Witness: William R. Hudlow

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Called by: People (prosecution)

Phase: Guilt

Examinations: Direct – David Harris; Cross – Mark Geragos; Redirect – David Harris; Recross – Mark Geragos

Day 1 of 1 for this witness

Court: San Mateo County Superior Court, Redwood City (People v. Scott Peterson)

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Direct Examination by David Harris

HARRIS: Mr. Hudlow, if you can pull the microphone towards you.

HUDLOW: Is that better?

JUDGE: Yeah. Maybe scoot up a little closer.

HUDLOW: Sure.

JUDGE: Thank you. Get you squared away, here.

HARRIS: Thank you, Judge.

HARRIS: Who are you employed by?

HUDLOW: I'm employed by the California Department of Justice, Central Valley Crime Laboratory.

HARRIS: What is your occupation with the Department of Justice?

HUDLOW: I'm a senior criminalist.

HARRIS: As a senior criminalist, what is it that you do and which particular laboratory do you work at?

HUDLOW: A criminalist is an individual trained in the sciences that collects and analyzes physical evidence and writes reports and then testifies in court about their reports and their opinions.

HARRIS: The second part of that is which laboratory were you employed by?

HUDLOW: The Central Valley Criminalistics Laboratory in Ripon.

HARRIS: Are you assigned to a particular unit at the Ripon -- Ripon laboratory?

HUDLOW: Yes, I work in the serology/DNA section.

HARRIS: And do you specialize in doing DNA testing?

HUDLOW: Yes, my area of specialty is DNA analysis.

HARRIS: As a person that specializes in that, do you have a -- if you can just give us your background, education, training that allows you to be somebody who specializes in DN
HUDLOW: Sure. I have a Bachelor of Science in chemistry with a minor in physics, a Master's of Science in chemistry. I received training from the California Criminalistics Institute in basic

forensic serology, DNA extraction and typing, DQ alpha polymarker typing, D1S80 typing, and short tandem repeat typing.

HARRIS: And have you testified as an expert before on DNA?

HUDLOW: Yes, I have.

JUDGE: How many times?

HUDLOW: Just once.

JUDGE: Go ahead.

HARRIS: I want to direct your attention to Central Valley case number 02010941, and ask if you worked on that particular case?

HUDLOW: Yes, I have.

HARRIS: And when we talk about that particular case, separate requests come into the laboratory, and did you work on a particular request, request number 2?

HUDLOW: Yes, I did.

HARRIS: So I want to direct and focus your attention to that particular request and give you a chance to catch up on your notes?

HUDLOW: Certainly. May I refer to my notes and the report?

HARRIS: Yes.

JUDGE: Go ahead. I assume you're offering him as an expert in DNA?

HARRIS: Yes.

JUDGE: Do you have any questions as to his qualification?

GERAGOS: No, your Honor.

JUDGE: All right. We'll accept Mr. Hudlow as an expert in DNA, qualified to give an opinion. Go ahead.

HARRIS: Thank you. Mr. Hudlow, with regards to this particular request number, did you receive an item that was a presumptive test positive for blood from a pickup truck from Miss Kyo to test for DNA comparison?

HUDLOW: Yes, I did. I believe you're referring to item 1 D.

HARRIS: And did you also receive some possible -- or some bloodstains from a comforter, 57 C, C 1?

HUDLOW: Yes, I did.

HARRIS: And did you test those two particular items using DNA testing?

HUDLOW: Yes, I did.

HARRIS: And can you tell us briefly what you did and what your results were?

HUDLOW: I extracted each of these items, as well as several reference samples for a comparison, using a standard, again, extraction protocol. I then estimated the quantity of DNA in each of these samples, amplified a portion of that DNA extract using the Profiler Plus typing kit, and then analyzed the data and compared, as I mentioned, to the reference samples.

HARRIS: Now, in this particular case, the reference samples, was that a blood sample obtained from the defendant, Scott Peterson?

HUDLOW: That was one of the samples, yes.

HARRIS: And did you make a comparison of the defendant's sample to the two bloodstains, one from the pickup truck and one from the comforter?

HUDLOW: Yes, I did.

HARRIS: What results, if any, did you receive?

HUDLOW: The genetic profile from the bloodstains swab from the pickup truck and from the bloodstain on the comforter were the same as Scott Peterson's.

HARRIS: And when you talked about a profile, how does this break down?

HUDLOW: What we do is we look at multiple locations on the DNA. In this case we looked at nine STR markers and one gender-specific marker, amelogenin. So in comparing each of those nine STR markers, they were all the same as Mr. Peterson's.

HARRIS: Do you go do -- go through some mathematical process after you get that and there's a match?

HUDLOW: Yes, we do. We use a couple of standard equations to calculate the frequencies. And in doing so, we will estimate how often we think we would expect to see that profile if randomly selecting individuals in the public.

HARRIS: And did you obtain any results by going through this mathematical frequency?

HUDLOW: Yes, I did.

HARRIS: What was the mathematical frequency of replicating that same profile?

HUDLOW: I'm referring to my report. This profile is estimated to occur at random among unrelated individuals in approximately one in twenty trillion African Americans, one in a hundred and eighty billion Caucasians, and one in nine point eight trillion Hispanics.

HARRIS: Now, just using -- the I guess it would be most conservative, that would be one out of eight hundred (sic) and eighty billion?

HUDLOW: Yes.

HARRIS: Now, moving on to your request number 13.

HUDLOW: Yes.

HARRIS: At some point in time you had these materials in the Ripon laboratory, the DNA materials, so to speak?

HUDLOW: The items that you're referring to from request number 13, yes.

HARRIS: And -- well, I'm talking about from the first request, you have the blood card, you have certain other items at the lab. Did you get requested by the Richmond DNA lab or the Modesto Police Department to take your DNA material or your known samples over to Richmond for identification purposes?

HUDLOW: Yes, a request was made to transfer a number of reference samples from our laboratory to the Richmond DNA laboratory for use in identification of remains found in Richmond.

HARRIS: Were you given the task of the gathering up the items that you had at the Richmond laboratory -- or the Ripon laboratory?

HUDLOW: Yes, I was.

HARRIS: And did you gather those up or package them in any way?

HUDLOW: Yes, I did.

HARRIS: I'd like to show you a series of photographs.

JUDGE: Have we marked these that you're going to show?

HARRIS: They've already been marked.

JUDGE: All right.

HARRIS: Let me just look at these real quick and see if you recognize any of these photographs.

HUDLOW: All right. Yes, I recognize my initials and date, as well as item numbers on a number of these items.

HARRIS: All right. Let me go ahead and pull these out. I don't want to jump around on you, but I'm kind of forced to. Did you at some point in time go back up to Richmond and retrieve those items and some additional items?

HUDLOW: Yes, I retrieved the items that I dropped off, as well as one additional item for transfer to the FBI laboratory.

HARRIS: And after you retrieved that -- those particular items from the laboratory, again did you repackage them? Or just take them in the packages line that they were in and prepare them for transport to the FBI?

HUDLOW: Yes, I did.

HARRIS: And did you -- the items that you prepared for transport to the FBI, did you personally give that to Agent Terry Scott?

HUDLOW: Yes, I did.

HARRIS: Let me show you one additional photograph, 245 E. Do you recognize that?

HUDLOW: Yes, I do.

HARRIS: And is this a photograph of a blood card that was prepared by Ms. Kyo that you used in your DNA testing, also gave to Richmond and packaged to go to the FBI as well?

HUDLOW: Yes.

HARRIS: Let me go through these photographs now. The last one that we were just looking at, the photograph that's this one right here, 245 E, this is the -- the blood cards that we were talking about?

HUDLOW: Yes, they are.

HARRIS: And that was marked as item 18 A?

HUDLOW: Yes.

HARRIS: I'm going to show you 162 A. Do you recognize these as being the outside packages or the transport envelopes that you provided to Richmond and/or the FBI?

HUDLOW: Yes, I do.

HARRIS: Showing you 162 B, these are somewhat out of order, but is this the outside envelope of the blood cards that we were looking at in the previous photograph?

HUDLOW: Yes, it is.

HARRIS: I'm sorry?

HUDLOW: Yes, it is.

HARRIS: This is you identified as 18 A?

HUDLOW: Yes.

HARRIS: Showing you 162 C, is this the outside envelope of the cheek swab of Sharon Rocha that you used or you took to Ripon and then provided to Terry Scott of the FBI?

HUDLOW: Yes.

HARRIS: And does it have your initials up here, your basic information and case number?

HUDLOW: That’s correct.

HARRIS: And then also down here where my finger is, also down there?

HUDLOW: Yes, that's true.

HARRIS: 162 D, does this appear to be your initials in the lower right corner over here?

HUDLOW: Yes, they are.

HARRIS: And this is one of the items that you didn't take to Ripon but you received from Ripon and provided to Terry Scott at the FBI?

HUDLOW: Yes, I received that from Richmond and provided it to Terry Scott.

HARRIS: I'm sorry. I said Ripon. Richmond. And that was identified as DNA dash 4 A?

HUDLOW: Yes.

HARRIS: And this is another photograph, a closeup of the transport envelope 162 E. And does the outside envelope bear your initials down here?

HUDLOW: Yes, it does.

HARRIS: And we've already looked at this card up here, the 18 A card. So let me show you the closeup pictures. 162 F. And looking at these two particular items, looking to the one to the right, it's identified as SR2, is that the transport envelope that Miss Rocha's cheek swab was sent to both the Richmond lab and the FBI?

HUDLOW: Yes, it is.

HARRIS: And it has your initials and identifying information on it?

HUDLOW: Yes, it does.

HARRIS: And there was also a hairs from a black/blue hairbrush, this item over here, 26 A. Does that also bear your initials and information?

HUDLOW: Yes, it does.

HARRIS: Showing you 162 G, one of the transport envelopes with these two items, bear your initials over to the right side?

HUDLOW: Yes, they are.

HARRIS: The contents of this particular item, 162 H, H, again, this is the items here, DR2 F and 26 A 1. Does that bear your initials on there as well?

HUDLOW: Yes, they do.

HARRIS: Those are the items that you took up to Ripon?

HUDLOW: To Richmond, yes.

HARRIS: 162 I, is this another photograph of a -- the blood card envelope and also the 26 A 2 blue/black hairbrush envelope?

HUDLOW: Yes, it is.

HARRIS: 162 J. And these items are the 26 A 1, hairbrush, blue -- black/blue hairbrush, and the DR, Dennis Rocha, cheek swab that went to Richmond?

HUDLOW: Yes, they are.

HARRIS: And bears your initials and information?

HUDLOW: Yes.

HARRIS: And last a closeup of the DR 2, 162 K. Is that the transport envelope for the swab from Mr. Rocha's cheek swab?

HUDLOW: Yes, it is.

HARRIS: And that has your initials and information on it?

HUDLOW: Yes, it does.

HARRIS: Showing you 190 C, is this one of the transport envelopes for the hair from the pliers, 144 A, that was given to Terry Scott at the FBI?

HUDLOW: Yes.

HARRIS: And does it bear your initials and information on it?

HUDLOW: Yes, it does.

HARRIS: 190 D, which this is another transport envelope that contains 26 A 2, DNA-4 A, SR2, 18 A and items 425 dash 1 through 425 dash 7?

HUDLOW: Yes.

HARRIS: And does this have your information at both the top and the bottom of that?

HUDLOW: Yes, it does.

HARRIS: Showing you the inside of these, 219 B, is this the inside envelope from the transport envelopes that you provided to Agent Scott?

HUDLOW: Yes, it is.

HARRIS: And does that have your information down here at the bottom?

HUDLOW: Yes, it does.

HARRIS: 219 D, again, is this a transport envelope and does it bear your information?

HUDLOW: Yes, it does.

HARRIS: 219 F, is this the contents of that, one of the particular items, 26 A 2, hairs from the black/blue hairbrush?

HUDLOW: Yes.

HARRIS: And does it bear your information?

HUDLOW: Yes, it does.

HARRIS: 219 I, are these hair samples taken from the defendant that were submitted to the FBI, and does it bear your information?

HUDLOW: Yes.

HARRIS: And this appears to be another photograph of SR2, the Sharon Rocha cheek swab, Exhibit number 219 M. Does this bear your information?

HUDLOW: Yes, it does.

HARRIS: Now, to go back through that, since we're talking about all these particular items. After you had performed your DNA examination and received your results for the comforter and the swab from the pickup truck, when Richmond asked for this information, did you gather these items that we're talking about and have seen in these photographs?

HUDLOW: Yes, I did.

HARRIS: And did you insure that they were packaged in a sealed condition and deliver them personally over to Richmond?

HUDLOW: That’s correct.

HARRIS: And after Angel Moore was done with her examination for identification purposes, the DNA results over there, were you contacted by her and go back and retrieve those items?

HUDLOW: Yes, I did.

HARRIS: And then at some later point in time were you asked to prepare those very same items and some additional items to take to the -- or for the FBI to take?

HUDLOW: Yes, I was.

HARRIS: And did you package them up in the way that we see them packaged up, and those were the items that you would use and Ripon -- or Richmond had previously used?

HUDLOW: Yes, I did.

HARRIS: And did you personally give those to Terry Scott?

HUDLOW: Yes, I did.

HARRIS: Were they in a sealed condition?

HUDLOW: Yes, they were.

HARRIS: I want to move up to report number 35 -- your request number 35. Bates stamp number 38517. Did you receive a piece of duct tape that was identified as item number 1 dash 5 that had been examined by Pin Kyo and that had been recovered from the remains of Laci Peterson?

HUDLOW: Yes, I did.

HARRIS: Was there a folded over piece or corner of that particular -- particular duct tape?

HUDLOW: Yes, there was.

HARRIS: Did you attempt to do any DNA analysis on that duct tape?

HUDLOW: Yes, I did.

HARRIS: Can you explain to us what occurred?

HUDLOW: The folded over corner was excised, or cut, from the rest of the duct tape. That corner also had a light tan brown material, kind of waxy-like kind of consistency on the outside. The outside was swabbed three times, and then the folded over corner itself was cut up and extracted for DNA analysis, as well as each of the three swabs of the outside of the duct tape.

HARRIS: Did you go through the same process that you were describing for us earlier?

HUDLOW: Yes, I did.

HARRIS: And were you able to obtain any results from those three swabs and that folded over corner?

HUDLOW: Ultimately no genetic profile was developed from any of those samples. However, a low level of DNA was detected in each of three of those samples.

HARRIS: What does that mean?

HUDLOW: That means that I was able to detect human DNA in both the cutting of the duct tape as well as the first two swabs from the outside of the duct tape. However, there wasn't sufficient DNA or the DNA was not of acceptable quality to generate a profile.

HARRIS: Now, when you say acceptable quality, as a person decomposes, does their DNA decompose as well?

HUDLOW: Yes, I believe it would.

HARRIS: And the outside, this tissue or the items that you were talking about, this tan kind of substance, Ms. Kyo described as fat and decomposing tissue. So even though that was there, you were still not able to get a DNA profile?

HUDLOW: That’s correct.

HARRIS: And that was the same with what was on the outside as what was on the inside?

HUDLOW: Essentially the same, yes.

JUDGE: Okay. Let's take the afternoon recess.

HARRIS: All right.

JUDGE: Ladies and gentlemen of the jury, we'll take the recess until 3:00 o'clock. Remember the admonition I've heretofore given you.

JUDGE: All right. Let the record show the defendant is present with counsel. The jury is in the jury box along with the alternates. Go ahead, Mr. Distaso -- you are Mr. Harris, right? Thank you.

GERAGOS: Eliminated the other Mr. Harris.

JUDGE: He's gone.

GERAGOS: He heard you were going to ask him to do the DNA

HARRIS: Mr. Hudlow, we can turn to your Request Number 31. Putting up 159B. In request number 31, were you asked to attempt to do DNA profiling or testing on some trace evidence that was recovered by Rod Oswalt of your laboratory?

HUDLOW: Yes, I was.

HARRIS: And did you attempt to do that?

HUDLOW: Yes, I did.

HARRIS: The item that you were attempting to obtain a DNA profile for, is this is -- does this appear to be that particular item?

HUDLOW: Yes, it does.

HARRIS: And what did you do?

HUDLOW: This item, which we refer as to 144-A dash T2, yielded no human DNA detected, and did not yield a genetic profile after doing the testing as I mentioned earlier.

JUDGE: What's number of that one again?

HARRIS: This one is People's 159B.

JUDGE: 159B.

GERAGOS: B, as in boy.

HARRIS: So as we go through the same process of trying to extract it, run it through the machines, and you come up with no human DNA?

HUDLOW: That’s correct.

HARRIS: People have no further questions.

Cross Examination by Mark Geragos

JUDGE: Okay.

GERAGOS: So that we're clear, that's a substance that, as you understand it, was taken off of 120B, was taken off of a hair, that was taken off of a pliers, supposedly?

HUDLOW: That’s correct.

GERAGOS: Okay.

JUDGE: Been identified as a piece of grass, right?

GERAGOS: What?

JUDGE: Identified as a piece of grass.

GERAGOS: Actually what you were looking at was T2, right?

HUDLOW: That’s correct.

GERAGOS: If I understand correct, it's T2, not because it's Terminator, but because it's Trace Evidence Number 2?

HUDLOW: Yes.

GERAGOS: Trace Evidence Number 1 is this blade of grass?

HUDLOW: I have not looked at Trace Number 1, so I couldn't say.

GERAGOS: All you were given is T2 trace evidence?

JUDGE: It's not plant material.

GERAGOS: It's not a plant material. It's not animal, mineral, vegetable. It's just something that looks like that.

HUDLOW: Yes.

GERAGOS: Okay. And you tested that and tried to extract some kind of DNA, anything DNA from it; is that correct?

HUDLOW: Yes.

GERAGOS: And I take it you got a big zero.

HUDLOW: Nothing detected.

GERAGOS: Okay. And the DNA that Mr. Harris went through with you, in regards to that, you -- that was -- you took a test of one of these samples, or the swab from the inside of the door; is that right?

HUDLOW: I believe referring to item 1-D from Mr. Peterson's truck?

GERAGOS: Yeah.

HUDLOW: Yes.

GERAGOS: And that came back that it was Mr. Peterson?

HUDLOW: Yes, it did.

GERAGOS: And then the other sample that you took was one of these -- I guess it was described as five millimeters. Is that an accurate size of the spot?

HUDLOW: I'd have to look back in my notes if I could. But it was very small stain, if you are referring to the stain in the comforter.

GERAGOS: I'm referring to the stain in comforter. How small are you talking about?

HUDLOW: I would say the stain was probably a couple of millimeters square, at best. I took a cutting slightly larger than that to ensure that I had the entire sample.

GERAGOS: Okay. And that was the -- you tested a sample on the comforter, and that's Mr. Peterson's. Approximately how much blood is actually there? Can you quantify how much is there?

HUDLOW: I could guess at fraction of a drop.

GERAGOS: Fraction of a drop?

HUDLOW: Yes.

GERAGOS: Thank you. I have no further questions.

Redirect Examination by David Harris

JUDGE: May this witness be excused?

HARRIS: Just real briefly. Mr. Hudlow, just to be clear, when counsel said -- I understand the form of the question saying it wasn't animal, vegetable, or mineral. Then he actually asked a question after that. When you said no, you weren't saying this wasn't animal, vegetable, or mineral. You were answering the second part of that question?

HUDLOW: That's correct.

HARRIS: So when we're talking about the T2 trace item that you tested for DNA, that was no human DNA?

HUDLOW: No human DNA detected.

HARRIS: People have no other questions.

Recross Examination by Mark Geragos

GERAGOS: You can't determine what it was, right? You were there obviously for DNA, but you didn't recognize it to be anything, did you?

HUDLOW: I can't recognize it as any one specific thing, no.

GERAGOS: Thank you. No further questions.

JUDGE: Thank you very much. He can be excused. Thank you.