Yes, ma'am.

4 Q. (By Ms. Falk) Now, I want to talk to you
5 about how DNA testing works, and then we'll talk
6 about your conclusions in your report. Can you
7 explain to the jury what the steps are when you're
8 conducting a DNA analysis?

9 A. Well, there's four main steps of DNA
10 analysis. So, once a swab or an item has been
11 retained for DNA testing, the first step is
12 extraction, where you're just extracting the DNA.
13 It's contained within the nucleus of the cell. So,
14 you're pulling the DNA out to isolate it. Then the
15 second step is quantitation, where you are
16 determining how much DNA is present. Once we
17 determine how much DNA is present, we want to target
18 a certain amount of DNA in order to run on our
19 instruments. So, that step is called amplification
20 where we basically are making Xerox copies, if you
21 will, of the DNA; so, it's a detectable amount for
22 the instruments. And, finally, it runs on the
23 instruments where we analyze the data that comes off
24 and develop what was known as a DNA profile.

25 Q. Were you able to do all four steps in

1 this case, you or your lab, able to do all four
2 steps on the items that were submitted to you in
3 these two reports?

4 A. Yes, we did.

5 Q. So, I want to talk about kind of the
6 first report. Let's start with -- let's actually go
7 backwards and start with State's 8, which is the --
8 it's entitled "Amended laboratory report". It's
9 dated December 2nd 2011. Do you have a copy in
10 front of you?

11 A. Yes, I do.

12 Q. Okay. Great. So, what are the items of
13 evidence that we're looking at here?

14 A. Okay. So, the items that we're looking
15 at are items 1.1.1, which is a portion of swabs from
16 red brown stains on blade of knife. Item 1.1.2,
17 which is a portion of swabs from red brown stains on
18 the blade of knife, and then 1.2.1, which is a
19 portion of swabs from red brown stains on the handle
20 of the knife.

21 Q. Were there any other items that were
22 also processed?

23 A. The item below that was previously
24 analyzed in a separate report, but it was item 8.1,
25 which is the portion of known blood stain card from

1 Jim Lee.

2 Q. So, that was processed separately, but
3 you've got the results to compare?

4 A. Correct.

5 Q. Correct me if I'm wrong because I'm not
6 a math or science person. Walk me through your
7 results and interpretations on your comparison of
8 the complainant's portion of blood stain card with
9 the 1.1.1 and the other two items.

10 A. Okay. Well, 1.1.1 and 1.2.1 were
11 combined because they were both swabs taken from the
12 blade, the same area of the knife, and they were
13 analyzed together and compared to Jim Lee. The
14 profile that was obtained was a mixture. Mixture
15 just means that it is more than one person
16 contributing. Would you like me to read the results
17 of the --

18 Q. Yes. I'm going to ask you to explain
19 them to us.

20 A. A mixture means it's more than one
21 individual contributing to the profile, and in this
22 particular case there was at least two individuals.
23 And there was also a distinctive major person,
24 meaning there was one individual contributing
25 significantly more than a second individual to the

1 mixture. So, comparing Jim Lee, he could not be
2 excluded as a possible contributor to the DNA
3 mixture. The probability that a randomly chosen,
4 unrelated individual would be included as a possible
5 contributor to this DNA mixture is approximately one
6 in 30 million for Caucasians, one in 9.5 million for
7 African Americans, one in 3.3 million for southeast
8 Hispanics and one in 450 million for southwest
9 Hispanics. And I list the locations on the DNA
10 where I calculate my statistics.

11 Q. What do those statistics mean to us
12 then?

13 A. Basically, the statistics mean if I
14 sampled, for example --

15 Q. Let's focus in on just the African
16 American statistic.

17 A. If we sampled a population of African
18 Americans, then you would expect to see somebody
19 included again in this mixture once every 9.5 --
20 every 9.5 million people you would expect somebody
21 to also be a possible contributor to the mixture.

22 Q. When it says Mr. Jim Lee who we know
23 from item 8.1 cannot be excluded as a possible
24 contributor, is that exactly the same or slightly
25 different as saying he is included as a contributor?

1 A. That's just the wording that we use. I
2 mean, nothing's ever ever 100%. He cannot be
3 excluded. There are consistencies with his
4 reference profile along with the evidence profile,
5 and he cannot be excluded as being a contributor to
6 the profile.

7 Q. I want to turn to your second page. And
8 focus up on the top on item 1.2.1. What was your
9 conclusion or your results from item 1.2.1?

10 A. 1.2.1 were the swabs that were collected
11 from the handle portion of the knife, and a partial
12 male DNA profile was obtained from this item. That
13 just means it doesn't look like it's a mixture. It
14 appears to be just from one individual, but it's not
15 a full profile either. Jim Lee is excluded as a
16 possible contributor to this partial DNA profile.

17 Q. That means he cannot be a contributor.
18 Clearly, he cannot be a contributor to the profile
19 on the handle?

20 A. It does not appear that Jim Lee would
21 have contributed or left -- he's not showing up on
22 these swabs.

23 Q. Right here, this line is important
24 because it says it is recommended that two suspect
25 swabs be submitted for DNA comparison. And why is

1 that?

2 A. As I stated before, DNA is a comparative
3 analysis. So, just because I have a profile doesn't
4 mean I know that person. I don't know who the
5 profile belongs to until I get a reference sample
6 from another individual. At this time I didn't have
7 a reference sample from a suspect or any other
8 individual, for that matter. And I knew the first
9 profile was giving me a mixture with a major
10 contributor that I didn't know who that was. So, we
11 requested swabs.

12 Q. Were you able to review and process
13 swabs of a known suspect?

14 A. Yes, we did.

15 Q. Is that referenced in what I call
16 State's Exhibit No. 7, but it's the laboratory
17 report with the main incident number being 038095711
18 from December 2nd 2011?

19 A. Yes.

20 Q. Now, I'm going to publish this one to
21 the jury. How do we mark this new evidence that
22 we're going to compare?

23 A. I'm not sure if I --

24 Q. It was a silly question. How is it that
25 we number the items of evidence?

1 A. Well, the items -- you mean like the
2 fact the reference sample is given item nine?

3 Q. Uh-huh.

4 A. That's done outside of the laboratory.
5 Those item numbers are given at the time that
6 they're submitted by the officer at the HPD property
7 room, and it's applied to that item and then shows
8 up in our LIMS system, which is our computer
9 tracking system. We receive a request. So, the
10 items are already given item numbers. So, that's
11 how we receive them.

12 Q. So, we have labeled as 9 and 9.1 a swab
13 of Mr. Richie and then a portion of a known swab of
14 Antone Richie, correct?

15 A. Correct.

16 Q. Did we go through the four different
17 steps of DNA processing or analysis for item 9, 9.1?

18 A. Yes. In order to obtain the profile, we
19 processed it through the same process as evidence
20 samples would have gone through in order to obtain a
21 profile.

22 Q. Were you able to obtain a profile in
23 this case?

24 A. Yes, I was.

25 Q. Then what do you do once you have that

1 known profile compared to what we had earlier in our
2 other report?

3 A. I look at the profile of the known and
4 compare it to the unknown samples that were
5 previously collected and reported out.

6 Q. Were you able to come up with any
7 results or conclusions in regards to the known swabs
8 of Mr. Richie?

9 A. Yes, I did.

10 Q. What was that conclusion?

11 A. Regarding items 1.1.1 and 1.1.2, which
12 is the portions of the swabs from the red brown
13 stains on the blade of the knife, Antoine Richie
14 cannot be excluded as the major contributor to the
15 DNA profile of the mixture. The probability that a
16 randomly chosen, unrelated individual would be
17 included as the major contributor to this DNA
18 mixture is approximately one in 890 quintillion for
19 Caucasians, one in 28 quintillion for African
20 Americans, one in 45 quadrillion for southeast
21 Hispanics, and one in 62 sextillion for southwest
22 Hispanics. To a reasonable degree of scientific
23 certainty, Antoine Richie cannot be excluded as the
24 major contributor to this DNA mixture, with the
25 exclusion of identical twins.

1 Q. Now, turning to item 1.2, it says 1.2.1
2 portion of swabs from the handle of the knife, what
3 were your conclusions in regard to that portion of
4 the analysis?

5 A. Antone Richie cannot be excluded as a
6 possible contributor to the partial DNA profile
7 obtained from this item. The probability that a
8 randomly chosen, unrelated individual would be
9 included as a partial -- as a possible contributor
10 to this DNA profile is one in 6.6 billion for
11 Caucasians, one in 280 million for African
12 Americans, one in 110 million for southeast
13 Hispanics, and one in 110 billion for southwest
14 Hispanics. And I also list the locations where I
15 calculate my statistics.

16 Q. Then on the back of each of these
17 reports, we have a chart. Will you explain to us
18 what this chart means? You don't have to walk
19 through each of the specifications of the alleles,
20 but just how the chart works and what you use it
21 for.

22 A. Sure. At the top, I don't know if you
23 guys can see that. The dark -- the bold line, the
24 row that goes across, those are particular locations
25 on the DNA that we look at. The line below that

1 lists the item number. So, in the example that she
2 has, this is item 9.1, which is a portion of the
3 buccal swabs collected from Antone Richie. The
4 numbers in the boxes are known as alleles. You
5 receive -- this is DNA that half you receive from
6 your mom, half you receive from your dad.

7 If you look at the first box, I'm
8 not sure if you can see it, but there's a 12/15.
9 So, he would have inherited a 12 from his mom or 15
10 from his mom and vice versa from his dad. So,
11 there's no more when you have -- this is obviously a
12 reference sample from an individual. So, this is a
13 single, what we would consider a single source
14 sample. And, so, you would have no more than two
15 alleles coming up at any particular location, one
16 donated by your mother, one donated by your father.

17 At the second location, you see
18 there's a 30. That means both parents happen to
19 donate the same number. So, there's just one 30
20 coming up. Then you take this reference profile. I
21 took this reference profile and compare it to the
22 evidence profiles that I had obtained.

23 Q. Is that how you're able to come up with
24 your conclusion in the statistical analysis of how
25 many -- the one in 960 quintillion numbers, those

1 gigantic numbers you have?

2 A. What I do is I compare and see where his
3 alleles are coming up in a profile, whether it's
4 from -- whether it's from any individual. And if
5 they are coming up, then we've already determined,
6 the FBI has determined in our statistical data base
7 the frequency of that number and the individual
8 having that number. So, when you have a frequency
9 and you multiply it by -- across the board, you get
10 these very large numbers. That's where there's more
11 places that they're included. There are more places
12 that you're -- better chance you're going to get a
13 higher number. If there's fewer places like for
14 example the statistics are a little lower on the
15 partial, that's because you don't have a full
16 profile. You're not looking at every single
17 location. So, that's how the statistics are
18 calculated.

19 MS. FALK: Pass the witness.

20 THE COURT: Mr. Davis.

21 MR. DAVIS: One moment, Your Honor.

22 MS. FALK: Judge, may I approach
23 the bench to put this back?

24 CROSS-EXAMINATION

25 Q. (By Mr. Davis) Ma'am, when you're doing

1 DNA analysis, the whole purpose of the DNA analysis
2 is usually identification; is that right?

3 A. Right. You're usually trying to see if
4 they can determine the source of an unknown sample
5 from a scene.

6 Q. Yes, ma'am. During the course of your
7 investigation and your analysis, you were able to
8 determine that the blood from the knife was a
9 mixture of Antone Richie and Jim Lee's?

10 A. It did appear that way, yes.

11 Q. And that the blood on the handle was
12 Antone Richie's?

13 A. Yes.

14 Q. So, basically the sole purpose of the
15 DNA is just identifying the source of the substance?

16 A. Right. I can't say that they didn't
17 come in contact with it. There's evidence that
18 somehow it was handled. Their DNA was detected,
19 then the stats to back-up those conclusions.

20 Q. Yes, ma'am.

21 MR. DAVIS: I don't have anything
22 else, Your Honor.

23 THE COURT: Ms. Falk.

24 MS. FALK: No further questions.

25 May this witness be excused?