Call your next witness, please.

MS. ROBERTS: Your Honor, the State calls Priscilla Hill.

THE COURT: Ma'am, you will stand there and be sworn in as a witness, please.

Ms. Roberts?

MS. ROBERTS: Thank you, Your Honor.

PRISCILLA HILL,

having been first duly sworn, testified as follows:

DIRECT EXAMINATION

BY MS. ROBERTS:

Q. Okay. Ms. Hill, can you please introduce yourself to the jury?

A. Hi. My name is Priscilla Hill.

Q. All right. And, Ms. Hill, where do you currently work?

A. I currently work for the Institute for -- the Harris County Institute of Forensic Sciences Forensic Genetics Laboratory.

Q. And what do you do there?

A. I am a DNA analyst as well as the DNA interpretation manager.

Q. At a previous time -- where else have you worked?

A. My previous employment was with the Houston

Forensic Science Center formally known as the Houston Police Department Crime Laboratory.

Q. Okay. And can you tell me a little bit about the Houston Police Department Crime Laboratory, now the Forensic Science Center? Are they an accredited laboratory?

A. Yes, ma'am.

Q. Okay. And can you explain the accreditation just a little bit to us?

A. Sure. We -- at the time when I was there, we were accredited by ASCLD Lab, which is the American Society of Crime Laboratory Directors Laboratory Accreditation Board. And what that is is a voluntary program that a lab seeks out accreditation. Which is a committee comes in and evaluates our procedures and standards and makes sure that we are not only adhering to a national guidelines set out for national standards, but also our own laboratory guidelines.

Q. Okay. And how long were you at the Houston Police Department Crime Laboratory before you left to go to IFS?

A. Little over eight years.

Q. Okay. So, now, just how long have you been with Harris County Institute of Forensic Sciences?

A. Since May of last year, so about nine months.

Q. What position did you hold at the Houston Police Department Crime Laboratory?

A. I was a DNA analyst there as well.

Q. Can you explain what kind of training and experience did you need in order to be a DNA analyst there?

A. Sure. My educational background is a Bachelor of Science degree from Baylor University in forensic science. And a Master's of Science in forensic DNA analysis from the University of Central Lancashire. Once I graduated and was employed with the Houston Police Department Crime Lab, I also went -- underwent training for the position. So, there was kind of two separate modules, a screening portion and a DNA analysis module. But both had similar components, which consisted of observation of other analysts, practical casework, literature, tests, written exams, a competency test and a mock trial.

Q. Okay. Did you have to go through any type of, I guess, annual or semiannual testing to keep your position at that lab?

A. Yes, ma'am. We went -- we took what we call proficiency tests which are required to stay competent within the field. And that's taken once every six months.

Q. Okay. And were you able to complete those proficiency examinations throughout your time at HPD?

A. Yes, ma'am.

Q. Okay. Now, have you ever testified as an expert in court before?

A. I have.

Q. All right. And was that on few or many occasions?

A. Approximately -- I'm almost at 40 times right now.

Q. And was that here in this county or state?

A. In this county, yes.

Q. Now, can you tell us a little bit about the normal duties of a DNA analyst?

A. Sure. It's -- well, we have -- as I kind of previously mentioned, we have almost two departments within the biology section. One would be the screening department and then the other is the DNA analysis department. I was trained to do both.

The screening position is initial inventory and identification of potential biological material on items of evidence that had been requested. Once those -- that material has been identified or items have been identified to move on to the DNA process, then that's when the DNA analysis begins. And

that sample goes all the way through DNA analysis where the end product is a genetic profile that is obtained.

And at that point comparisons can be made to a known reference sample, which is -- like my own DNA that I know came from me, that profile would be generated and we can compare that to the evidence to see if they're consistent or not consistent with each other.

Q. Okay. So, we're going to back up just a little bit and talk about DNA in general.

A. Sure.

Q. What does DNA stand for?

A. DNA stands for deoxyribonucleic acid. It's our basic blueprint that allows us to live and breathe as human beings. You obtain half from your mother, half from your father. And other than a small portion of the DNA, we are the same. But there is a small portion of each of our DNA that does differ from person to person.

Q. Now, you talked a little bit about DNA profiling and analysis just a minute ago. What's the purpose of that?

A. The analysis process is to really isolate and remove the actual potential DNA on a particular substrate. With the goal to obtain a genetic profile

that then can be compared to a known sample. I then can collect that data and interpret that data and draw conclusions from that data.

Q. Okay. So, is that purpose not only to implicate people, but also to exclude people from possibly being matching or something like that?

A. Yes. Those comparisons are meant to say that a known person is then excluded as a potential contributor from the profile that we obtained from the evidence or cannot be excluded.

Q. Okay. Now, I want to talk to you a little bit about the actual process of the testing.

A. Okay.

Q. Is there a standard technique or generally accepted protocol used for this type of testing?

A. Yes, ma'am.

Q. Okay. Can you tell us, does your laboratory or did the HPD Crime Lab, when you were there, did it follow the protocols that were required?

A. Yes, ma'am.

Q. Okay. Can you please describe the procedure just a little bit for us?

A. Sure. First step is to, as I said before, isolate the DNA and remove anything else that's not not DNA. We just are concerned with the DNA potentially on

an item.

The second step is then to see how much DNA we have. We need to know what how -- an amount of what we're working with.

The third step is to make multiple copies of the target areas of the DNA that we're interested in for forensic purposes. For our purposes, we're interested in 15 locations, along with the sex determining gene that will tell us if it's male or female DNA.

And then the final step is loading that sample onto a -- what we call a genetic analyzer. But this allows us to visualize the sample that we've isolated the DNA from.

Q. Okay. Now, you said you've been with different crime labs for quite a while at this point. Have you personally performed these tests yourself?

A. Yes. In the past I have, yes.

Q. Okay. And is it on few or many occasions?

A. Quite a bit, yes, over the years.

Q. All right. Now, are there any controls in place at the HPD Crime Lab to ensure the quality of procedure and the credibility of results?

A. Sure. We have what we call a chain of custody for each item which tracks the -- the flow of that item

and where it goes and what hands it's in, to maintain the authenticity of the item. When the item enters our laboratory and testing has begun, our analysts wear protective gear equipment like lab coats and masks and gloves. We change gloves periodically. Evidentiary samples are opened one at a time. Evidence and knowns are also separated in their analysis.

Q. Okay. And are these controls standard -- and standards, are they consistent with the other controls and standards that other labs use?

A. Yes, ma'am.

Q. Now, how is a sample or specimen normally received at the HPD Crime Lab?

A. A request for analysis is generated with the laboratory so that we know that there's -- there's a request. Our senior evidence technician will then go to our property room and obtain those items that have been requested. She would then transport them over to the laboratory and log them in our secure evidence storage area. Once an analyst knows that those items are available, then they can go and retrieve those items for testing.

Q. All right. Now, how exactly are they stored in that storage area?

A. They are in a locked facility. Every item is

sealed and that is confirmed prior to opening. And obviously, in that area it has minimal access as well to those that -- that are working in the laboratory.

Q. Okay. Now, I want to talk to you about the testing done in the particular case that you're here on. Are you -- have you worked on a case by Incident No. 179079909?

A. Yes, ma'am.

Q. And was the HPD Crime Lab asked to perform testing on the evidence from this case number?

A. Yes, ma'am.

Q. And were you assigned to handle the testing or the analysis of this particular case?

A. Yes, I was the DNA analyst assigned to this case.

Q. Now, I know earlier we were talking about the first half or the first module -- I don't know if that's what you called it -- this screening portion of it. Do you know who did the screening portion in this case?

A. I do.

Q. Who was it?

A. That would be Kristina Blackmon.

Q. And then after that, are there other steps before you actually start doing the analysis?

A. There are.
Q. Okay. And so, I know we've kind of gone into these and you were discussing it a little bit. But can you tell us who else worked on this case?
A. Sure. There were two reports. Would you like me to go off of each report or --
Q. Yes. That might be helpful. Just -- we'll keep -- are there -- are you talking about -- there's one report that's from July 31st, 2012 and then another report from October 29th, 2013?
A. Yes, ma'am.
Q. Okay. So, let's go ahead and first start with the July 31st, 2012 report?
A. Okay. One of the DNA technicians involved was Diana Crossen.
Q. Okay. And does she have a different name now?
A. Oh, yes. It's now Diana Donely.
Q. Okay. And so, what was her portion of the analysis for this report?
A. She was tasked with the extraction process, which is that very first step of isolating and purifying the DNA.
Q. And is this after the screening process that Kristina Blackmon did?
A. Yes, ma'am.

Q. And so, when you're talking about the extraction process, is it treated differently whether it's sperm or blood or contact DNA?

A. They can be. There's a couple of different extraction procedures. If an item has been identified with semen on it, then it will undergo what we call differential extraction. And what that is is splitting the sample into two results. We can isolate the sperm fraction where sperm is separated from that sample. And then everything else that is non-sperm but cellular material that contains DNA, that would be in what we would call a non-sperm fraction or epithelial fraction.

Q. Okay. And was that done in this case?

A. Yes, ma'am.

Q. All right. And so, once the extraction was done and she made the differentiation between the two, what exactly -- how is that done, like what happens next?

A. The next step is then seeing how much DNA we have in each sample. And that was performed by Shauna Schoonover.

Q. Okay. And so, do you have a specific term for that?

A. Yes. It's called quantification.

Q. All right. And how is that done?

A. That is taking a small bit of the sample that was extracted. So, once an extraction process is performed, you now have nothing that's left of the actual substrate from the item. It's simply liquid in a tube. And so, a little bit -- portion of that will go onto a machine that will give us numeric value of approximately how much DNA is contained within that sample.

Q. Now, does the machine that it's put in, does it only have that one tube or that one part of DNA in it at the time or is it testing more than one at a time?

A. It tests multiple at that time. At that point we're able to do batch samples. And so, the machine takes a plate -- that's what it's loaded on. And this plate contains 96 different little wells within it. And so, we can just pipette a little bit of liquid into each well, which is the different samples. And that can be loaded onto the machine.

Q. Okay. And are there any safeguards in place to ensure that it's done properly?

A. Yes. There's a negative control which allows us to see that the reagents are working properly and are contamination free. There is a verification step that all the samples were loaded in correctly. And

then we also have blanks in between different samples so that we also can tell if that's negative -- DNA free as well.

Q. Okay. So, if anything came back wrong or the machine decided it wasn't done properly, what would happen?

A. There's also standards that go with every run. So, we can check those standards. Those standards have a known amount of DNA within it. So, we can tell that those worked properly. Obviously, the controls that are in place, if we see that DNA is contained within it, we know something is not correct. So, we have safeguards in place to give us that red flag that something did not go the way it was supposed to.

Q. Okay. And did any of those red flags come up or show that it doesn't go as it was supposed to on these -- on this particular batch?

A. No, ma'am.

Q. Okay. If you got a red flag, would they retest the exact same one or would they throw it out and start again?

A. Oh, the plate -- once it goes on the machine is not reusable. So, the entire thing would have to be repeated.

Q. And once the quantification is done, what

happens next?

A. The next step is then making those multiple copies of the target areas of DNA and that's called amplification. The DNA technician involved in that was also Shauna Schoonover.

Q. Okay. And so, how is the amplification actually done?

A. Once we have the numerical value of how much DNA is present in each sample, we can then target the optimal amount that's needed to visualize and obtain a profile. So, depending on that number, we can load a certain amount of sample into the amplification process so that we can make just the right amount of multiple copies of DNA.

Q. Now, when it's making these copies, is it essentially just like photocopying it so it's the exact same or how is it done?

A. Yes. It's similar to a Xerox machine. I said there was 15 copies plus the sex determining gene. And that is made over and over and over again with each cycle in the amplification process.

Q. Okay. And if something were to go wrong here, are there safeguards in place to be able to determine that?

A. Yes. Again, there are positive -- there's a

positive and negative control that is also amplified with the rest of the samples. So, a known genetic profile should be obtained from the positive control to let us know that everything went smoothly. The negative also will tell us that the reagents used for the amplification process were contamination free. And then at the end step, visualizing the genetic profile will also give us an idea if that amplification process was successful.

Q. Okay. And what happened after the amplification?

A. After the amplification, then the sample can be loaded onto our genetic analyzer. During the amplification process each DNA segment that is copied and made is also fluorescently tagged. So, that when it's loaded onto the machine, that fluorescence can be picked up by the machine and we can visualize that data. Shauna Schoonover was also the DNA technician to perform that.

Q. Okay. And so, after the loading, what happened?

A. After the loading, then the data is generated from -- by the machine. So, we call it raw data. It hasn't been interpreted, but the machine has generated it. So, at that point I will go in and review that

data to make sure that the run was successful.
Q. Okay. Now, based on your training, if anything had gone wrong in any of the steps of the process, would you have seen it?
A. Yes, ma'am.
Q. Okay. And so, are you saying that everyone did their work correctly in these steps?
A. Yes, ma'am.
Q. Okay. And so, is that everybody who worked on the actual report that's dated July 31st, 2012?
A. Yes.
Q. And were you able to analyze the actual data -- the raw data was given out by the machine after the loading by Shauna Schoonover?
A. Yes, ma'am.
MS. ROBERTS: Your Honor, may I approach the witness?
THE COURT: Yes, ma'am.
Q. (BY MS. ROBERTS) All right. I'm going to show you what's been marked as State's Exhibit No. 29. Can you please take a look at it and let me know if you recognize it?
A. Yes.
Q. Okay. And how do you recognize it?
A. That is my DNA report from July 31st, 2012.

Q. Okay. And these reports, are they kept in the normal course of business with the HPD Crime Laboratory at the time?

A. Yes, ma'am.

Q. Okay. And is this a fair and accurate representation of the analysis that you did back on July 31st, 2012?

A. Yes, ma'am.

MS. ROBERTS: Your Honor, at this time I'm going tender State's Exhibit No. 29 to opposing counsel and offer State's Exhibit No. 29 into evidence.

MS. REDDI: No objections, Your Honor.

THE COURT: All right. Thank you.

State's 29 will be admitted.

Q. (BY MS. ROBERTS) Now, I'm going to move on to the lab report from October 29th, 2013. Did you also do the analysis on this case?

A. Yes, ma'am.

Q. All right. And on this case, did people follow the same steps that we just went through for the July 31st, 2012 case?

A. Yes.

Q. All right. If you can just tell us who actually did the extraction of the -- if you can go through and say what their jobs were.

A. Sure. The extraction was performed -- well, there was actually two different extractors. Let me make sure. No, there was one extractor. Ben Cambridge was the extractor for this case or for this part of the DNA --

Q. Okay.

A. -- analysis.

Q. Sorry.

And what exactly did he do the extraction for?

A. He did extraction from the known buccal swabs from Roy Vasquez.

Q. Okay. And then what happened -- who -- who else worked on this case?

A. Michael Bryan Davis.

Q. All right. And what did he do as part of his work on the October 29th, 2013 case?

A. He performed the quantification step.

Q. Okay. Who did the amplification step?

A. Also Michael Bryan Davis.

Q. All right. And finally the loading step?

A. Also Michael Bryan Davis.

Q. And just as we talked about for the July 31st, 2012 lab report, for this particular October 29th, 2013 lab report, based on your training, if anything would

have gone wrong in any step of the process, would you have seen it?

A. Yes, ma'am.

Q. Okay. And did you see any issues, red flags in the October 29th, 2013 report that was given to you?

A. No, ma'am.

Q. And so, are you saying again that everyone did their work correctly on this lab report?

A. Yes, ma'am.

I do need to correct myself though. There was an additional technician involved in the July 31st, 2012 report. That would be an additional extractor.

Q. Okay.

A. Who was Karen Gincoo.

Q. And you said she's an additional extractor. What exactly did she do on that report?

A. Correct. She actually was in charge of extracting the known saliva samples from Natalie Pineda.

Q. And did she do her work correctly on that day?

A. Yes, ma'am.

Q. Okay. And how can you say it so surely when you were not there for it?

A. Every step in the process is documented with

times and dates and exactly what was done. All of that paperwork, I review and initial as if it were my own and I accept that work to be true.

Q. Okay.

MS. ROBERTS: Your Honor, may I approach the witness?

THE COURT: Yes, ma'am.

Q. (BY MS. ROBERTS) I'm going to show you what's been marked as State's Exhibit No. 30. Do you recognize this document?

A. Yes, ma'am.

Q. Okay, can you -- how do you recognize it?

A. The unique lab number, my signature and this is the second DNA report in this case.

Q. Okay. And is it a fair and accurate depiction of the DNA report you generated for the case?

A. Yes, ma'am.

Q. And is it kept in the regular course of business for the HPD Crime Laboratory?

A. Yes.

Q. All right.

MS. ROBERTS: Your Honor, at this time State tenders to opposing counsel State's Exhibit No. 30 and offers State's Exhibit No. 30 into evidence.

MS. REDDI: No objections, Your Honor.

THE COURT: All right. State's 30 will be admitted.

MS. ROBERTS: Thank you.

Your Honor, may I publish both of these to the jury?

THE COURT: Yes, ma'am.

MS. ROBERTS: Thank you.

Q. (BY MS. ROBERTS) So, first let's talk about State's Exhibit No. 29. And you can see it up on the screen next to you. This is the July 31st, 2012 report.

When we're looking at it here, we can see that there are different numbers that are given to different types of evidence and then there are results and interpretation below. Can you just describe what this -- the report itself a little bit?

A. Sure. The items of evidence underneath that is a list of the portions that went on for DNA and their unique descriptors. Underneath -- that first paragraph actually details what was performed on that item and what the names of the locations are that we identified in our DNA analysis testing. Following that then is the individual conclusions for those items that were tested for DNA.

Q. Okay. And so, looking at the Item 3.2.1

conclusion, what does it say?

A. The portion of the anal swabs sperm fraction, a mixture of DNA from at least two individuals with a major male contributor of unknown origin was obtained from this item. Natalie Pineda cannot be excluded as a possible contributor to this DNA mixture.

Q. Okay. So, it's talking about an unknown male. Did we have a specific sample or known sample we were testing it against at that time?

A. No, ma'am. The only known sample we had was the known saliva swabs from Natalie Pineda.

Q. Okay. Does it surprise you to see her -- that she is a minor or a possible contributor to the DNA mixture?

A. No.

Q. Okay. Why is that?

A. This particular sample was an intimate sample -- we call an intimate sample. So, it was taken from the body of a person. And at that point it is not uncommon to see then the DNA of that person to be consistent with those types of samples.

Q. Okay. And then we also see -- underneath it, it talks about the portion of the anal swab, the epithelial fraction, what is that saying there?

A. A full single source female DNA profile was

obtained from this item. Natalie Pineda cannot be excluded as a contributor to the DNA profile obtained from this item.

Q. Okay. So, again, what are the epithelial versus the sperm fractions?

A. The epithelial fraction would be all cellular material that is non-sperm.

Q. Okay. So, is this common to see in another intimate swab that is the non-sperm fraction?

A. Yes.

Q. Okay. All right. Under that we can see that no analysis was performed on specific items. Do you know why no analysis was performed at that time?

A. With this particular case, I believe that the most intimate item and item that was identified with semen was taken on for DNA analysis first. And then if we obtain informative information, then we can make that decision of going back to other items or not.

Q. Okay. And so, through your time at the crime lab doing the analysis and other portions of this, do you rely on other things such as SANE examinations or offense reports to help guide you in which items need to be tested?

A. Yes.

Q. Okay. So, in this case did you guys have

information that would lead you to test the anal swab portion before any of the other swabs?

A. Yes. I believe we had the medical report.

Q. And now, looking at the third page of your actual report. What are we looking at here?

A. This is what we call an allele -- allelic table. And what this is showing is on the first column where it says under case items, that would be the descriptors of the items that were processed for DNA. The top two would be the sperm fraction and epithelial fraction from the anal swabs. And the last row is the portion, known saliva swabs, from Natalie Pineda.

Across the top of that table is -- in each column are the names of the DNA target locations that we tested for.

Then you'll notice that's a number in each box. And those are just the allele -- the DNA variations that are obtained from the item.

So, for example, if you look at the known -- the very last column right there, is a 12, 13. And we know that not -- one person will not have more than two variations within each location because you receive half from your mom and half from your dad. If you notice above in the first column, it's just a solo 13. And that mean that mom and dad both donated a 13.

Q. Okay. And so, when we're looking at this -- let me zoom out just a little bit.

We can see on this one that the bottom two rows match. Is that going back to the front page where it was talking about the epithelial fraction? Is this the comparison of known swab from Natalie Pineda to that epithelial fraction?

A. Yes. The middle row is the epithelial fraction of the anal swabs. Underneath then is the profile obtained from the saliva swabs of Natalie Pineda. And then when we performed our comparison, we do look number by number to see if there's consistency between the two.

Q. Okay. And again, just the top portion, is that the sperm fraction of the -- of the swab?

A. Yes, ma'am.

Q. Okay. And so, does it surprise you that it's different than the bottom two rows?

A. The sperm fraction?

Q. Yes, ma'am.

A. No, ma'am.

Q. Now, I'm going to go ahead and jump forward to October 29th, 2013 report.

At this time, we see that there are different items of evidence. Are these the ones that

are tested at this time?

A. Yes, ma'am.

Q. And next to 3.4.1, I guess, I should say, it says portion of known saliva swabs of Natalie Pineda previously analyzed. So, is that from that previous report, the July 31st, 2012 report?

A. It is.

Q. So, at that time, I guess, what was going -- what's different about this report?

A. What this report is showing is that we've drawn conclusions with different items. So, previously analyzed were the known saliva samples of Natalie Pineda as well as the profile that was obtained from the sperm fraction of the anal swabs.

The new item of evidence that underwent DNA analysis at that time that's reflected in this laboratory report is known buccal swabs from Roy Vasquez.

Q. Okay. And do we see the allele profile on the third page of the report?

A. Yes, ma'am.

Q. Okay. And so, if we look at that and also look at that original, the July 31st, 2012 report, what can we see with those two different allele profiles or the -- the new allele profile with the old sperm

fraction profile?

A. That the profile obtained from the buccal swabs of Roy Vasquez could not be excluded from the sperm fraction -- the profile generated in the sperm fraction of the anal swabs.

Q. Okay. You used the term cannot be excluded. Do you guys every say match?

A. No, ma'am.

Q. Okay. Are you guys ever allowed to say match?

A. We do not say match, no.

Q. Okay. Is it -- but when you say cannot be excluded, do you ever put numbers or like an amount on something or how likely it is to happen?

A. Yes. Once we've determined that a known reference is consistent with a profile of evidence, then we will give a statistical weight to how unique that profile is in the general population.

Q. Okay. So, is that done on the October 29th, 2013 report?

A. Yes, ma'am.

Q. All right. And do we see that on the front page of the report where it says Item 3.2.1, portion of anal swabs from fraction?

A. Yes.

Q. Okay. And what are the statistical values on

-- that is, if you could just tell us what that section means.

A. Sure. A mixture of DNA from at least two individuals, at least one of whom was male, was obtained from this item. Roy Vasquez cannot be excluded as a possible contributor to the major component of this DNA mixture.

And the probability that a randomly chosen unrelated individual would be included as a possible contributor to the major component of this mixture is approximately one in one sextillion of Caucasians, one in 9.5 sextillion for African-Americans, one in 3.0 quadrillion for Southeast Hispanics and one in 2.7 quintillion or Southwest Hispanics.

Natalie Pineda cannot be excluded as a possible contributor to this mixture.

Q. Okay. And so, looking at this -- well, I guess, first question: How many people are on earth?

A. Approximately 7.2 billion.

Q. Okay. And so, each of these statistical values, the one sextillion, the 9.5 sextillion, 3.0 quadrillion and the 2.7 quintillion, are they bigger or smaller than the earth's -- the number of people on the earth?

A. Larger.
Q. Okay. Each of them individually?
A. Yes.
Q. Now, if we know that the person who we took the buccal swab from is Hispanic, do you generally start looking at the Southeast and Southwest Hispanic numbers more?
A. Well, we give those four population groups because they're in our common population groups that we encounter. But if you notice, the statistics do not -- from one population to another, do not vary in magnitude so much that would be drastically different.
Q. Okay. Just to ask -- I guess, looking at -- did you -- have you done calculations as to how many earths there would have to be in order to have another person with this exact profile for each of these divisions?
A. Oh, I'm sorry. One more time.
Q. Did I ask it wrong?
A. That's okay.
Q. Have you done any calculations to determine how many earths we would need to have in order to find somebody else with this same DNA profile that we're seeing in Roy Vasquez?
A. Oh, I don't have that on me right now, but it

is hundreds and thousands more.

Q. So -- sorry. Just to clear on that. Did you and I talk about this at a previous time?

A. We did. I thought I was coming tomorrow.

Q. Okay. And so, did you -- did we determine that it was at least more than one earth and you said it was about hundreds?

A. It was -- yes, quite a few hundreds, yes.

Q. Okay. So, the statistical probability of finding someone with the exact same DNA on this earth, would you say it's probable, possible or what would your determination be?

A. Well, it would mean that you would potentially have to poll, let's say, another sextillion people, which is far greater than the world's population, to potentially find another profile that would be consistent with the evidentiary profile.

Q. Okay. So, it's rare?

A. It's rather rare.

MS. ROBERTS: Your Honor, I pass the witness.

THE COURT: Ms. Reddi?

MS. REDDI: Thank you, sir.

THE COURT: Yes, ma'am.

CROSS-EXAMINATION

BY MS. REDDI:

Q. Ms. Hill, how long again have you worked for the HPD Crime Lab?

A. It was a little over eight years.

Q. Okay. And were you working there when HPD crime labs was in the news for shoddy -- shoddy work?

A. Do you have a specific instance?

Q. There were plenty in the news. But HPD Crime Lab was in the news for --

A. There were times where it was in the news. So, I wasn't sure if you had a particular time frame that you would like me to expand on.

Q. Now, particularly one instance, but it has been in the news for shoddy work, correct?

A. I have heard that in the media.

Q. Okay. And you don't know that at work? You have not heard it at work?

MS. ROBERTS: Objection, Your Honor, relevance.

MS. REDDI: I believe it's very relevant, Your Honor.

THE COURT: Overruled.

A. Yes. I am aware of the media saying that.

Q. (BY MS. REDDI) Okay. And would you agree with me that's why they changed their name?

A. I'm not sure for the exact reason that they changed their name. It was -- I know there was multiple reasons actually. Just getting the laboratory out underneath the police department was a good move, that was seen for that.

Q. Sure. And -- but it doesn't quite have the sterling reputation that most labs have.

A. I think that the reputation now has been -- has been great. I've heard very good reviews about the laboratory.

Q. Okay. Now, is there a backlog for DNA testing at the lab right now?

A. Right now, I'm not sure where they are on the backlog. But at the time, we were processing the backlog cases.

Q. Okay. And when did you say you got the sample?

A. Which -- which sample, the evidence samples?

Q. Yes.

A. Looks like the sexual assault kit was received April 18th of 2012.

Q. Okay. And did you know that the incident happened in 2009?

A. Which incident would that be?

Q. The alleged aggravated sexual assault.

A. Oh, no. I was not aware. I think that might be on the offense report or their request.

Q. Okay. Would it surprise you if I told you that the DNA was tested on the third request, which is some two and a half years after the fact?

A. No, it would not surprise me.

Q. While going through these different tests, you said that there were several individuals involved in the processing of the DNA.

A. Yes, ma'am.

Q. And you named them by name. And I believe you said Diana Donely or was it Connelly?

A. Her maiden name was Crossen and she's now Diana Donely.

Q. Okay. And was one of the people involved in that testing, I believe in two -- was it 2012, July 31st? Was it Karen Gincoo?

A. Yes, ma'am.

Q. Okay. And you testified earlier that most of the people that worked in the lab with you, you could vouch for their work, correct?

A. Yes, ma'am, all the people in the lab.

Q. Okay. And so, you work pretty closely together?

A. Yes. We did work -- well, we were within one

department, the biology section. So, we all worked together.

Q. Okay. Did you know that in August of 2013, the crime lab -- laboratory informed the DA's office that Karen had made some errors during her proficiency exam?

A. Yes, ma'am, I'm aware.

Q. And so, that doesn't tell me that she does excellent work.

MS. ROBERTS: Objection, Your Honor, that's not a question.

THE COURT: Sustained.

Q. (BY MS. REDDI) So, what do have to say about that?

A. What would you like me to explain?

Q. Would that not effect what you-all do?

A. The error was identified in a proficiency test. And the proper measures and protocols were then carried out to ensure that that particular analyst was one, removed from casework so that an investigation could ensue. And a review of cases was then performed that went back to her last successful proficiency test. And then rework has since occurred if it was warranted.

Q. Okay. And specifically, what error did she make? Wasn't it a swap in the samples?

A. Yes, ma'am. It had to do with a sample switch.
Q. Okay. And wouldn't you agree with me that's fairly fatal?
A. It's a -- it's a very large error, yes, ma'am.
Q. Okay. And she is one of the people that was involved in one of the testings, correct?
A. She was involved, yes, ma'am.
Q. And one of the people that you vouched for?
A. Yes, ma'am. And -- yes, ma'am. From her work and the laboratory work sheets that were in this report, yes.
Q. Okay. And this report went out to the Harris County District Attorney's Office regarding her error?
A. Yes, it did.
Q. Okay. Now, these anal swabs that were taken, you tested the swabs, but you don't know where exactly the swabs were taken from, correct?
A. Correct.
Q. So, you don't know if this swab was taken outside the anus or they went inside the anus, correct?
A. Correct.
Q. Okay. So, quite frankly, you can't really testify to a sexual assault, correct?
A. No, ma'am.

Q. All you can testify to is the presence of sperm, correct?
A. I can testify to the presence of the DNA profile obtained from the item labeled as anal swabs.
Q. Sure. And specifically here, you were talking about testing sperm?
A. Yes. In the screening process, semen was identified.
Q. Of course.
A. Yes.
Q. Semen?
A. Yes, ma'am.
Q. That's what I meant to say.
Okay. Now, you would agree with me that semen can appear from consensual sex or rape, correct?
A. Yes, ma'am.
MS. REDDI: No further questions, Your Honor.
THE COURT: Ms. Roberts?
MS. ROBERTS: Briefly, Your Honor.

REDIRECT EXAMINATION

BY MS. ROBERTS:
Q. I'm just going to talk to you about a few things. Okay, Ms. Hill?
A. Yes, ma'am.

Q. First off, do you have any knowledge of why there was a delay in the testing on the items from this SANE kit as they were logged into the lab on 12/15/09 and not pulled for testing until 4/18/2012?

A. I don't have direct knowledge of that, no.

Q. Okay. But you were talking about a backlog. Is that something that HPD was working through at that time?

A. Yes, ma'am.

Q. But at the time of the testing, did y'all have a known sample anyway -- a known sample to test it against the first time of testing? Sorry.

A. The known saliva swabs?

Q. Of a suspect.

A. Oh, no, we did not.

Q. Okay. And that didn't come into later even after the first -- the July 2012 report was generated?

A. Yes, ma'am.

Q. Now, I want to talk to you about Karen Gincoo. Specifically, which swabs did Karen touch in this case?

A. She extracted the portion of the known saliva swabs from Natalie Pineda.

Q. Okay. And so, if there had been a switch, would we have been able to tell?

A. Yes, ma'am.
Q. Okay. And how?
A. With a known saliva swab or anything from a known reference sample, we have an expectation of what that sample will be. For example, if it's my sample, I'm expecting a female profile, not a male. And also because there was a sexual assault kit where intimate items were collected from her person, we had profiles that were consistent with her known. So, that also led me to believe that that -- that everything processing wise was done correctly.
Q. Okay. And so, did Karen Gincoo ever have anything to do with the defendant Roy Vasquez's known saliva sample?
A. No, ma'am.
Q. Did -- she never touched it or moved it around?
A. No, not her or her records.
Q. And she did not touch or work on any of the physical evidence from the SANE exam either?
A. No. That would be the screener Kristina Blackmon.
Q. Okay. And so, your confidence in saying that Karen Gincoo did not make a switch on this date, is it high or low?

A. High.

MS. ROBERTS: Pass the witness, Your Honor.

THE COURT: Ms. Reddi?

MS. REDDI: Very briefly, Your Honor.

THE COURT: Okay.

RECROSS-EXAMINATION

BY MS. REDDI:

Q. Ms. Hill, in the past HPD has been under investigation. And there were some falsification of DNA results as well, correct?

A. Falsification?

MS. ROBERTS: Objection, Your Honor, to relevance.

THE COURT: Sustained.

Q. (BY MS. REDDI) HPD has had a problem in the past.

MS. ROBERTS: Objection, Your Honor, asked and answered.

THE COURT: I'll let her finish her question.

Q. (BY MS. REDDI) HPD Crime Lab has had -- in the past have had problems with technicians falsifying records, correct?

MS. ROBERTS: Objection, Your Honor,

relevance.

THE COURT: Sustained.

MS. REDDI: It's very relevant, Your Honor.

THE COURT: That's sustained.

MS. REDDI: Pass the witness, Your Honor.

MS. ROBERTS: Nothing further from the State, Your Honor.

THE COURT: All right. You may be excused. Thank you.

Call your next witness, please.

MS. ROBERTS: Your Honor, the State rests.

THE COURT: Okay. Ladies and gentlemen, the State has rested. That's all the evidence you're going to hear from them at this point.

So, I'm going to ask you to briefly just step to the back. I need to discuss with the attorneys how we're going to proceed from here. Hopefully that won't take but just a minute or two and then we can get started back.

So, if you'll step to the back, please.

(Jury out).

THE COURT: Ms. Reddi?

MS. REDDI: At this time we'd like to