

EXHIBIT 14C—Sample Cross-Examination of a Criminalist Regarding Whether There Was Any Sexual Activity at All and, If So, the Identifying Markers of the Assailant

[Background for the following cross-examination: The defendant was charged with the rape and strangulation death of a woman. In addition to the identity of the assailant, an issue was whether there had been any sexual activity, and, if so, the timing of it. The deceased was sexually active with her partner near the time of the incident. A theory was that any scientific evidence of sexual activity could have been as a result of the deceased's actions with her partner and not as a result of anything done by the assailant. The defendant had blood type B. Type B blood group substances were found in the deceased.]

Acid Phosphatase

- Q. Now, it's obvious from what you've told us that the evidence that was submitted to you involved swabs taken from the deceased's body. Is that correct?
- A. That's correct.
- Q. And part of those were swabs taken from the vagina, from the oral area, and from the rectal area. Is that right?
- A. Yes.
- Q. It can tell you two things, Mr. Bogdan. One is whether or not, depending on the results of the samples, sexual activity has occurred. Is that correct?
- A. That's correct.
- Q. And the other, if it has occurred and someone has left blood group substances, for example, it can give you information about the identity of the person who was involved in the sexual activity. Is that correct?
- A. Yes.
- Q. You'll agree with the basic scientific principle that with almost any kind of biological evidence like sperm, semen, blood, that it's more stable when it's kept in the cold in a refrigerator. Is that correct?
- A. Yes.
- Q. And, in fact, when you receive evidence like that, one of the first things you would do in the Crime Lab is to refrigerate, if not freeze, certain samples. Is that correct?
- A. That's correct.
- Q. Now, in terms of acid phosphatase, you found this substance present on a number of the swabs. Is that right?
- A. Yes.
- Q. And you told the jury that there's a substance that is often found in semen. Is that correct?

- A. It's characteristically present.
- Q. It's also found in a number of other living things. Isn't that right?
- A. Yes.
- Q. It's found in other biological fluids that we all have. Isn't that correct?
- A. Not in the same concentration as in semen.
- Q. We'll get to the concentration. But, in terms of the presence of acid phosphatase, it is found in a number of other substances.
- A. Yes.
- Q. For example, it is found in red blood cells in general. Isn't that correct?
- A. There's erythrocyte in acid phosphatase, which doesn't—we don't test for.
- Q. It is found in milk, in human milk. Isn't that correct?
- A. I assume so, if your reference says so.
- Q. Mr. Bogdan, to the number of things that acid phosphatase is also found in, as you said, you agree that Anthony Moenssens is a recognized expert in the field of forensic criminology. Isn't that correct?
- A. Yes. I agree.
- Q. And that he has written a text that's fairly well known, *Scientific Evidence in Criminal Cases*. Isn't that correct?
- A. Yes.
- Q. And part of what's in that text is a description of the number of organisms and biological fluids which contain acid phosphatase. Will you accept this?
- A. Yes.
- Q. And Moenssens and the other people that he wrote the book with have stated that acid phosphatase can be found in bacteria. Would you agree with that?
- A. I don't know. I'll have to take his word for that.
- Q. Human milk. Are you familiar with acid phosphatase being found . . .
- A. I've read that.
- Q. Human liver, being found in the human liver?
- A. I don't know.
- Q. Human urine, being found in human urine?
- A. You've given me a whole list. Some of them I will have heard it and some of them I won't have heard it. I agree that there are other substances in which acid phosphatase is present.
- Q. Including red blood cells, correct?

- A. As I said, there is a substance known as erythrocyte acid phosphatase.
- Q. And there are a number of foods that humans eat which also contain acid phosphatase. Isn't that correct?
- A. Yes.
- Q. And some of those foods are cauliflower. Is that correct?
- A. Yes. That is the best known.
- Q. Brussels sprouts, correct?
- A. I don't know.
- Q. Garlic?
- A. I don't know.
- Q. Turnips?
- A. As I say, you can go through the whole list. Some I've heard of, some I haven't. Cauliflower, I've heard of.
- Q. You also told the jury that acid phosphatase is also something that can be found in vaginal secretions. Is that correct?
- A. I didn't tell them that, but it's true.
- Q. And it is also considered just to be a preliminary presumptive test. Is that right?
- A. Yes.
- Q. In fact, vaginal acid phosphatase is the most common contaminator of potential semen specimens. Isn't that right?
- A. I'm not sure I understand what you're saying.
- Q. When you have something that has been identified as acid phosphatase and it has been taken from the vaginal area on your vaginal swabs—and you've identified it as acid phosphatase, correct?
- A. Yes.
- Q. Now, there is vaginal acid phosphatase and there's seminal acid phosphatase. Isn't that correct?
- A. That is correct.
- Q. And there is—without separating the two, there is a potential for the vaginal acid phosphatase that's normally found in women. You'll agree that vaginal acid phosphatase is something that's normally found in women?
- A. Yes.
- Q. There's a potential for that vaginal acid phosphatase to contaminate or to mix in with any seminal acid phosphatase if that has been present. Is that correct?

- A. I'll agree that the material that's removed will contain vaginal secretions.
- Q. And, in fact, there are tests that you can do to separate vaginal acid phosphatase from seminal acid phosphatase. Isn't that correct?
- A. As far as I know, it's a very difficult thing to separate the two.
- Q. You are familiar with electrophoresis, electrophoretic testing. Isn't that correct?
- A. Yes.
- Q. And, again, you recognize Richard Saferstein as being an authority in the field of forensic science. Isn't that right?
- A. Yes. I did before.
- Q. And you do now, right? And he has written that there are two approaches that can be taken to separate vaginal acid phosphatase from seminal acid phosphatase, and one of those is electrophoretic separation. Would you agree with that?
- A. I'm trying to remember whether that is so. You're reading it to me, so I will say yes, it's so.
- Q. And, in this case, there was no testing done on that substance that contained acid phosphatase to determine whether or not it came—it was just the natural vaginal acid phosphatase or whether it was acid phosphatase that was deposited with semen. Isn't that correct?
- A. No.
- Q. You do recognize that you have at your disposal other more sophisticated laboratories. Isn't that correct?
- A. Lab reports?
- Q. Laboratories. I'm sorry. You can send things out to the FBI lab. Isn't that right?
- A. If we do not have the capability of doing a particular type of analysis, yes, we can.
- Q. But, in any event, you have the opportunity to get more sophisticated testing in a particular situation. Isn't that right?
- A. We do have the opportunity of using the FBI lab.
- Q. And, just to get back to finish this part of this, there was no testing done to separate the acid phosphatase to determine whether all of it or how much of it was vaginal acid phosphatase and compare that with separated, if it was, seminal acid phosphatase?
- A. No. Based on my references, this is almost impossible to do.
- Q. But you will agree with Dr. Saferstein that it is possible through electrophoresis to do, that science exists.
- A. You're giving me an out-of-context statement which doesn't indicate the method or how much material is produced or how quantitative it is.
- Q. I could give you the whole chapter if you wanted to read it, Sir?
- A. I have a chapter, too, that tells how difficult it is to do.

- Q. Just because something is difficult doesn't mean that it's not necessarily done. You'll agree with that?
- A. My recollection—and I'm only drawing from my memory—is that it's very difficult, and it is not done.
- Q. Not done by you, obviously.
- A. It is not done.
- Q. So you did not do that.
- A. I did not do it.
- Q. Now, the additional tests that you went on to do when you got the preliminary positive results for acid phosphatase was to try to identify whether or not that substance was semen. Isn't that correct?
- A. That's correct.
- Q. And the next test that you would go on to do would be a choline test?
- A. Yes.
- Q. That's another test that you do routinely in your laboratory. Isn't that right?
- A. That's right.
- Q. And that's another test that is still a preliminary test if it tests positive for acid phosphatase. Is that correct?
- A. Yes, it is.
- Q. You do also, though, have the capacity to do a P30 test. Isn't that correct?
- A. Yes.
- Q. That P30 test is a test that tests for one thing and one thing only, and that's semen. Isn't that correct?
- A. That's for the presence of the prostatic antigen.
- Q. And that's a protein that exists—if it's semen, it exists in semen. Isn't that correct?
- A. Yes.
- Q. Other than finding sperm, the P30 test is the only other test you can do to conclusively prove that that stain or swab is semen. Isn't that correct?
- A. That's correct. Those tests were all done on each of these samples.
- Q. Okay. On the vaginal swabs, there was no evidence at all of any semen after you had done your conclusive tests for P30. Isn't that correct?
- A. Well, I wasn't phrasing it that way. I said I determined the presence of acid phosphatase and I couldn't confirm the presence of semen.
- Q. P30 is a test that is conclusive if it tests positive for semen. Isn't that right?

- A. If it's detected, it's positive, we say the semen is present.
- Q. And, when you did the P30 test that tests only for semen, you did not get a positive result. Isn't that correct?
- A. That's correct. I did not.
- A. The acid phosphatase was the evidence, the presence of acid phosphatase.
- Q. You did nothing to measure the amount of acid phosphatase. Isn't that correct?
- A. The test is a qualitative test. It determines the presence or absence.
- Q. My question to you, Sir. Is you did nothing to quantify the—
- A. I just said it was a qualitative test.
- Q. So you did nothing—
- A. Which is not a quantitative test.
- Q. So you did nothing to quantify the presence of acid phosphatase in any of these swabs. Is that correct?
- A. That's right.
- Q. So you'll agree there was no semen found on any of these swabs?
- A. I'll agree that semen was not identified.
- Q. You were looking for semen, right?
- A. Yes.
- Q. And you used the one test that can test positive for semen, right?
- A. I found one test that was positive but didn't use the one test. I found one that was positive.
- Q. The P30 test said that there was no semen.
- A. Yes. I used that test.
- Q. Yes. And it didn't come up with any semen on any of these samples.
- A. It was not positive.
- Q. Well, if it's not positive, that means it was negative, right?
- A. Well, I think I've made that very clear that I couldn't confirm the presence of semen because those tests were not positive. They were negative.
- Q. If you had found—if the P30 test had been positive, you would be telling this jury that there was semen, right?
- A. I would be saying the semen was identified.
- Q. And since the P30 test was not positive, there was no semen identified. Is that correct?

A. That's correct. That's what I said.

Sperm/Semen

Q. Now, as you said, the other way to see if this substance came from—this substance was semen was if you had found actual sperm. Is that right?

A. Yes.

Q. And there are two types of sperm, motile and nonmotile. Is that correct?

A. Yes.

Q. And motile is another word for living sperm?

A. Yes.

Q. Sperm that's alive. And nonmotile is sperm that is not alive. Is that right?

A. Yes.

Q. And sperm, depending on what kind, has its own life span. Isn't that right?

A. Yes.

Q. And you can recover sperm from the vagina for up to eight hours after intercourse. Is that right?

A. That question can't be answered with a yes or no.

Q. Well, there are a number of—Mr. Saferstein, as you've recognized, has stated that motile sperm can be taken and be found within eight hours of the alleged assault. You agree with that? We're talking motile now, not nonmotile.

A. You're quoting Richard Saferstein?

Q. Right.

A. And there is a book that's absent in your library over there which is called *The Sourcebook for Forensic Chemistry and Serology* and so on.

Q. Who is the author of that?

A. Robert Gaensslen. It's a big, fat, thick book. And he has done a very in-depth study of many of these topics, one of them being the persistence of spermatozoa in the vagina and the finding of motile or spermatozoa and the length of time in which spermatozoa can be found. He has quoted about 5 or 10, 20 or 30 different references. And depending on the particular reference, you get a different number. So for you to say to me is eight hours an accurate number, I will say I've seen other numbers.

Q. I'm asking you, Sir, motile sperm can live up to six or eight hours. Isn't that correct?

A. That's what Mr. Saferstein says.

Q. All right. Nonmotile sperm can be recovered sometimes up to 16 hours and sometimes up to 48 hours. Isn't that right?

- A. Going back to my other references, which I don't have with me, you will find that spermatozoa can be found for up to very long periods.
- Q. Now, if I show you a text by Richard Saferstein, who you've been quoting in terms of your authority, I would just ask you to read these two paragraphs to yourself. Saferstein, in this text, has said "Living sperm may generally survive up to 46 hours in the vaginal cavity." Is that correct?
- A. Yes.
- Q. He goes on to say "Nonmotile sperm may survive up to three days and occasionally up to six days." Is that correct?
- A. Yes. That's what the book says.
- Q. And this is the Saferstein you were referring to when you were speaking to the jury just a little bit ago?
- A. The same Saferstein.
- Q. Now, the life span of sperm, although it can vary, obviously. Is important to know in trying to determine the time of the assault. It can be an important piece of information. Would you agree?
- A. I'll agree.
- Q. And, for example, if you had found motile sperm, living sperm, you could have offered an opinion, an expert opinion that sexual activity had occurred within the last four to six hours prior to the taking of that motile sperm. Isn't that right?
- Q. When you examined the vaginal washings, Mr. Bogdan, Item No. 1 in your report, you also did not find the presence of any semen there, did you?
- A. I did not find any in the vaginal washing. I couldn't find that place in my report.
- Q. And, again, you did the P30 test on that. Is that correct?
- A. On that particular sample, the acid phosphatase was negative, so no further testing was done.
- Q. You described about where the vaginal swabs were taken from. You knew that. Is that correct? You told the jury where they were taken from.
- A. I said they were taken from the vagina. That's it.
- Q. You also examined the cervical scrapings. Is that correct?
- A. Yes.
- Q. And you found no sperm in the cervical scrapings. Is that right?
- A. No semen.
- Q. And no acid phosphatase, I take it?
- A. No acid phosphatase.

Q. The saliva standard that you told the jury about tested for a weak positive of acid phosphatase. Is that right?

A. Yes.

Q. Now, you also are to examine stains on any clothing that you might receive. Is that correct?

A. I couldn't hear the beginning of your question.

Q. Part of your duties is also to examine stains on clothing that you may receive. Is that right?

A. Yes.

Q. One of the things you're looking for is whether or not there's any seminal stains on articles of clothing. Is that correct?

A. Yes.

Q. And that's because after there has been sexual intercourse, semen is either absorbed by the body or it drains out of the body through leakage. Is that right?

A. That's correct.

Q. Through that leakage, that is how, if there are seminal stains, the stains would get on the clothing. Is that right?

A. Yes. That's one of the ways it could happen.

Q. You'll agree that a man who does not produce sperm is someone who is aspermatic. Is that right?

A. I'd say that's correct.

Q. If someone is able at a particular time to father a child, they would not be aspermatic. Isn't that right?

Q. If a man fathers a child, he would not be aspermatic. Isn't that correct?

A. We're getting a little bit far afield as far as my area of expertise goes. One of the areas of my expertise is not fertility.

Q. Well, you testified before that someone who fathered a child, would he be aspermatic, and you answered probably not. Isn't that right?

A. I guess I did, yes.

Q. Let me just show you your testimony.

A. I've read that.

Q. You said it.

A. Yes. I did say it.

Blood Types

Q. Now, in terms of blood types, Mr. Bogdan, you testified that Gwendolyn Taylor's blood type was Type O. Is that correct?

A. Yes.

Q. And Type O is a very common blood type in the United States. Isn't that right?

A. Yes.

Q. In fact, in terms of the four categories, you have Type A, Type B, Type O, and then Type AB. O is the most common. Isn't that correct?

A. It's approximately about the same frequency as Type A, both most common.

Q. Well, anywhere from 43 to 44 percent of the population, of the white population, anyway. Is Type O. Isn't that correct?

A. That's one of the figures I've seen.

Q. That's a figure that if I tell you Richard Saferstein, the person you referred to before, quotes, that you'd agree with that, 44 percent?

A. Yes.

Q. And, in the black—different populations, different groups can have different percentages of blood types. Isn't that correct?

A. Yes.

Q. And, in the black population, Type O is 49 percent of the population. Isn't that correct?

A. I am only going to assume that that's what Mr. Saferstein—

Q. There is a higher percentage of Type O blood group—there is a higher percentage of Type O blood types in the black population than there is in the white population. Isn't that correct?

A. I'll agree with His Honor that that's what the book says.

Q. And this book—Saferstein is a recognized authority in the field of forensic serology. Isn't that correct?

A. Yes.

Q. And Saferstein states that 49 percent of blacks are Type "O." Isn't that correct?

A. That's what Saferstein says, yes.

Q. Now, Thomas Rosa's blood type is Type "B." Is that correct?

A. Yes.

Q. And, in general, in the white population, Type B is about 10 percent of the population. Isn't that correct?

A. Yes.

- Q. And, in the black population, Type B goes up to 21 percent. Isn't that correct?
- A. Yes.
- Q. And often you'll have populations or races that over time have mixed. Isn't that correct?
- A. Yes.
- Q. So you'll get someone who has—I don't know exactly how to phrase this, but correct me I'm wrong—some color pigmentation in them. Is that correct? I mean, if you're white, you're black, but there's a whole mixture from white to black. Isn't that correct?
- A. Yes.
- Q. When you received blood samples from Mr. Rosa, he voluntarily allowed your technicians to take his blood. Isn't that correct, Sir?
- A. That is correct.
- Q. You told us, Mr. Bogdan, that both Ms. Taylor and Mr. Rosa were secretors. Isn't that correct?
- A. Yes.
- Q. And, very simply, being a secretor, what that means is, as you've told us, that you can take someone's tears, perspiration, saliva, semen, whatever bodily fluid that we have, and look at that under a microscope and, if they are a secretor, determine what their blood type is even though there's no blood there. Isn't that right?
- A. Right. You can determine it by chemical methods, not by microscopic.
- Q. And you can do that even though there's no blood present. Isn't that right?
- A. Yes.
- Q. And 80 percent of the population are secretors. Isn't that correct?
- A. That's correct.
- Q. You found B and H blood group substances on the vaginal swabs and a saliva standard taken from Ms. Taylor. Is that correct?
- A. I did, yes. That's correct.
- Q. Now, in terms of the vaginal swabs, in order for these blood group substances, meaning B and H—that's what we're talking about as blood group substances, right?
- A. Yes.
- Q. In order for those blood group substances to have been found in Ms. Taylor's body, they had to get there somehow. Isn't that correct?
- A. Yes.
- Q. They had to get there or come from some bodily fluid of somebody who is a Type B secretor. Isn't that right?

- A. Yes.
- Q. You found no sperm and no semen in any of the samples that were submitted to you from Ms. Taylor. Isn't that correct?
- A. I didn't identify semen.
- Q. And certainly no sperm. Is that right?
- A. That's correct.
- Q. So we're left with the blood group substances, right?
- A. Yes.
- Q. And there are a number of explanations as to why there would be no sperm or no semen found. Isn't that correct?
- A. Yes.
- Q. One of the explanations is Ms. Taylor could have had sex with somebody two to three days before December 6 and 7 so that the semen and the sperm either would have been absorbed by the body or leaked out and would no longer exist. Isn't that correct?
- A. And had not had sex subsequently.
- Q. And had not had sex subsequently so that you were just left with B and H blood group substances. Isn't that right?
- A. I suppose that's a possibility.
- Q. In order for you to make as intelligent or as meaningful a finding as you can from the results of your tests, it's important that you know, if you can find out, when the last time a consensual intercourse occurred. Isn't that right?
- A. My function here is to identify things, not to—
- Q. I understand.
- A. —evaluate why or when.
- Q. For example, if you had samples from a person that had had sex with two people, one was three days before and the other was within the last six hours, it would be important for you to know about the person she had sex with two to three days before in order to interpret accurately your results of the most recent activity. Isn't that right?
- A. It wouldn't be important to me as far as doing a test on the material that is supplied.
- Q. Well, you recognize that samples can become contaminated. Is that correct? That can happen?
- A. Yes. Samples can be contaminated.
- Q. And it would be important to know, for example, the blood type of the person that the deceased last had sexual intercourse with. Isn't that correct?
- A. Not for my performance of the test.

Q. You have no information at all with regard to the blood type of Charles Ferguson, do you?

A. No, I do not.

Q. And you have no information as to the last time she may or may not have been sexually intimate with Mr. Ferguson, do you?

A. I'm not even aware of her sexual habits or intimacy with Mr. Ferguson.

Q. And you, yourself, did not ask the detectives or the prosecutors to try to find that out so that you could make sure your results would be as accurate as possible, did you?

A. I did not ask the investigators anything like that.

Q. There is nothing about the presence of these blood group substances B and H that were found on the swabs that you took that can tell you how long they had been there. Is there?

A. No.

Q. There is nothing on those blood group substances B and H that can tell you whether they were consensually put there or nonconsensually put there. Is there?

A. No, there isn't.

Q. Your testimony that the B and H blood group substances are consistent with Thomas Rosa's Type B secretor status only means that he is part of that either 10 to 21 percent of people that has that type of blood. Is that correct?

A. That is correct.

Q. It is not any sort of a positive identification that Thomas Rosa is the only person that could have deposited those B and "H" blood group substances in Ms. Taylor. Is it?

Q. I mean, it's not like a fingerprint. It's nothing like that.

A. No, it is not.

Other Tests

Q. Now, you have the ability at the crime lab to do more tests beyond typing someone's blood, don't you, in terms of the makeup of the blood?

A. Yes.

Q. You have the means in the crime lab to take certain samples or stains and subject them to tests that can give you more individual type of markers that can help you ultimately identify someone. Isn't that right?

A. They could help to narrow the group from which the sample may have originated.

Q. And there are tests that can be done that start narrowing this group and narrowing this group until you get down to something like DNA, which is a very narrow group if it's identified. Is that right?

A. Yes.

Q. One of these types of tests that are available at your lab is what is known as the PGM test. Isn't that correct?

A. Yes.

Q. That's—again, stop me if I misstate anything—phosphoglucomutase?

A. Phosphoglucomutase.

Q. And those are different enzymes that are found in the blood?

A. These are enzymes.

Q. And you can look at a stain and break it down and you can get more identifying markers. Isn't that correct?

A. We did look for PGM in these particular samples.

Q. You looked for PGM in Ms. Taylor's blood type. Is that correct?

A. Yes.

Q. And you looked for PGM in Mr. Rosa's blood type. Is that correct?

A. Yes.

Q. You did not look for PGM on the vaginal swabs, did you?

A. No.

Q. You did not look for PGM on the oral swabs, did you?

A. No. No.

Q. You did not look for PGM on the rectal swabs. Is that correct?

A. No.

Q. You didn't look for—

A. We did not.

Q. —it on the vaginal washings, right?

A. No. There was no further testing done on those because, as I said, the acid phosphatase test was negative.

Q. In terms of the vaginal swabs and the oral swabs where you were able to get the blood group substances, you could have gone further to check for that PGM measurement in those swabs, couldn't you have?

A. I really don't remember exactly what was done on all those slides.

Q. Well, you know that you did nothing to take the PGM that was found in the blood of Ms. Taylor and Mr. Rosa and compare it to any PGM that was found on any of the swabs that you tested. Is that right?

A. No. They both had the same PGM type.

Q. There is a further PGM type that's called PGM subtyping. Isn't that right?

A. Yes.

Q. And, again, the more of these tests you take, the more narrow the possibilities are. Is that correct?

A. Yes.

Q. If you get a distinctive sequence—and, just for the sake of argument, one, two, three—and that matches with a suspect's sequence—one, two, three—that can also be important evidence. Isn't that correct?

A. Yes.

Q. And, in this case, even the PGM subtyping was not done. Is that right?

A. We didn't have the capabilities.

Q. But you do have access to sending things down to the FBI lab. Isn't that correct?

A. Yes.

Q. And the crime lab has in the past sent evidence down to the FBI lab. Isn't that right?

A. Yes, we have.

Q. There are other types of electrophoresis tests that can be done on samples that you found blood group substances in. Isn't that correct?

A. Yes.

Q. You can test for other substances that can also leave individual markers. Isn't that right?

A. Yes.

Q. And some of those are known as AK. Do you know what that means, AK?

A. Yes.

Q. What does that mean?

A. Adenylate kinase (phonetic).

Q. And there's also one called Esterase-D. Is that correct?

A. Yes.

Q. And there's also another common one called Peptidase-A. Is that right?

A. Yes.

Q. It's known as pep-A?

A. Yes.

A. These are enzymes.

Q. Enzymes, right?

A. Yes.

Q. And they all can leave particular individual sequences of markers. Isn't that right?

A. Yes.

Q. Whatever the numbers are—1, 4, 3; 1, 2, 3, whatever—it's unique or starting to narrow it down to a particular group of individuals?

A. It's not unique.

Q. Well, they start to narrow the field much more so than blood types. Is that right?

A. If you find them, they could, yes.

Q. And you did nothing at all to see if you could find them on the swabs, did you?

A. No.

Q. And they're much more narrow than the fact that someone is a secretor or a nonsecretor. Isn't that correct?

A. Yes.

Q. On Item 7 on her panties, there were some yellowish-brown stains. Is that right?

A. Yes.

Q. Item 7. And, in Item 8, there were some yellowish stains in the crotch area of the white tights. Is that correct?

A. Yes.

Q. And there were some dark yellow stains on both of the legs of the white tights. Is that right?

A. Yes.

Q. And you know that often dried semen can be visually detected on clothing. Isn't that right?

A. Yes.

Q. And that often dried semen can appear to be yellow when it's on clothing due to the growth of bacteria. Isn't that right?

A. Usually when I see dried semen, it's white.

Q. It can be yellow if it's been contaminated by bacteria. Isn't that correct?

A. I don't know.

Q. Well, let me show you Mr. Saferstein's text, *Forensic Science Handbook*.

A. That's only part of the sentence.

Q. There's two sentences there.

A. Well, there's a full sentence that you didn't read.

Q. It can be an off-white color. Isn't that correct? That's the sentence—

A. Since you're having me read the book, it says "under warm, moist conditions."

Q. It can also assume a yellow coloration.

A. It says "under warm, moist conditions."

Q. That's right.

A. Which I don't believe were the conditions existing here.

Q. Well, you did not go out to the scene. Isn't that right?

A. I'm aware of the conditions.

Q. You don't know what the conditions were where, for example, she was supposed to have been killed, do you?

A. I know the conditions where she was found.

Q. Right, that's all you know. Is that correct?

A. I don't know where she was killed.

Q. You don't know what the conditions were when she was last supposed to have engaged in sexual activity, do you?

Q. You did not test these stains on the yellow panties to determine if they were semen stains, did you?

A. No. I did not.

Q. You did not test these stains on the panties to determine if there was any nonmotile sperm in them, did you?

A. No.

Q. You did not test the stains on the panties to determine if there were any blood group substances, did you?

A. No. This clothing wasn't on her.

Q. It was given to you. You described it as Ms. Taylor's clothing. Isn't that correct?

A. Yes,

Q. And you were part of a homicide investigation. You knew that. Is that right?

A. Yes.

Q. And part of your job is to look for evidence, forensic evidence that can aid the police in making an arrest and the prosecution making a conviction, if possible. Is that right?

A. That's correct.

Q. And you had stains on these panties that you did not test. Is that correct, Sir?

A. That's correct.

Q. And, nobody, after you had finished with the tests, given them on to the prosecutor or the detective, nobody came back and asked you to test those stains, did they?

A. No.

Trace Evidence

Q. As a forensic criminalist, Mr. Bogdan, you are familiar with the term "trace evidence." Isn't that correct?

A. Yes.

Q. Will you explain to the jury what trace evidence is?

A. Usually it's microscopic evidence or evidence that can be examined microscopically to evaluate it.

Q. What types of evidence can that be?

A. Well, the one that comes to mind, of course. Is hair, trace evidence or microscopic evidence.

Q. And can it also be soil?

A. Yes.

Q. Can it also be fibers from clothing?

A. Yes.

Q. Can it also be fibers, for example, from an automobile, if they existed?

A. Automobiles, what?

Q. If there was a covering on a car seat, it could be trace evidence that could be examined. Isn't that correct?

A. Yes.

Q. And trace evidence is something that—and please again correct if I'm wrong—is easily transferable from object to person or person to person sometimes. Isn't that right?

A. It is transferrable.

Q. That's why you look for it if it's relevant in a case. Isn't that correct?

A. Yes.

Q. Because you may be able to find some trace evidence on a suspect that might match up with the victim. Is that right?

A. That's correct.

- Q. Or you might be able to find some trace evidence on a suspect that might match up with the scene of the crime. Isn't that correct?
- A. Yes.
- Q. You did not go or were not asked to go to the actual scene of where Ms. Taylor was found, were you?
- A. No.
- Q. You never went back to get either soil samples or samples from the ground around the auto mechanic shop where Ms. Taylor was found. Is that correct?
- A. That's correct.
- Q. You were never asked to go and look at and vacuum up the contents of the automobile to try to collect hairs, fibers or other types of trace evidence, were you?
- A. No.
- Q. Some of Ms. Taylor's clothing was dirty. Is that correct? It was soiled?
- A. Yes.
- Q. You found no trace evidence, nothing that connected Mr. Rosa's clothes to those soiled areas on her pants.
- A. No. I didn't.
- Q. You testified that there was dirt on Ms. Taylor's shoes. Is that correct?
- A. Yes.
- Q. That dirt was analyzed in any way to know if it had oil stains or grass stains or any mixture thereof on the dirt. Is that right?
- A. No. I did not.
- Q. And there was nothing on Mr. Rosa's clothes that connected him to what was found on those shoes. Is that correct?
- A. No. There was nothing that I remember.
- Q. You did find on Item 9, which are the slacks of Ms. Taylor, you did find synthetic fibers. Is that right?
- A. Yes.
- Q. You found plant fibers. Is that correct?
- A. Yes.
- Q. Animal hairs. Is that right?
- A. Yes.
- Q. And head hairs, correct?

A. Yes.

Q. You did nothing to identify what the synthetic fibers were. Is that correct?

A. I did not.

Q. You did not go to the car and take any samples to see if they compared with those synthetic fibers, did you?

A. No.

Q. You didn't find any fibers, synthetic fibers, on Mr. Rosa's clothes, did you?

A. I didn't see any.

Q. In terms of the plant stains, plant fibers, you did no testing to determine what type of plant those fibers came from. Is that correct?

A. That's correct.

Q. And you did not find any of those plant fibers on Mr. Rosa's clothes, either, did you?

A. No.

Q. The animal hairs again were found on Ms. Taylor's pants. Is that right?

A. Yes.

Q. And you did not find any animal hairs on the clothes that you examined from Mr. Rosa. Is that correct?

A. I didn't find any.

Hair

Q. Now, let's turn to the hairs, Mr. Bogdan. Obviously, you're well trained in looking at and comparing hair samples. Is that correct?

A. Yes.

Q. You've done this hundreds of times. Is that right?

A. Yes.

Q. And you've had a number of hours of schooling on this, on this type of identification. Is that correct?

A. Yes.

Q. And, referring to No. 6 on the bra, there were several hairs on the bra. Is that correct?

A. That's correct.

Q. You obviously had a hair sample from Ms. Taylor. Is that right?

A. That's right.

Q. When you went to see Mr. Rosa, he voluntarily gave you his head hair sample. Is that correct?

A. Yes. I told you that before.

Q. So, therefore, you had two what are known as control samples to compare anything you found with. Is that right?

A. Yes,

Q. Two standards. Is that correct?

A. That's correct.

Q. And you only found one hair that was similar to Ms. Taylor. Is that correct? The other hairs that you found were not similar to Ms. Taylor. Is that right?

A. That's right.

Q. The other hairs also were not Thomas Rosa's hair. Isn't that correct?

A. That's correct.

Q. The other hairs that you found on that white bra were of Negroid origin. Is that correct?

A. Yes.

Q. And in terms of classification. Is it fair to say that there are three broad classifications for head hair, for hair, or are there more?

A. What are we talking about? Are we talking about racial?

Q. Yes.

A. Okay. So Negroid is the term that you use for the Negroid race. Is that correct?

A. Yes.

Q. In Item 6, one of those hairs was a body hair. Is that correct?

A. Yes.

Q. And that was a body hair of Negroid origin that was unidentified. Is that correct?

A. That's correct.

Q. You found on Mr. Rosa's clothes no unidentified Negroid hairs, did you?

A. No, I didn't.

Q. In addition to the fibers that were found, you also found head hairs on the white slacks. Is that correct?

A. That's correct.

Q. I'm sorry. One was similar to Ms. Taylor's hair. Is that correct?

A. That's correct.

- Q. And the others were not Thomas Rosa's hair. Is that correct?
- A. That's correct.
- Q. And you did not find these unidentified hairs, anything like that, on Mr. Rosa's clothes either, did you?
- A. No.
- Q. On Item No. 12, the sweater, there were no hairs of Mr. Rosa's found on the sweater, were there?
- A. There were none.
- Q. The hairs that were found were similar to Ms. Taylor. Is that correct?
- A. Yes.
- Q. On Mr. Rosa's clothes, you found no fiber that was similar to the clothing Ms. Taylor had been wearing. You found none of those fibers on Mr. Rosa's clothes, did you?
- A. Well, none similar to the clothing that was submitted.
- Q. Right.
- Q. And you did not find any fibers from Mr. Rosa's clothes on any of Ms. Taylor's clothing that you examined. Isn't that correct?
- A. Yes. That's correct.
- Q. Now, as part of the rape kit, you had a pubic hair collection lifter, Item No. 1, page 2, that had some hairs on it. Is that right?
- A. Yes.
- Q. And this would be combings that were taken by presumably the medical examiner through the pubic hair in the genital area. Is that correct?
- A. Yes. The fact that there was a lifter indicates that the way of collecting possible loose hairs was to use this lifter, which is transparent adhesive, like Scotch Tape, applied to the pubic, which would have any loose hairs adhere to it.
- Q. Okay. And obviously you're looking for hairs that are not similar to the victim's. Is that correct?
- A. That's correct.
- Q. And, if you can find hairs that are not similar to hers, then you can try to use those and try to identify them with the perpetrator. Is that correct?
- Q. And, again, Mr. Rosa voluntarily gave you cuttings of his pubic hairs. Isn't that right?
- A. That's correct.
- Q. You did find—there was hair found that was not Ms. Taylor's in the pubic hair lifter. Isn't that correct?

- A. The final finding was that there was a fragment, which was unsuitable for comparison. There were two pubic hairs which were similar.
- Q. Well, I'd ask you to look at your report dated 12/7/85.
- A. Well, I'm looking at the supplementary report.
- Q. I'm asking you to look at Item 1 on your original report, Sir.
- A. That supplementary updates that.
- Q. Sir, I'm asking you to look at your original report.
- A. I can't hear you.
- Q. I'm asking you to look at your original report.
- A. I'm looking at it.
- Q. In that report, you say that the hair was a Negroid pubic hair. Is that correct?
- A. Yes.
- Q. And you said that that was dissimilar to Ms. Taylor. Is that correct?
- A. Yes.
- Q. And you said that that Negroid pubic hair was dissimilar to Mr. Rosa. Is that correct?
- A. Yes. I did.
- Q. And then you went on to say that two other fragments of Negroid hair were unsuitable for comparison. Is that correct?
- A. Yes.
- Q. You found no pubic hairs of Ms. Taylor on any of Mr. Rosa's clothing, did you?
- A. No.
- Q. You did not do any type of A, B, O testing on any of these hairs, did you?
- A. No.
- Q. Meaning looking to try to determine if you could determine the blood type of the person who belonged to the unidentified hairs. Is that right?
- A. We don't do that.
- Q. It can be done if you get a hair in the proper condition. Isn't that correct?
- A. If there are roots on the hairs, it's possible. It might possibly be done.
- Q. Mr. Bogdan, if you had been given cigarette butts that a suspect may have smoked that had been retrieved from the scene, if that person were a secretor, you would be able to check that cigarette butt and determine the blood group substances that were deposited in the saliva. Is that correct?

MR. MOYNAHAN: Objection, Your Honor.

THE COURT: Sustained

Q. You have had occasion to test cigarette butts before. Isn't that correct?

A. Yes, I have.

Q. In what connection would you be looking at a cigarette butt?

A. To try to detect if there are any blood group substances present on the tip of the cigarette.

Q. And, if a person were a secretor and if the person had had that cigarette in his mouth, then you would be able to determine his blood type. Is that correct?

A. You could possibly.

Q. You were not given any debris or cigarettes or anything for you to examine other than the cigarette package and the matches at the lab, were you?

A. No, I wasn't.