

1 KATHLEEN M. CIULA,

2 A witness called on behalf of the People, was duly sworn,  
3 testified as follows:

4  
5 THE WITNESS: I do.

6 THE CLERK: Please state your full name for  
7 the record and spell your last name.

8 THE WITNESS: Kathleen M. Ciula, C-i-u-l-a.  
9

10 DIRECT EXAMINATION

11 BY MR. MAYO: Q. Ms. Ciula, can you tell us  
12 what your occupation is?

13 A. Yes. I am a senior criminalist with the California  
14 Department of Justice Criminalistics Laboratories in French  
15 Camp and Modesto.

16 Q. And can you tell us what the responsibilities of the  
17 senior criminalist are?

18 A. A senior criminalist is a person with scientific  
19 training that uses scientific methods and techniques to  
20 analyze physical evidence submitted to the laboratory, form  
21 an opinion from the results of the scientific analysis and  
22 present those opinions in a report and courtroom testimony.

23 Q. And how long have you been a criminalist?

24 A. I have been with the Department of Justice about five  
25 and a half years.

26 Q. What is your training and experience which qualifies  
27 you for this particular position?

28 A. I have a Bachelor of Arts degree in chemistry from

1 the University of California at Davis and a Master's of  
2 Science degree also in chemistry from California State  
3 University at Fresno.

4 In addition to my chemistry course work, I have also  
5 had college course work in biology, zoology, embryology,  
6 physiology, genetics, biochemistry and protein  
7 biotechnology, all while with the Department of Justice.

8 I have attended numerous classes presented by the  
9 California Criminalistics Institute in Sacramento and these  
10 classes have consisted of basic serology, which is a class  
11 designed to teach you how to locate and identify various  
12 physiological stains, things such as blood and semen. And I  
13 have those stains and do some genetic typing of those  
14 stains.

15 I have attended two one week classes on  
16 electrophoresis, which is also a technique used to  
17 genetically type stains such as blood and semen. A two week  
18 course on the examination of sexual assault evidence, which  
19 dealt with identifying semen stains, doing the genetic  
20 typing of those stains, and interpreting the results of the  
21 genetic typing. And a microscopy on a rape class, which  
22 dealt with the examination of semen stains for the presence  
23 of spermatozoan.

24 I have also received training in the laboratory for  
25 more experience criminalists on the identification of  
26 various physiological stains, including blood and semen,  
27 the genetic typing of those stains and the interpretation of  
28 those genetic types.

1 Q. As a result of your employment, were you called upon  
2 to make any type of comparisons in a case where a suspect  
3 was named Peter Rose?

4 A. Yes, I was.

5 Q. And do you remember when you were approximately asked  
6 to do that?

7 A. Could I refer to my report?

8 My report is dated February 9th, 1995. And another  
9 report dated January 24th, 1995. So somewhere a little  
10 before January 24th was when I first started my examination  
11 on these items.

12 Q. Now you say you did an examination on these items.  
13 Can you tell us what items those were?

14 A. I received in the laboratory, a sexual assault  
15 evidence kit from a victim. And in addition to the sexual  
16 assault evidence kit, various cloth items associated with  
17 that victim, including a pair of underwear.

18 Now I was asked to examine the contents of the sexual  
19 assault kit for possible foreign hairs and any semen stains  
20 on vaginal swabs, rectum swabs and on the underwear.

21 Q. Can you tell us what is normally included in the  
22 sexual assault kit?

23 A. In a typical victim sexual assault kit where the  
24 victim is a female, there are various standards. These  
25 standards include a blood sample and a saliva sample.

26 These are used for determining the genetic type of  
27 the victim, pubic hair and head hair standards, which are  
28 used for evaluating possible foreign hairs, a pubic hair

1 brushing which is collected to collect any loose hairs in  
2 the pubic hair region that could be from the perpetrator in  
3 an assault.

4 Then there are vaginal swabs and vaginal smear slides  
5 made from those swabs. There could be oral swabs and oral  
6 smear slides and rectal swabs and rectal smear slides. And  
7 there could be any other type swabs that the doctor at the  
8 time may deem important. And sometimes in the kit  
9 themselves, the victim's underwear is submitted. Sometimes  
10 it is submitted separately.

11 Q. Can you tell us how pubic hair brushing is done?

12 A. There is a paper towel that is held under the pubic  
13 region. And there is a brand new brush that is provided in  
14 the sexual assault kit. And this is a very soft plastic  
15 brush.

16 And the pubic region is just combed with this brush.  
17 And then the brush is placed in the paper towel, is wrapped  
18 up and placed back in the envelope in which it originally  
19 came in the kit. And this is done prior to a collection of  
20 any pubic hair standards.

21 Q. Now when you say this is done prior to the collection  
22 of pubic hair standards, can you tell the jury what you mean  
23 by that?

24 A. Pubic hair standards are the actual hairs from that  
25 individual. And these hairs are either collected by pulling  
26 or cutting very close to the skin. And you want to collect  
27 the pubic hair brushing before any standards, so that if  
28 some of the hairs cut were not removed for the standards,

1 those don't collect in the pubic hair brushing themselves.  
2 So you don't get a mix up of the standards with any loose  
3 hairs that may be in the pubic hair region.

4 Q. So is this pubic hair brush, is it really really  
5 soft, it is not made to pull hair at all?

6 A. That is correct.

7 Q. Can you tell us what you first did when you received  
8 this material?

9 A. The first thing I would do is examine the outer  
10 packaging to ensure it was received sealed. I would then  
11 open the kit and inventory the items present inside the kit.

12 And from there, I would move onto my examination.  
13 Usually the blood sample would have been broken down. And  
14 by broken down, what I mean is ABO typing would have already  
15 been done on the witness' blood sample. And a blood stain  
16 would have been made from this.

17 And by that, the blood is pipetted onto a card and  
18 allowed to dry. And then that blood stain is stored frozen,  
19 and the dry frozen blood stain is the best way to preserve  
20 genetic material for a particular blood standard for later  
21 comparison. So that would have already been done.

22 At this point, after inventorying the items, I would  
23 have examined the vaginal swabs and vaginal smear slides for  
24 the presence of semen and spermatozoan.

25 Q. Now is this a simple process to do that type of  
26 examination?

27 A. It is. It would appear simple. It requires chemical  
28 reactions that you need training to understand and the

1 examination of the smear slides can be a rather time  
2 dependent search. You're looking at a microscope at 400  
3 times power and that can take some time. And you have to  
4 have knowledge of what a spermatozoan looks like to be able  
5 to tell a human spermatozoan.

6 Q. How long did it take you to view the -- well, what  
7 swabs did you review?

8 A. The vaginal swabs were what I would start with.

9 Q. And how long did it take you to view those swabs?

10 A. The actual testing of the swabs would take only a few  
11 minutes. And for that, I would be doing a color presumptive  
12 test for something called seminal acid phosphatase. We  
13 refer to it by the letters SAP. And this acid phosphatase  
14 is found in high levels in semen.

15 And by taking a portion of the swab, reacting it with  
16 these chemicals, I look for a color change in the chemicals  
17 that would tell me that I had a high level of acid  
18 phosphatase present. And thus I could potentially have  
19 semen present.

20 I would have to do a confirmatory test to prove it.

21 Q. What were your results of that test?

22 A. That was positive. In other words, I saw the color  
23 change indicative of the acid phosphatase.

24 Q. And what did you do in that regard?

25 A. After that I would examine the smear slides, the  
26 vaginal smear slides, which are made from the swabs, and  
27 that would to be look for spermatozoan, which is one  
28 confirmatory test for the presence of semen.

1 Q. And did you do that?

2 A. Yes, I did.

3 Q. Is this a very complicated or complex project?

4 A. It involves steady knowing what a human spermatozoan  
5 looks like and it involves time on a microscope examining  
6 the smear slide.

7 Q. So when you have a positive change in the vaginal  
8 swab, what do you expect to find in the smear slide?

9 A. Hopefully I will find intact spermatozoan. I always  
10 see from a vaginal smear slide epithelial seals, which are  
11 just a type of skin cell which is common to see in vaginal  
12 swabs.

13 But hopefully with a strong positive SAP test, I  
14 would expect to find spermatozoan.

15 Q. How often when you have a positive test, do you find  
16 sperm with the smear slide?

17 A. About 75 percent of the time, I would say.

18 Q. Why don't you find it the other 25 percent of the  
19 time?

20 A. It could have to do with the amount of time in  
21 between the sexual assault and when the kit was collected.

22 It could have to do with how the swabs were  
23 collected. They could have actually missed the best area  
24 for the spermatozoan. It could be that there was no semen  
25 present, and what I am seeing is from some other fluid  
26 present. Some vaginal fluids can give a positive acid  
27 phosphatase test, which is why that is just a presumptive  
28 test. Or the individual could be vasectomized in which case

1 there would be no spermatozoan present.

2 But I would still have the liquid components of  
3 seminal fluid.

4 Q. What did you find on this smear slide?

5 A. This smear slide I found the epithelial cells, but I  
6 did not see any spermatozoan.

7 Q. Can you tell us what you mean again by the epithelial  
8 cells?

9 A. The epithelial cells is what you typically see in  
10 vaginal secretions. It is from the skin lining in the  
11 vagina.

12 Q. After you did this test, what test did you do?

13 A. I then did a confirmatory test for another component  
14 in semen. And this is a protein that is specific for semen  
15 and it is referred to as P30.

16 And what I do is I react a sample of the swab with an  
17 antibody to the P30 protein, and I look to see if I get a  
18 precipitate reaction occurring. In which case, that tells  
19 me I have P30 present. And therefore I do have the liquid  
20 component, at least of semen.

21 Q. What happened after this test?

\* 22 A. This test was positive. I did get the precipitate  
23 reaction. And therefore, I confirmed that there was seminal  
24 fluid present on the vaginal -- excuse me, I think I am  
25 confusing myself here.

26 I believe this test was negative on the swabs, and I  
\* 27 did not see any semen on the vaginal swabs.

28 Q. And does that mean there was never any semen in the

1 vaginal area?

2 A. No, that does not.

3 Q. Why is that?

4 A. The vagina is always secreting vaginal fluid. And if  
5 there had been semen present, it would constantly be diluted  
6 and drained from the vagina because of this vaginal  
7 secretion.

8 So the seminal fluid would only stay in the vagina a  
9 short period of time. It would then drain out and you could  
10 see it then on underwear or any other clothing that could be  
11 down there.

12 Q. In that regard, did you then do testing on some of  
13 the clothing that was submitted to you?

14 A. Yes. I then did testing on the underwear in this  
15 case.

16 Q. And can you tell us what you did in regards to the  
17 underwear?

18 A. In regards to the underwear, I started off with a  
19 visual exam of the underwear. And I did the SAP test that I  
20 had referred to previously on various stains I found in the  
21 underwear, and one area that I found did test positive for  
22 the SAP or seminal aside phosphatase.

23 Q. Can you tell us where this stain was located?

24 A. Yes. This was in the crouch area of the underwear,  
25 kind of middle of the crouch, toward the side, toward one  
26 leg, the elastic area of the underwear.

27 Q. Did you then do some more testing after you got the  
28 positive reaction?

1 A. Yes. I again did an examination of a cutting from  
2 the underwear. I put it on a microscope slide and agitated  
3 the cutting with some water to try and knock any cellular  
4 material off to see if I could observe any spermatozoan.

5 Again I saw epithelial cells, but no spermatozoan. I  
6 then ran the P30 test to see if I could detect the protein  
7 P30 in that stain. And in this case, it did come back  
8 positive, so I did detect semen on the underwear.

9 Q. Can you tell us how big the stain or how big of an  
10 area this was?

11 A. It is hard to judge the exact size of the stains  
12 because the semen stain doesn't have a real color to it like  
13 you see with a blood stain, blood red on a white clothe you  
14 would see a definite outline.

15 Semen has a slight yellowish appearance. And the  
16 area that I saw probably was about an inch long by a quarter  
17 to 3/8ths of an inch wide.

18 It wasn't a very large area on the underwear.

19 Q. And this stain, did it go right up to the edge of the  
20 underwear?

21 A. It appeared to go close to the elastic edge of the  
22 underwear and extended back toward the middle area of the  
23 crouch of the underwear.

24 Q. As a result of making a positive finding on semen,  
25 what did you do next?

26 A. I then ultimately did genetic typing of the stain  
27 once I obtained a standard for the suspect in the case.

28 Q. Can you tell us what you mean by genetic typing?

1 A. Genetic typing is looking for genetic markers. These  
2 are proteins that are found in body fluids, blood semen,  
3 vaginal fluid.

4 They are determined by the genetics of the  
5 individual, that is their parents. They remain constant  
6 throughout the entire life of that individual.

7 And what we detect in the semen and vaginal fluids  
8 are similar to what we can detect in blood samples. And in  
9 this particular case, we looked at the ABO protein or  
10 antigen which is found on a red blood cell in blood and can  
11 be secreted into the vaginal fluid and seminal fluid of  
12 individuals.

13 And an enzyme called PGM, which is also found in  
14 blood and is found in seminal fluid and vaginal fluid.

15 Q. Did you then attempt to match the seminal fluid that  
16 you found with the blood sample of the alleged victim you  
17 were given and also the alleged defendant you were given or  
18 suspect?

19 A. Rather than say match, what I do is I run the blood  
20 and saliva standards for the victim and the blood and saliva  
21 standards for the suspect to see what their genetic types  
22 are. And then I run the semen stain and see what genetic  
23 types I detect in that particular semen stain.

24 In just about every sexual assault case, when I refer  
25 to a semen stain, it is actually a mixture of semen and  
26 vaginal fluid. And in this case in the crouch of underwear  
27 there would be a mixture of semen and vaginal fluid present.

28 So I would then look at the genetic types I obtained

1 and compare them to that of the victim and the suspect to  
2 try and determine then if the suspect could be the source of  
3 that semen or could not be the source.

4 Q. What genetic typing markers did you get when you ran  
5 this test on the victim?

6 A. The victim, as I said, I ran ABO and PGM, and for the  
7 victim, I found her to be an O secretor, and for the ABO --  
8 and what the secretor means is that that particular person  
9 would secret their ABO information into other body fluids  
10 such as vaginal fluid and saliva.

11 And her PGM type was a one plus. PGM has four  
12 different alleles, that is types that you can see. And a  
13 person can be any combination of two of those with types  
14 being a one plus, one minus, two plus, two minus. It is  
15 just the designation that is given to these types.

16 It is like the ABO in the ABO system. So in this  
17 case, she was a PGM type one plus.

18 Q. And what did you get as a result of your testing of  
19 the individual that was named as Peter Rose?

20 A. He came back as an A secretor. And again that means  
21 that A, he is type A person in the ABO system. Secretor  
22 means I should be able to find it in his seminal fluid, and  
23 his PGM type was a one plus.

24 Q. And then what did you get of your testing of the  
25 semen stuff?

26 A. The semen stain from the underwear I was able to  
27 detect a PGM type one plus. But my ABO typing was  
28 inconclusive.

1 In other words, I could not assign a specific ABO  
2 type to that stain.

3 Q. Why was that?

4 A. For the ABO type, you need to run a control, which is  
5 an area of the crotch of the underwear that is not semen  
6 stained. And you compare what you get in that control to  
7 what you get in the semen stain.

8 The control, you should not get any ABO information  
9 occurring into it. In this case, some ABO information was  
10 coming up, so I could not say in that semen stain if what I  
11 was seeing was coming from just the underwear itself or if  
12 it was coming from the semen on top of the underwear. And  
13 so it was then inconclusive.

14 Q. So you are saying you couldn't separate what was  
15 actually on the underwear compared to just testing semen?

16 A. That is correct.

17 Q. And is this something that is usually biblical with  
18 underwear?

19 A. Yes. The ABO typing on underwear comes up  
20 inconclusive most of the time. And this is because you get  
21 a lot of perspiration occurring down in the crotch area of  
22 underwear. And the perspiration can also carry ABO  
23 information. And so it comes up with ABO information on the  
24 control in most cases from underwear.

25 Q. So you're telling us that the only conclusive thing  
26 you could find was a PGM type?

27 A. That is correct.

28 Q. As a result of this PGM typing, what does that tell

1 you when you compare that with the victim?

2 A. Because the PGM type I detected in the semen stain is  
3 the same that I would expect from the victim. I cannot tell  
4 how much of the information I am seeing, if any, is coming  
5 from the semen donor.

6 As I had mentioned, you get semen on the underwear  
7 from the drainage from the vaginal region. That vaginal  
8 fluid is always being created. You have a limited amount of  
9 semen there, so it is constantly being diluted. So there  
10 can come a point where the amount of vaginal fluid would  
11 overwhelm the semen.

12 And I could essentially not detect the PGM  
13 information from the semen donor there.

14 Of course, in this case, the suspect is a one plus.  
15 And it is not inconsistent with the information I saw. I  
16 just cannot say how much, if any, of that PGM one plus  
17 information could have come from the semen donor.

18 Q. What percentage of humans are one plus?

19 A. PGM type one plus is found in about 30 percent of the  
20 general population.

21 Q. So you are telling us the victim had a one plus PGM?

22 A. Yes.

23 Q. And the suspect Peter Rose had a one plus PGM?

24 A. Yes.

25 Q. And then what did the semen stain have?

26 A. It also had a one plus PGM.

27 Q. So based on your studies, you can't say it came from  
28 the victim, the suspect or a combination?

1 A. That is correct.

2 In other words, I cannot eliminate Peter Rose is the  
3 donor of the semen.

4 Q. After you made these findings, did you attempt to  
5 look for any other types of evidence?

6 A. All throughout, prior to doing the genetic typing, I  
7 did finish looking at the items submitted. And I believe I  
8 saw some hairs in a preliminary examination comparing them  
9 with hair standards submitted by the victim and the suspect.  
10 I was not able to say who they could have come from.

11 Q. And you said you did a preliminary examination on the  
12 hair. Did somebody else do a more thorough examination of  
13 the hair?

14 A. Yes.

15 Q. Can you tell us what your initial preliminary  
16 examination showed you?

17 A. My preliminary examination involved looking at them  
18 just under regular room light. And then using a  
19 stereoscope, which is a low level magnification, and I look  
20 at the actual shape of the hair, the color of the hair, any  
21 damage to the hair, the root of the hair, various  
22 characteristics of the hair. And I compare those hairs.

23 And these would be hairs there, like the pubic hair  
24 brushing to those in the standards from the victim and the  
25 suspect. And I look for similarities and differences. And  
26 in this case, there was one hair in the victim's pubic hair  
27 brushing which was similar in color to her standards, but it  
28 showed more buckle. And buckle is easiestly described as an

1 abrupt change in direction of the hair.

2 The hair will go along and all of a sudden it kind of  
3 twists and moves in another direction. And that is a  
4 buckle.

5 And this is seen routinely in pubic hairs. So there  
6 was more buckle, and this hair was slightly thinner in  
7 diameter than the victim's pubic hair standards. It was  
8 similar in color and diameter to the pubic hair standards  
9 that were associated with Peter Rose. But I also saw more  
10 buckle in that hair than I was seeing in his standards.

11 I also found hairs from the underwear. And this is  
12 underwear that I found semen stains on. And again, they  
13 were similar in color to both the pubic hair standards of  
14 the victim and Peter Rose, but they were finner in diameter  
15 than either of the two sets of standards.

16 Q. And as a result of your preliminary testing, what  
17 could you say in regards to the hair you saw?

18 A. They appeared that they could be foreign to the  
19 victim. But additional work would need to be done there as  
20 you move from the center of the pubic region to the outer  
21 edges, hairs can be different looking on a single  
22 individual.

23 And so additional standards may have been required  
24 and a more in-depth examination would be needed to make any  
25 further conclusions from the hairs.

26 Q. And as a result of your preliminary testing of the  
27 hairs, could you say they belong to the suspect?

28 A. No, I could not.

1 Q. And as a result of your preliminary examination,  
2 could you say that they didn't belong to the suspect?

3 A. No, I could not.

4 Q. As a result of your preliminary examination, could  
5 you even say there was any hairs foreign to the victim?

6 A. No, I could not.

7 Q. And do you know who did the testing, the more  
8 thorough testing on the hair?

9 A. Yes, I do.

10 Q. Who was that?

11 A. It is John Yoshida. He is another senior criminalist  
12 in our laboratory.

13 Q. Besides these tests, did the Department of Justice  
14 lab attempt to do any other type of genetic testing?

15 A. It was requested that we submit the blood standards  
16 from the individuals and the semen stain to our DNA  
17 laboratory for DNA testing.

18 Q. And do you have expertise in DNA?

19 A. I have some knowledge in DNA.

20 Q. What is that?

21 A. My knowledge is from my schooling and from reading  
22 literature on various techniques of DNA testing, how much  
23 material is needed for the various testing and attending  
24 some seminars where different papers have been presented on  
25 a variety of DNA testing.

26 I don't actually do DNA testing myself, but I am  
27 familiar with the basic techniques of DNA testing.

28 Q. And do you know where the DNA testing was done?

1 A. I know that DNA testing was at least attempted.

2 Q. Did you have an opportunity to review the report on  
3 the DNA testing as attempted?

4 A. Yes.

5 Q. Can you tell us if the conclusions of that report are  
6 in your expertise as far as DNA?

7 A. Yes, they are.

8 Q. And why is that?

9 A. The results in this reporting into how much DNA is  
10 required to obtain results in DNA testing, and I have that  
11 information I have obtained from reading literature and  
12 attending seminars that I have mentioned.

13 Q. In fact, there wasn't any DNA testing actually done,  
14 was there?

15 A. An attempt was may need to DNA type the sperm cells  
16 in this case, but no results were obtained or no conclusive  
17 results were obtained.

18 Q. And can you tell us why that was?

19 A. According to the report, it is because there was very  
20 few sperm cells and the sperm cells are what are required to  
21 obtain the DNA information for genetic typing of the semen  
22 donor.

23 And as I had mentioned in my examination of the semen  
24 stain, I did do a microscopic examination. I saw epithelial  
25 cells, but I did not see any spermatozoan and that fits with  
26 what the DNA laboratory also saw.

27 Q. Was there any indication of how many sperm cells they  
28 observed?

1 A. No. It just says a few.

2 Q. So as a result of the attempted DNA testing, is there  
3 any way they can say who submitted these few sperm cells?

4 A. They have no information as far as who the donor of  
5 the sperm cells.

6 Q. Thank you. I have no further questions.

7

8 CROSS-EXAMINATION

9 BY MR. HUDSON: Q. Good afternoon, Ms. Ciula.  
10 How are you today?

11 A. Pretty good.

12 Q. Okay. Just to make sure I have in my mind what all  
13 it was that came into your office to start with, you get a  
14 rape kit, which consists of certain items plus some clothing  
15 from the victim and sometimes underwear is viewed as part of  
16 the rape kit; is that correct?

17 A. That is correct.

18 Q. And the rape kit, the operative stuff that you're  
19 going to be working with, generally speaking, is going to be  
20 blood, saliva samples that have been drawn from the victim  
21 at this point?

22 A. The blood would be drawn from the victim. The saliva  
23 is obtain by chewing on gauze from the victim, yes.

24 Q. And these samples are obtained by your office?

25 A. They are obtained, the entire rape kit is collected  
26 at a hospital by medical personnel.

27 Q. This is something that is just standard in a hospital  
28 emergency room?

1 A. We supply the rape kits to the hospital. They come  
2 prepackaged and the hospitals use these prepackaged rape  
3 kits for their examinations.

4 Q. So all the information or the material that is  
5 collected, either in a vial from the blood or on the gauze  
6 for the saliva or the vaginal swabs or the other swabs that  
7 are done, those are all collected by some technician or  
8 doctor who is not a part of your department?

9 A. That is correct.

10 Q. They would also be the person or persons who do the  
11 the pubic air brushing?

12 A. Yes.

13 Q. Okay. In reference to a couple of questions by  
14 Mr. Mayo, he asked you what you did. You indicated you  
15 would have done "X," and so he asked you what you had done  
16 when you received this. You would have ensured -- in this  
17 case, you did in fact make sure the rape kit was in fact  
18 sealed?

19 A. Yes.

20 Q. And you did in fact inventory the items that were  
21 inside the rape kit?

22 A. Yes.

23 Q. Was the underwear included as part of -- in this  
24 case, was the underwear included as part of the rape kit or  
25 was it submitted outside?

26 A. It was submitted as part of the rape kit.

27 Q. So it was in a sealed plastic bag?

28 A. A white paper bag.

1 Q. And that paper bag is part of the rape kit that you  
2 supply to the hospital?

3 A. Yes. Inside the rape kit in addition to envelopes  
4 for the various pubic hair standards, head hair standards,  
5 swabs, smear slides, there is also a white paper bag slide  
6 for cloth items.

7 Q. Do you or does your department create this rape kit  
8 or is that something that is commercially provided to the  
9 department to be provided to the hospital?

10 A. We contract with a vendor to make the kits, and then  
11 the kits are supplied to us. I don't know the name of the  
12 vendor right offhand.

13 Q. I am not concerned about that.

14 Is there any kind of quality control check done by  
15 your department to make sure when a rape kit is submitted to  
16 the hospital there is no foreign matter that is in it?

17 I am not asking about your specific office in  
18 Manteca, just if you know whether or not such tests are  
19 done?

20 A. I don't know.

21 Q. Does the manufacturer supply the kits directly to you  
22 here in Manteca, French Camp or do they supply them to the  
23 Department of Justice, their offices in Sacramento and then  
24 they are shipped out to you?

25 A. They are supplied to the general store in Sacramento,  
26 the Department of Justice. And then we request them as we  
27 need them, and we have cases shipped to us.

28 Q. So whether or not the department in Sacramento has

1 some testing procedure, you are not aware of that?

2 A. I would doubt that they do, because they are sealed  
3 cases that we receive. And I imagine they are sealed cases  
4 when they are delivered to the Department of Justice there  
5 in Sacramento.

6 Q. You said something about the blood typing and that  
7 already having been done.

8 Can you explain that a little bit more in detail,  
9 please.

10 A. Yes.

11 Q. I mean, it is done at the hospital?

12 A. No. It is done in our laboratory. When the rape  
13 kits are submitted to us, in many cases the agency obtains  
14 the blood sample from the hospital. It is kept in a  
15 refrigerator, whereas the kit is kept in a freezer. And  
16 that is at our direction.

17 Liquid blood samples need to be stored refrigerated.  
18 The kits need to be stored frozen to maintain the genetic  
19 information. So in that case, the blood samples are on the  
20 outside of the envelope, outside of the kit, which is a box  
21 when it comes into the laboratory.

22 If for some reason they are inside the kit, we will  
23 open the kit and remove the blood sample and then we store  
24 the kits frozen and the blood samples refrigerated.

25 We then do this ABO typing of the liquid bloods as  
26 soon as we can on the liquid blood samples to get them into  
27 the frozen dried standard to preserve the genetic  
28 information as soon as we can.

1           In a liquid state, blood will deteriorate and we can  
2 lose the genetic information on those blood samples. So  
3 that is routinely done as soon as possible, once they come  
4 into the laboratory.

5       Q.     The typing on this particular sample, you didn't do  
6 that yourself?

7       A.     Yes, I did. I believe I did in this case.

8       Q.     With respect to the victim's typing, I am talking  
9 about now, that was done within what kind of time period  
10 relevant to the collection of the sample?

11      A.     If I can find my notes here for the victim's sample.  
12 I did not do the breakdown on it.

13           It was broken down on December 21st, it was, of '94.  
14 It was drawn on November 29th of 1994. And it was submitted  
15 to the laboratory on December 2nd, 1994.

16      Q.     And in your experience, these are not significant  
17 differences in time for the test that were done?

18      A.     No, they are not.

19      Q.     You shouldn't have had any breakdown of the destroyed  
20 DNA evidence -- or genetic evidence, excuse me?

21      A.     No, it should not have.

22      Q.     Is there a preservative that is in the vial in the  
23 sample when the sample is drawn for blood?

24      A.     Yes. There are two blood tubes drawn. One uses a  
25 preservative of citric as I had and the other uses a  
26 preservative EDTA, and we make stain cards from both of  
27 these blood tubes.

28      Q.     Then you end up comparing those at some point, just

1 to make sure?

2 A. The EDTA is requested by our DNA laboratory. The  
3 citric, as I had, is what we routinely use for our genetic  
4 typing in the laboratory. We have found that it works  
5 better as a preservative for us than the EDTA does, but both  
6 work okay.

7 Q. You did do some typing then of blood samples that was  
8 Mr. Rose's?

9 A. Yes, I did.

10 Q. And without going into a lot of details about when it  
11 was collected and all that stuff, it was collected and  
12 tested within a time frame that wouldn't have caused a  
13 genetic breakdown?

14 A. That is correct.

15 Q. Roughly the same type of time period?

16 A. Yes.

17 Q. You were talking earlier in response to some  
18 questions by Mr. Mayo about dilution of the seminal sample  
19 as a result of vaginal secretions, that is somewhat time  
20 dependent?

21 A. Yes.

22 Q. Also depends on the individual person, whether or not  
23 they secret more fluids than somebody else, compare  
24 different samples?

25 A. That is correct.

26 Q. And then the shorter the period of time from the time  
27 the samples are collected -- the shorter the period of time  
28 from the assault to the time that the samples are collected

1 reduces the possibilities somewhat significantly with  
2 respect to this dilution that you're talking about?

3 A. Well, the shorter the time period between the assault  
4 and the samples being collected, the better the chance it is  
5 of finding semen and being able to detect genetic  
6 information from the semen.

7 Q. Is there a significant difference in that regard,  
8 let's say, between 15 minutes and 30 minutes?

9 A. Not in that regard. I think I start to see a  
10 difference around twelve hours, another difference around 24  
11 hours, so it is a matter of hours as opposed to minutes.

12 MR. HUDSON: Thank you. No further questions.

13 MR. MAYO: No further questions.

14 THE COURT: You may step down.

15 MR. MAYO: Your Honor, my next witness would  
16 be John Yoshida.

17  
18 JOHN YOSHIDA,

19 A witness called on behalf of the People, was duly sworn,  
20 testified as follows:

21  
22 THE WITNESS: I do.

23 THE CLERK: Please state your name for the  
24 record and spell your last name.

25 THE WITNESS: John Yoshida, Y-o-s-h-i-d-a.

26  
27 DIRECT EXAMINATION

28 BY MR. MAYO: Q. Mr. Yoshida, what is your

1 occupation?

2 A. I am a senior criminalist with the California  
3 Department of Justice in the crime laboratory, French Camp.

4 Q. How long have you been employed with them?

5 A. About 14 years.

6 Q. And can you tell us your training and experience  
7 which qualifies you to be a senior criminalist?

8 A. I have a Bachelor of Science degree in biological  
9 sciences from the University of California, Davis. I worked  
10 for two years at Sacramento County Crime Lab. A year and a  
11 half at a private forensic firm, and in this department  
12 approximately 14 years at Department of Justice.

13 Q. How many years have you been working with  
14 criminalistics?

15 A. About 17 and a half years.

16 Q. You don't have a memory problem, do you?

17 A. No.

18 Q. As a result of your employment, did you have an  
19 opportunity to do some work on a case where a suspect was  
20 named Peter Rose?

21 A. Yes.

22 Q. Can you tell us what you did in regards to that case?

23 A. Well, I was asked to compare some hairs that one of  
24 the other criminalists in our laboratory, Kathleen Ciula,  
25 examined initially, a sexual assault kit and found some  
26 hairs in the pubic brushing and in the victim's underwear,  
27 which I was asked then to examine and compare to the  
28 standards submitted by the victim and standards by Mr. Rose.

1 Q. And do you remember how many hairs there were that  
2 were collected?

3 A. I can check in my notes.

4 Q. Would that refresh your recollection?

5 A. Yes.

6 Q. Why don't you do that.

7 A. There were three hairs in the pubic brush and three  
8 hairs in the victim's underwear.

9 Q. So you had three hairs from the pubic brushing and  
10 three hairs from the underwear?

11 A. That is correct.

12 Q. Can you tell us what is involved when you do a hair  
13 comparison?

14 A. Well, there are a lot of features depending if you  
15 are looking at -- well, first of all, you classify them into  
16 things such as head, layer, pubic hair, and then other body  
17 hair such as arm hair, leg hair, mustache, eyebrow, beard  
18 hair. And all those have certain characteristics that we  
19 look for.

20 In this case, it was mostly pubic hairs that I looked  
21 at. And in that case, you're looking for things such as  
22 color, color transition between the root of a hair and the  
23 tip of a hair.

24 There is a thing called buckling. The hair goes  
25 along and then it kind of takes a right-hand turn and is  
26 kind of a crinklier pubic hair. It is a lot more crinkly  
27 than your head hair because it isn't groomed all the time.

28 It is subjected to being smashed and everything, so

1 it takes funny turns. And the amount there is examined.  
2 Also, the diameter of the hair, some hair is a lot more  
3 course or wider than some other hair, some hair is very  
4 fine. And that is a feature that we examine.

5 And then internally, I look at things such as the  
6 medulla, which is the inner portion of the hair. Some of it  
7 you can see a dark line going through, sometimes a dark line  
8 is separated into fragments and sometimes the area is clear  
9 and not dark.

10 So those are other features. And then there are  
11 features in hair called cortical fusi, which are hair  
12 bubbles in the hair. So the more of these you have and  
13 depending where you are, it either adds more uniqueness to  
14 the hair or places a comparative value in comparing it to  
15 different individual's standards.

16 Q. Could you tell us how much time is involved in the  
17 lab when it comes to comparing hair?

18 A. Well, that all depends.

19 I look at each individual hair separately. And in  
20 this case, there were three hairs. I probably spent a total  
21 of about 16 hours looking at the hairs and comparing.

22 First of all, I have to have a range of variations  
23 that I look at, that is for the victim's hairs, a range of  
24 variation for the suspect's' hairs.

25 And if I can tell the victim and the suspect hairs  
26 apart, then I look at the other hairs and see which features  
27 are similar to which set of standards.

28 Q. Even after spending all that time, can you always

1 tell the victim's hair apart from the suspect's hair?

2 A. No.

3 Q. And why is that?

4 A. Well, because there are some features depending on  
5 race, especially Mongoloid or Negroid hairs have less  
6 features in them, too, and because the hair is a lot darker.  
7 And when it is dark or opaque when I shine the light through  
8 it and under a microscope, I can't see through it because it  
9 is too dark. So that cuts down the number of features that  
10 I can examine. So you have then less of a range to examine  
11 on features.

12 Q. On these six hairs that you examined, were you able  
13 to shine a light through six of them?

14 A. Yes.

15 Q. What would that indicate to you as far as what you're  
16 telling us about Mongoloid or Negroid type hair?

17 A. Well, these hairs are classified in the Caucasian  
18 population. They are definitely within that range of  
19 variation for that genetic type of individual.

20 Q. After you spent these 16 hours looking at this hair,  
21 what did you then do?

22 A. Well, I wrote a report.

23 Q. Good job.

24 Did you -- it is getting late. Did you compare these  
25 six hairs to any other hair standards?

26 A. I did.

27 Q. Is that part of your 16 hours?

28 A. Yes. That is part of the 16 hours is to look at the

1 victim's hair standards, the suspect's hair standards and  
2 also the unknown hairs and compare them to all of them.

3 Q. What do you mean by unknown hairs?

4 A. Well, the hairs that are found in the pubic brushing  
5 and in the underwear aren't hairs that are immediately known  
6 as to where they came from.

7 Q. Can you tell us what you found when you compared the  
8 unknown six hairs with the victim's hairs?

9 A. Well, starting with the three that were found in the  
10 pubic brushing, two of them had similar characteristics to  
11 the victim's hairs, pubic hairs, and therefore they were  
12 within her range of variation. So she could be the donor of  
13 those hairs.

14 Now the other hair had features that were outside  
15 hers, her pubic hair standards. And they were more similar  
16 to the victim's hair standards than they were to the -- or I  
17 am sorry, the suspect's hair standards when compared those  
18 to the victim's, except there was more buckle in this  
19 particular hair than there was in the victim's hair standard  
20 or pubic hair standards.

21 But that amount of buckling isn't typical at all of  
22 any pubic hair samples. It is kind of like pubic hair got  
23 caught and then just maserated in, let's say, the washer or  
24 some other type of compression where the hair kind of got  
25 tied up in knots or just mangled together. So that would  
26 eliminate buckling as being used as one of the features for  
27 comparative analysis on this hair.

28 Q. So if I got this right, of the three pubic hair

1 brushings, you felt two could have come from the victim?

2 A. Yes.

3 Q. And you felt one was more similar to the suspect's?

4 A. Yes. Mr. Rose could not be eliminated as a donor of  
5 that pubic hair. It had all the features similar to his,  
6 except that the buckle was different. It had a lot more  
7 buckle than his pubic hair standards.

8 Q. And then you -- I missed that part, you just  
9 described the buckling to us; is that correct?

10 A. Yes. The other three hairs, two of the hairs were --  
11 well, one of the hairs was actually a fragment of a hair,  
12 and it was similar to the victim's hair, pubic hair in  
13 color, curl and diameter. Curl means how much, how straight  
14 or how curly it is. And the diameter is just the thickness  
15 or wideness of the hair.

16 The other two were similar to the suspect's arm  
17 standards, but they didn't -- they were a little bit  
18 different. There was a difference in the color. And it  
19 didn't appear to be an arm hair. It looked either more like  
20 a transition hair. Transition hair is the area between your  
21 pubic hair and your leg hair.

22 There is an area where it slowly goes from where you  
23 have pubic hair and then where it starts to become leg hair,  
24 which is a lot shorter, finner and more nondescript. But in  
25 between that range, there is an area which transitions into  
26 one to the other. And this appeared to be a transition  
27 hair, or actually both of them did.

28 Q. And how was a transition hair different than a pubic

1 hair?

2 A. Well, the transition hair doesn't have as much  
3 buckling to it. They are generally shorter. And it is a  
4 lot more nondescript or the diameters aren't as varied as  
5 they are in pubic hair.

6 They are not as wide. And they start to look more  
7 like leg hair or arm hair. But there is a slight difference  
8 between those, because it is just a transition between pubic  
9 hair and where your leg hair is.

10 Q. And as a result of what you obtained as far as what  
11 you considered this transition hair, when you said arm hair,  
12 was that a mistake or is transition hair similar to arm  
13 hair?

14 A. No. I received arm hair standards from Mr. Rose.  
15 And I examined those and compared them to the hairs.

16 Q. To the transition hairs?

17 A. Yes.

18 Q. And as a result of your testing and your time with  
19 these hairs, what conclusion were you able to make in  
20 regards to the suspect, Pete Rose?

21 A. Well, the hairs appeared to be transition hairs. I  
22 made no determination whether or not they could be from the  
23 victim or the suspect. I simply asked for standards of  
24 that. And I never received those, so I didn't do any more  
25 work the case.

26 MR. ROSE: Thank you. I have no further  
27 questions.

28

## CROSS-EXAMINATION

1  
2 BY MR. HUDSON: Q. Well, I don't mean to  
3 speak lightly, Mr. Yoshida, but it seems one thing from your  
4 work that you definitively did was to exclude all but  
5 members of the Caucasian race as a potential donors of these  
6 potential hairs?

7 A. Excluded. I don't thing I excluded any.

8 Q. No, I said excluded. Members of the Caucasian white  
9 race, except for that race, you excluded everybody else  
10 there. Is it is not possible it would be a Negroid or  
11 Mongoloid?

12 A. No, that isn't true either. It has characteristics  
13 of the Caucasian race ethnic group, but because of mixed  
14 innermixing, you can have these features in someone that  
15 looks Mongoloid or Negroid.

16 You can have these features, depending. Somewhere  
17 back in the generations, if there was a mixed marriage or  
18 the individual, let's say, is half black and half white, you  
19 can have some of these features.

20 Q. I apologize guys. And I didn't mean to be flippant,  
21 I was thinking about your comment, the response to a  
22 question by Mr. Mayo about whether or not you could always  
23 tell the hairs from the victim and the suspect.

24 And at that point you were speaking generally, is  
25 that correct, as to whether or not you could tell the hairs  
26 from a victim or a suspect? You weren't speaking with  
27 specific reference to this case?

28 A. Well, generally the first thing you do is you compare

1 the standards. And if you can't see differences in the  
2 standards, there is really no use comparing the unknown  
3 hairs. Because what you're left with in the end as they  
4 could from either -- or I mean, it doesn't tell you  
5 anything. That is why I look at the standards.

6 First, if I can't tell them apart in their hairs,  
7 then generally I will examine the hairs and I will examine  
8 them, compare them to the victim's only.

9 MR. HUDSON: Thank you.

10 MR. MAYO: No further questions.

11 THE COURT: You may step down.

12 THE WITNESS: Thank you.

13 MR. MAYO: I don't have another witness for  
14 today, Your Honor.

15 THE COURT: Well, we are pretty close to the  
16 quitting hour, so you have done pretty well today as far as  
17 witnesses, Counsel.

18 MR. MAYO: I am sorry, Your Honor.

19 THE COURT: You both have done pretty well  
20 today as far as witnesses. We are going to meet tomorrow  
21 morning and start at 9:00 then.

22 MR. MAYO: Is that our approximate time, Your  
23 Honor?

24 MR. HUDSON: Well, as close as we can get  
25 tomorrow. I have a matter that is in 11 at 8:30, supposedly  
26 a pretrial conference I will need to continue. So given the  
27 way the difficulty of sometimes getting down there, can we  
28 make it more like 9:30?