```
three areas than the other?
 1
 2
          Α.
               Generally out of the ejection port.
 3
          0.
               And that would be on top of the gun?
 4
          Α.
               Yes, ma'am, yes, ma'am.
 5
               And so -- okay. Thank you. I was -- just got a
          Q.
 6
     little primer there on gunshot residue?
 7
          Α.
               Yes, ma'am.
               Okay. Thank you, Mr. Schroeder. I appreciate it.
 8
          Q.
 9
               MS. SCARDINO: I have no further questions.
10
               THE WITNESS: Yes, ma'am.
11
               THE COURT: May this witness be excused?
12
               MR. REISS: Yes, your Honor.
               THE COURT: Thank you, sir. You may be excused.
13
14
               THE WITNESS: Thank you.
15
               THE COURT: Would you call your next.
16
               MS. FULLER: The State calls Priscilla Hill.
17
               THE COURT: You may proceed.
18
               MS. FULLER: Thank you.
19
                             PRISCILLA HILL,
20
    having been duly sworn, testified as follows:
21
                            DIRECT EXAMINATION
22
    BY MS. FULLER:
23
              Good afternoon. Would you please introduce yourself
          Q.
24
     to the jury.
25
               Hi. My name is Priscilla Hill.
          Α.
```

- 1 Q. And how long have you been known as Priscilla Hill?
- 2 A. Almost a year now.
 - Q. Okay. What was your previous name?
- 4 A. Priscilla Encida.
 - Q. Okay. So have you been married?
- A. Married, yes, ma'am.
 - Q. Okay. Congratulations.
- 8 A. Thank you.

5

7

9

16

17

18

19

20

- Q. Could you please tell the jury how you're employed.
- 10 A. I work for the Houston Police Department crime
 11 laboratory in the biology section.
- 12 Q. And what is your title there?
- 13 A. A criminalist.
- Q. Could you please tell the jury what education you have, background, training you have to be a criminalist?
 - A. Sure. I have a bachelor's of science degree in forensic science from Baylor University and a master's of science in forensic DNA analysis from the University of Central Lancashire.
 - Q. In addition to that have you received additional training in DNA?
- A. I did. Once I was employed with the police

 department, I went through vigorous training for screening and

 for DNA analysis. Those are two different, I guess,

 departments within one department, but the training included

- lectures, observation, practical case work, written exams, as
 well as mock trials. And I did that separately for screening
- 4 Q. How long have you been employed with the HPD crime 5 lab?
 - A. Just hit seven years.
 - Q. And currently what are your duties, what is your position with the crime lab?
 - A. Currently I am able to do everything within the department as far as screening and DNA analysis, but right now I am specifically a report writer for DNA.
 - Q. Back in 2010 what were your duties?
 - A. I was still doing some lab work at the time as well as writing reports.
 - Q. Is the DNA laboratory at HPD certified or accredited?
 - A. It is accredited.
 - Q. And do you know how long it has been accredited?
- A. We gained our initial accreditation for screening May
 of '05, and DNA June of '06, and we have been accredited ever
 since. We renew that every five years.
 - Q. Have you previously testified as an expert in the area of DNA?
- 23 A. Yes.

6

7

8

9

10

11

12

13

14

15

16

17

21

22

and for DNA.

Q. And have you been deemed an expert by the courts of Harris County in the area of DNA?

- 1 A. Yes, ma'am.
- Q. And have you testified on few or many occasions in that capacity?
 - A. Approximately 25 times.
- 5 Q. Okay.
- 6 All right. Can you tell us what DNA stands for?
- 7 A. DNA stands for deoxyribonucleic acid.
 - Q. Could you please spell that for my court reporter?
- 9 A. Sure. D-e-o-x-y-r-i-b-o-n-u-c-l-e-i-c, then acid,
- 10 a-c-i-d.

8

15

16

17

18

19

20

21

22

23

2.4

- 11 Q. What is DNA?
- 12 A. DNA is our genetic blueprint. It's instructions for 13 life. It allows us to live and breathe.
- 14 Q. And where do you find DNA?
 - A. DNA is found in any nucleus of a cell, which we can have cells in all fluids of our body within our body. So we inherit our DNA at conception and it stays consistent throughout our lifetime.
 - Q. So anything that is a living part of our body will contain DNA?
 - A. Well, we have cells within our body, and that's found all over, and certain cells have a nucleus. In the nucleus is where the DNA is held, and that is where our genetic code is held.
- Q. Okay. So how do you use that genetic code in

relation to your studies with DNA?

- A. For forensic purposes we are able to target certain areas of DNA and develop what we call a genetic profile. This profile is unique to us, because we target the part of the genome that is that differs from person to person.

 99.7 percent of our DNA is the same, that allows us to live and breathe and walk and our organs to function. It's the

 .03 percent that makes us different, and that's the areas that we're able to use for forensic purposes so that we can differentiate people.
 - Q. What do you use specifically from that .03 percent?
 - A. It is -- they're call STRs, short tandem repeats, and these are repetitive codes in our DNA that we are able to target.
 - Now, they don't code for anything. They don't tell us anything. They are -- kind of dubbed them junk DNA because they're not informative in any other manner, but for our forensic purposes they are.
- Q. But those -- are they genetic markers, is that fair to say?
- A. Yes.
- Q. Okay. Are those genetic markers unique to each individual?
- A. The ones that we focus on, yes, excluding identical twins, they will have the same profiles, yes, they are unique.

- Q. But you can take those genetic markers and compare them to other known sources to see if it's the same person?
- A. Correct. So in -- for forensics, what we will typically see is we will get items of evidence to analyze that are in question, specifically in a criminal case, and we will analyze that particular item of evidence.

If we develop a profile from that item, we need a known profile to compare to to make a conclusion. If not, we just have DNA. We -- the big question is who does that DNA belong to, and it's the known DNA that we can compare to say if they're consistent or not consistent.

- Q. Okay. So back in 2010 were you asked to perform an analysis for incident no. 088525110?
 - A. Yes, ma'am.

- Q. And can you tell me what items of evidence were presented to you for analysis?
- A. Refer to my notes. See, we received, hmm, an envelope containing a DNA swab from a dime, which was item 5.1, and item 5.2, a second DNA swab from a dime.

We also received envelope containing known buccal swabs from Humberto Madrigal Morales, and also an envelope said to contain known buccal swabs from Seitrich Buckner. That was item 10.

Item 11 would be an envelope containing morgue evidence from Aidee Reyna, and within that morgue evidence kit,

- 1 | there were several items within that kit.
- 2 Would you like me to go through those?
 - Q. Yes.

- 4 A. Okay. 11.1 was a bloodstained card from Aidee Reyna.
- 5 | 11.2 was brown capped vials. 11.3, bags from hands. 11.4,
- 6 | fingernail scrapings and clippings from the right hand. And
- 7 | 11.5, fingernail scrapings and clippings from the left hand.
- Q. Okay. Now, you mentioned that you had two known
- 9 buccal swabs from Humberto Morales and from Seitrich Buckner;
- 10 is that correct?
- 11 A. Yes, ma'am.
- 12 Q. What is a buccal swab?
- A. A buccal swab is -- it looks like a Q-tip. There's a
- 14 | cotton end to it, and we take it and rub it along the cheek
- 15 line and it collects buccal cells or cheek cells, and that is
- 16 | what we use for a known reference sample.
- Q. Okay. So those were the two -- actually, how many
- 18 known reference samples did you have in this -- in this case?
- 19 A. We had three. The known buccal swabs from Humberto,
- 20 | the known buccal swabs from Seitrich, and then the bloodstain
- 21 | card from Aidee Reyna, which also can serve as a reference
- 22 sample.
- Q. Okay. So with those reference samples, did you then
- 24 | compare them to the other pieces of evidence that you have
- 25 mentioned?

- Well, certain items of evidence went on for DNA, and 1 of those items, the profiles that were generated were compared 3 then to the references.
- Okay. So let's talk about what items were analyzed 4 Ο. 5 for DNA.
 - Just for DNA? Α.
 - Q. Yes.

6

7

8

9

12

13

14

15

16

17

18

19

20

21

22

23

24

- Α. Okay.
- Can you tell us the first item? 0.
- 10 That would be a portion of no. 5, DNA swab of a dime. Α. 11 That would be item 5.1.1.
 - 5.2.1 is a portion of no. 6 DNA swab from a dime. And the three references that we discussed before, as well as 11.4.1.1, portion of swabs from the fingernail scrapings and clippings from the right hand. And then 11.5.1.1, a portion of the fingernail clippings and scrapings swabbed from the left hand.
 - Okay. So you were able to obtain DNA profiles from not only the known reference samples but also from these pieces of evidence?
 - Α. They went through DNA analysis, and I believe all generated a profile except for one item.
 - Okay. So let's talk about what the results were when Q. you were able to analyze those reference samples along with the pieces of evidence that you just described.

1 A. Okay.

4

8

9

10

16

- 2 Q. Starting with -- let's talk about evidence no. 5, which I believe was a dime; is that correct?
 - A. Swab from a dime.
- 5 Q. Okay. Were you able to get any results from that 6 swab?
- 7 A. From 5.1.1, no, there was no DNA profile obtained.
 - Q. Okay. When you say that there were no DNA profile obtained, what exactly are you saying?
 - A. We did not get any results.
- 11 Q. Okay. Does that mean from the swab itself you did
 12 not get any DNA?
- 13 A. Yes. Part of our analysis is taking a cutting of the 14 swab and processing that. From that cutting we did not get 15 anything -- any result to see.
 - Q. Okay. How about evidence no. 6?
- A. 6 would be the known buccal swabs of Humberto

 18 Morales, and we did get a profile from -- from that.
- 19 Q. I'm sorry, let me back up. I'm referring to evidence 20 no. 6, which I believe is your item 5.2.
 - A. Oh, I'm sorry.
- Q. No, that's my mistake.
- So item 5.2, which was the DNA swab from the dime.
- 24 A. Yes.
- Q. Evidence no. 6, a dime, were you able to obtain a

- profile from that? 1
- 2 Α. Yes.

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

- 0. Okay. And then once you obtained a profile from that dime, did you then compare it to the known three reference samples?
 - Α. Yes.
 - And what were the results of that analysis?
- A full female DNA profile was obtained from the swab Α. of the dime, and Aidee Reyna cannot be excluded as contributor to that profile. The probability that a randomly chosen unrelated individual would be included as a possible contributor is approximately 1 in 11 sextillion for Caucasians, 1 in 27 septillion for African-Americans, 1 in 2.6 quintillion for southeast Hispanics, and 1 in 12 sextillion for southwest Hispanics.
- So to a reasonable degree of scientific certainty, Aidee Reyna is the source of this profile, excluding identical twins.
- Humberto Morales and Seitrich Buckner are excluded as possible contributors to this profile.
 - Ο. Okay. So their DNA was not located on that dime?
- Correct. Their profiles were inconsistent with the Α. 23 profile that we obtained.
- 24 Okay. Now, how about -- let me make sure I have your 25 right number. I believe it's 11.4.1.1 and 11.5.1.1?

1 A. Yes.

- Q. What are those -- what are those swabs?
- A. 11 -- 11.4 was the swabs from the fingernail scrapings and clippings of the right hand, and 11.5 was a -- the swabs of fingernail scrapings and clippings from the left hand.
 - Q. And the left and right hand of who?
 - A. Of Aidee Reyna. They were in her morgue kit.
- Q. Okay. So did you compare those to the known reference samples that you had?
 - A. The profiles obtained, yes.
 - Q. Okay. And what were the results of that?
- A. The same profile that was obtained from the item 6, DNA swab of the dime, was obtained in the fingernail scrapings right hand and left hand, so Aidee Reyna cannot be excluded from this -- the profiles obtained from those two items as.
 - Q. Okay.
- A. And Humberto Morales and Seitrich Buckner are excluded as possible contributors to the profile.
- Q. Okay. And were the numbers that you mentioned before when you were talking about the dime, are those same numbers associated with Aidee Reyna with the fingernail clippings?
 - A. The statistical significance, yes.
- Q. So can you say with a degree of scientific certainty that those fingernail clippings belonged to or she was the

- source of those fingernail clippings from the right and the left?
 - A. Yes.

2.2

- Q. Okay. And your analysis tells you that you did not get a profile of Seitrich Buckner with those fingernail clippings?
 - A. No.
 - Q. Did I say that right?
- A. He is excluded from the profiles, or the profile obtained from both the right and the left hand.
- Q. Okay. So his DNA is not found in her fingernail clippings?
- 13 A. Correct.
 - Q. Okay. I want to talk to you a little bit about contact DNA. What is contact DNA?
 - A. Contact DNA refers to cellular material that is transferred from somebody to a surface or to -- it's a transfer. We don't have any tests currently that look for just the cellular material on an item, so we refer to it as contact, and that goes directly on to DNA analysis. We aren't able to screen for that.
 - But, for example, me touching the countertop, I've potentially just left my own cells on this countertop, and if I were to swab it, I might get some of my DNA because I may have transferred my cells onto there.

- Q. Okay. And so if somebody -- if I were to touch you
 with my hands, is it possible that I would leave some of my DNA
 on you?
 - A. Possibly, uh-huh.

- Q. Okay. If I were to scratch you with my nails, would I obtain some of your DNA underneath my fingernails?
 - A. There's potential, yes.
 - Q. How do the elements affect contact DNA?
- A. Well, with contact, we're -- we're dealing with very minute amounts of DNA. It -- there's a lot of different factors that play into us getting a result. Obviously if the person is a, what we call heavy shedder, they -- I shed more cells touching something than somebody else would. If my palms are sweaty touching something, I might leave more DNA than somebody that's not. The surface that of which I touched, is it porous, is it slick, all these things play into the fact if DNA is transferred and stays on a particular item.
- Q. Okay. Is it fair to say that if I were to scratch you with my fingernails, there would be a greater chance of your DNA staying underneath my fingernails than if I were to just touch you with my fingertips on your skin?
- A. I -- I would be more likely if you scratched me, yes, than just touched me, yes.
- MS. FULLER: Pass the witness.
- 25 THE COURT: Cross-examination.

1 CROSS-EXAMINATION 2 BY MS. SCARDINO: 3 Well, just to make sure that we're all clear, Seitrich Buckner's DNA was not on any of the -- either of the 4 5 items that you tested; is that correct? Correct. 6 Α. 7 Q. Thank you. MS. SCARDINO: I'll pass the witness. 8 9 THE COURT: Thank you, ma'am. 10 May this witness be excused? 11 MS. FULLER: Yes, your Honor. 12 THE COURT: Thank you so much for coming. You're 13 excused. 14 Call your next. 15 MR. REISS: The State of Texas would call Darrell 16 Stein, your Honor. 17 May I proceed, your Honor? 18 THE COURT: You may. 19 MR. REISS: Thank you. 20 DARRELL STEIN, 21 having been duly sworn, testified as follows: 2.2 DIRECT EXAMINATION 23 BY MR. REISS: 2.4 Mr. Stein, good afternoon. Q. 25 A. Good afternoon.