

1 time, your Honor.

2 THE COURT: Thank you. You may step down.

3 (Witness excused.)

4 THE COURT: Your next witness?

5 MR. BOWN: Your Honor -- well, let me call
6 Martha Kerr.

7 THE COURT: Martha Kerr.

8 MR. BOWN: I believe she's outside.

9 MR. SHUMATE: She right here (indicating).

10 THE COURT: Young lady, would you come up, raise
11 your hand and take an oath, and position the things you
12 have there before you take that oath.

13 MARTHA KERR,

14 having been called as a witness, being first duly sworn,
15 testified as follows:

16 DIRECT EXAMINATION,

17 BY MR. BOWN:

18 Q Would you state your name and your occupation,
19 please.

20 A Martha Kerr, a criminalist employed at the
21 Utah State Crime Laboratory.

22 MR. SHUMATE: Your Honor, for the purposes of
23 this matter, we will stipulate that Martha Kerr is quali-
24 fied to examine blood, hair, bodily fluid samples,
25 qualified in all respects as a criminalist in connection

1 with her employment at the Utah State Crime Lab.

2 THE COURT: Has testified in court before,
3 including this one.

4 MR. SHUMATE: Yes, sir.

5 THE COURT: You have testified in court before?

6 THE WITNESS: Yes, I have.

7 THE COURT: And your last name is spelled
8 K-e-r-r?

9 THE WITNESS: Yes, it is.

10 THE COURT: All right.

11 MR. BOWN: I'll accept that stipulation as far
12 as qualifications.

13 THE COURT: Those facts are established.

14 Q (By Mr. Bown) Calling your attention to November
15 of 1984, and following months, have you had dealings with
16 doing some analysis on various items from the victim who
17 was found at the Manderfield exit in Beaver County?

18 A Yes, I have.

19 MR. SHUMATE: Your Honor, in order to save time,
20 I can stipulate that the items examined by Martha Kerr
21 pertinent to this case, as she identifies them, were
22 properly taken, handled and delivered to her. There's
23 no need to go into a lengthy chain of custody or chain
24 of evidence. We can stipulate to those items and hear
25 from the witness what she did with them.

1 THE COURT: Does that stipulation satisfy your
2 foundation, counsel?

3 MR. BOWN: Yes.

4 THE COURT: Those facts are established. Mr.
5 Shumate, as an assist to the Court, will stipulate on
6 those facts that have no contest. It facilitates matters.

7 MR. SHUMATE: That's correct. Thank you, your
8 Honor.

9 THE COURT: All right.

10 Q (By Mr. Bown) Did you have an occasion to
11 examine or analyze the blood of the victim?

12 A Yes, I did.

13 Q And what did you do in that analysis?

14 A I tested the blood from the victim in various
15 blood group -- blood grouping systems.

16 Q And did you obtain a result from your analysis?

17 A Yes, I did.

18 Q What did you find out about the blood,
19 particularly of the victim?

20 A The blood from the victim was in the typings ABO
21 type O; ESD type 1; PGM type 2-1; EAP type B; AK type 1;
22 ADA type 1. In the --

23 THE COURT: Slow down just a little bit.

24 THE WITNESS: All right. AK type -- well,
25 I'll repeat it. ABO type O.

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THE COURT: Yes.

THE WITNESS: EsD: 1; PGM type 2-1; EAP type B; AK type 1; ADA type 1; and in the Lewis system for determination of the treatise status she was a Lewis A-, Lewis B+.

I also did an Rh, but no testing was done on other items submitted in the case. And in this case she was a type R₁r.

THE COURT: R one small "R"?

THE WITNESS: Yes.

Q (By Mr. Bown) What does all that mean?

A Well, these are blood grouping systems and everybody has a different blood type, and these are the types that she exhibited in these systems.

Q So there's more to someone's blood than just your A+ or A- or "0"?

A Yes. That's only one of numerous different blood grouping systems that can be typed.

Q Okay. Did you also do some analysis of the blood submitted to you that was purported to have come from the defendant?

A Yes, I did.

Q And what did you find about the blood of the defendant in this matter?

A In typing the blood represented that came from

1 Bruce Dallas Goodman, I obtained the following types:
2 ABO type A; PGM type 1; EAP type BA; EsD type 1; AK type 1;
3 ADA type 1. The Lewis typings were Lewis A-, Lewis B+,
4 which would be indicative of a secretor type.

5 THE COURT: Were both of them secretors?

6 THE WITNESS: Yes.

7 THE COURT: The accused and the victim were both
8 secretors?

9 THE WITNESS: Yes, that's correct.

10 Q (By Mr. Bown) Okay, what does a "secretor" mean?

11 A Approximately 80 percent of the population will
12 secrete in their body fluids. For example, their saliva,
13 seminal fluid, vaginal fluid, the ABO antigens. And if
14 they are a secretor, it's possible to identify these
15 antigens and to obtain a type on the person.

16 Q Did you have any opportunity to analyze the
17 vaginal wash from the victim?

18 A Yes, I did.

19 Q And what did you find in that sample?

20 A When I examined the vaginal washing, I was
21 examining for the presence of seminal fluid. When we
22 do these tests, basically what I do is I test for the
23 presence of acid phosphatase, which is an enzyme in
24 high quantities in seminal fluid. It's not proof of
25 seminal fluid, but it's an indication of it.

1 I also do a microscopic looking for the presence of
2 sperm. If sperm are not found and acid phosphatase is
3 found, I then can test for a protein marker called P30
4 antigen. And this is conclusive for the presence of seminal
5 fluid in the absence of spermatozoa.

6 In this case I examined the vaginal washing for the
7 acid phosphatase, the P30s and the spermatozoa.

8 I obtained a positive result with my acid phosphatase
9 test, positive test with the P30 antigen. However,
10 microscopic examination failed to reveal the presence of
11 spermatozoa.

12 Q That means that in the sample that you had, that
13 you microscopically looked at, did you look at the whole
14 wash or just a portion of that sample?

15 A What you do is you spin the wash down and take a
16 sediment of the wash and look at it.

17 Q And in that sediment you could observe no
18 spermatozoa?

19 A I observed nothing that I could identify as
20 spermatozoa.

21 Q Okay. What else did you find, after you did
22 that?

23 A All right, once the seminal fluid is identified,
24 I then did an absorption inhibition test, which is a test
25 that we can use to detect the presence of any foreign ABO

1 antigens that may be present.

2 In this case I examined the vaginal washing and
3 detected the presence of A & H antigens.

4 Q Okay. And what does that mean?

5 A The seminal fluid present was deposited by an
6 "A" secretor.

7 Q What percentage of the population has the blood
8 type that could deposit that "A" secretor seminal fluid?

9 A All right, approximately 40 percent of your
10 population are going to be type A individuals, and of
11 that, 80 percent would be secretors. Approximately 32
12 percent of the population.

13 Q Okay. And as you compared the defendant's blood,
14 the ABO classification, he was again what?

15 A He was an "A" secretor.

16 Q So he fits within that category of persons who
17 could have deposited that that you found?

18 A Yes, he did.

19 Q Is there any way of telling how long that seminal
20 fluid had been in the vaginal -- vagina of the victim?

21 A No. There's a broad area there. Generally it's
22 been our experience that after 24 to 36 hours, you will
23 obtain a negative for the presence of seminal fluid. How-
24 ever, different portions of the seminal fluid may be
25 detected for up to a week, and in one case, where the body

1 was frozen, it was detected for 17 days after the death
2 of the victim.

3 Q Did you do any analysis with regard to a cigarette
4 that was found at the scene?

5 A Yes, I did.

6 Q And what is it that you did with regard to that
7 cigarette?

8 A Well, because of the presence of the ABO antigens
9 in the different body fluids, such as saliva, as I mentioned,
10 it's possible, in many cases, to determine possibly the
11 type of the person who may have smoked the cigarette.

12 In this case what you do is take the end of the filter
13 of the cigarette, test it for the presence of an enzyme
14 called Amylase, which is present in saliva in high quantities,
15 and when you find -- if you find Amylase present, that indi-
16 cates that there is sufficient saliva present that may
17 be able to obtain a type. Then do an absorption inhibi-
18 tion test and look for the presence of any antigens that
19 may be found.

20 Q Did you obtain a result as you did that?

21 A Yes, I did.

22 Q And what was that result?

23 A I obtained the presence of A & H antigens on
24 the cigarette butt.

25 Q Okay. Now, what is an "H" antigen?

1 A An "H" antigen -- all right, technically the
2 ABO system is referred to as ABO, but technically it's
3 the ABH blood grouping systems.

4 "H" antigen by itself would indicate a person of
5 type O.

6 A person that's an "A" individual will exhibit some
7 residual "H" activity and will have the "A" antigen and
8 a small amount of "H" antigen also present; which is also
9 true with a type B individual, will have "B" and a small
10 amount of "H" antigen present.

11 Q So it's not unusual to find in someone whose
12 type is "A," to find the "A" and the "H" antigen?

13 A No, it's not.

14 Q Not unusual?

15 A That's correct, it's not unusual.

16 Q Did you have an occasion to analyze a pillow
17 submitted to you which had blood on it?

18 A Yes, I did.

19 Q And what did you do with that particular exhibit?

20 A The pillow was examined. The casing --

21 Q Let me direct your attention to P-26-A and B.
22 Are those the items you did an analysis on?

23 A Yes, they are. The pillowcase was on the item
24 when it was submitted.

25 Basically -- you see, I took an area from this same

1 area (indicating) and --

2 THE COURT: You're referring to Exhibit 26 --

3 MR. SHUMATE: "A," I believe, your Honor.

4 MR. BOWN: "A."

5 THE COURT: -- "A," and it is marked separate.

6 MR. BOWN: Yes. This is "B" (indicating) and
7 that's "A."

8 THE COURT: All right. And "A" you have taken
9 a portion out of the stained area?

10 THE WITNESS: Yes.

11 THE COURT: Excised a portion?

12 THE WITNESS: Yes.

13 THE COURT: All right. The record will show that
14 on 26-A --

15 THE WITNESS: Also there's an area taken out
16 of the unstained portion.

17 THE COURT: All right. And you did both of those?

18 THE WITNESS: Yes, I did.

19 THE COURT: All right.

20 Q (By Mr. Bown) Okay. Did you obtain a result
21 from your analysis of that?

22 A Yes, I did.

23 Q Did you compare the results that you obtained
24 from the results that you obtained from the analysis of
25 the victim's blood?

1 A Yes, I did.

2 Q And how did they compare?

3 A Well, first of all, I tested for the presence of
4 human blood, and human blood -- the sample that I tested
5 to be human blood. I performed the ABO testing and
6 different enzyme testings on the samples. Of the blood
7 types that I obtained from the samples were consistent with
8 the blood typings from the victim.

9 Q Okay.

10 THE COURT: Now, you're both -- you are now and
11 both of you have referred to exhibits that have been
12 marked, identified but not received in evidence. I assume --

13 MR. BOWN: That's true.

14 THE COURT: -- by stipulation.

15 MR. BOWN: Now that we have some results, if
16 I could look at the clerk's note.

17 THE COURT: There's no objection, and I suppose
18 you understand, both of you, what you are doing.

19 MR. SHUMATE: I presume it's going to come in,
20 your Honor.

21 MR. BOWN: I think at this time I really have
22 no further questions, and I would kinda do some house
23 cleaning and make a motion to introduce those items.

24 With regard to P-17, the medical examiner's photographs,
25 I would make a motion to introduce those photographs, the

1 six photographs.

2 MR. SHUMATE: No objection, your Honor.

3 THE COURT: All right, when you say, "17," they
4 must be marked separate. Are they?

5 MR. BOWN: No. Those are the ones on the board.

6 THE COURT: No objection to P-17, Mr. Shumate?

7 MR. SHUMATE: None, your Honor.

8 THE COURT: Marked, offered and received.

9 (Plaintiff's Exhibit 17 received in evidence.)

10 MR. BOWN: I would move for the introduction of
11 P-19, which is the map of the western United States.

12 MR. SHUMATE: No objection.

13 MR. BOWN: For illustrative purposes.

14 THE COURT: P-19 is received, there being no
15 objection.

16 (Plaintiff's Exhibit 19 received in evidence.)

17 MR. BOWN: I'd move for the introduction of
18 P-21, the diagram. No, that was not -- that was a different
19 diagram. Excuse me.

20 I would move for the introduction of P-25, P-25-A and B,
21 which are the bags.

22 THE COURT: All right, P-25-A and B, both
23 identified as, I suppose, tote bags?

24 MR. SHUMATE: Yes.

25 THE COURT: One multi-colored, "A," and "B,"

1 a canvas-type, received in evidence.

2 MR. SHUMATE: No objection.

3 THE COURT: Yes, no objection, subject to
4 connecting them up with anything with the accused. And
5 you may couple it with a motion to strike if you don't --

6 MR. SHUMATE: They can be connected to the
7 victim, your Honor.

8 MR. BOWN: They're connected to the victim, your
9 Honor, and found up the road, and that's --

10 THE COURT: Yes. But there's nothing, at this
11 juncture, that brings the accused into this at any point.

12 MR. BOWN: Not yet, that's correct.

13 THE COURT: All right. So if you don't connect
14 it up, he may make a motion to strike.

15 MR. BOWN: I think they are part of the crime
16 scene. That's what we are offering them for.

17 (Plaintiff's Exhibits 25-A and B received
18 in evidence.)

19 MR. BOWN: I move for the introduction of 26-A
20 and B --

21 MR. SHUMATE: No objection.

22 MR. BOWN: -- pillow and pillowcase.

23 THE COURT: Received.

24 (Plaintiff's Exhibit 26-A and B received in
25 evidence.)

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MR. BOWN: And P-27, the vial of the cigarette.

THE COURT: No objection?

MR. SHUMATE: No objection.

THE COURT: P-27, the vial, as identified,
received.

(Plaintiff's Exhibit 27 received in evidence.)

MR. BOWN: Twenty-eight, the vest -- Levi vest.

MR. SHUMATE: No objection.

THE COURT: Received. No objection to the Levi
vest?

MR. SHUMATE: No, sir.

THE COURT: Received.

(Plaintiff's Exhibit 28 received in evidence.)

MR. BOWN: I also have some that I proffer to
be the cotton swabs of the items from the victim taken at
the autopsy, that Martha Kerr has.

THE COURT: What's the number?

MR. BOWN: There are 24 -- excuse me. Thirty-four,
35 and 36.

THE COURT: All right, what's 34, for the record?

MR. BOWN: It's a vaginal swab.

MR. SHUMATE: No objection.

THE COURT: Received.

(Plaintiff's Exhibit 34 received in evidence.)

MR. BOWN: Thirty-five is a rectal swab.

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MR. SHUMATE: No objection.

THE COURT: Received.

(Plaintiff's Exhibit 35 received in evidence.)

MR. BOWN: Where's the vaginal swab?

THE WITNESS: It was left here at prelim.

MR. BOWN: And 36 is a blood sample from the
victim.

MR. SHUMATE: No objection.

THE COURT: Received.

(Plaintiff's Exhibit 26 received in evidence.)

MR. BOWN: Now, if I may have just a moment,
your Honor. No further questions of this witness.

THE WITNESS: May I remove this?

THE COURT: Yes. As a matter of fact, I'm going
to have the bailiff move them.

Mr. Bailiff, keep close monitor on that, and you
can move them, the exhibits now. All right, proceed.

MR. SHUMATE: Thank you, your Honor.

CROSS-EXAMINATION,

BY MR. SHUMATE:

Q Miss Kerr, in connection with this case, did you
also examine ropes taken from the victim at the medical
examiner's office and delivered to you by Deputy Goodwin?

A. Yes, I did.

Q And did you compare those with ropes provided

1 from samples in Las Vegas allegedly taken from the possession
2 of Mr. Frank Snyder, owner of the pickup truck involved in
3 this case?

4 A. Yes, I did compare them with ropes submitted from
5 Las Vegas.

6 Q. Okay. And in your comparison of the two ropes,
7 did you find them similar or dissimilar?

8 A. They were dissimilar in construction, your Honor.

9 Q. Can you tell us, just very briefly, the
10 dissimilarities, how they were different?

11 A. Well, if I could read my report, because it
12 does come --

13 THE COURT: Certainly. Refresh your memory
14 from whatever you need to. You can't work on many,
15 many cases and keep it all in the back of your mind.
16 So you refresh your memory.

17 THE WITNESS: Thank you. All right, the
18 ropes, ME#29 and 36 represented as removed from the
19 victim, are constructed as follows: They're three plies
20 twisted together in a "Z" direction, which means a right-
21 hand twist. They would be twisted that way (indicating).
22 Each ply contains three strands twisted in an "S" direction,
23 or left-hand twist. Each strand contains two yarns twisted
24 in a left-hand or "S" direction. Each yarn contains
25 numerous Olefin fibers. There are five black yarns and one

1 orange yarn. They are two and a half crowns per inch, .4-
2 inch diameter and no core to the rope.

3 On the rope from Las Vegas, it was constructed as follows:

4 The three-ply twisted together in a "Z" direction. Each
5 play contains three strands twisted in an "S" direction.

6 And then this is where it differs from the rope from the
7 medical examiner's office. Each strand contained numerous
8 Olefin fibers. That was the same, the construction of the
9 Olefin fibers. But there are two black strands and one
10 orange strand with one fiber within the orange strand.

11 They are two and a half crowns per inch, .4-inch diameter.
12 No core.

13 Q Okay. Is there a conclusion, then, from your
14 examination of the ropes, that the rope samples from Las
15 Vegas is dissimilar from the rope taken from the victim's
16 body, is that correct?

17 A Yes, it was.

18 Q Okay. Now, getting back to your analysis of
19 the vaginal washing from the victim, was this a qualitative
20 or quantitative analysis?

21 A This is a qualitative analysis.

22 Q And so the record is clear and we all understand,
23 can you tell us what the difference is between qualitative
24 and quantitative analysis?

25 A A qualitative analysis looks for the presence or

1 absence of the substance.

2 A quantative you would be determining a certain --

3 Q Amount?

4 A -- amount, yes.

5 Q Okay. So from your analysis, there was no
6 determination as to how much seminal fluid may or may
7 not have been present at all, is that correct?

8 A No. I can give a rough -- in our qualitative
9 we grade it one-to four-plus. And I obtained what I
10 consider a three-plus reaction.

11 Q And a three-plus reaction in a qualitative range
12 would say what about how much would have been present?

13 A There was -- well, four-plus would be almost
14 pure seminal fluid. Three-plus would be -- there was
15 adequate seminal fluid present for identification.

16 Q So the life of this particular sample, in this
17 range that you said 36 hours old up to the present time,
18 sometimes you can find them as much as a week old, would
19 indicate what, a more present life of that sample?

20 A Yes. I would say it was within 24 to 36 hours.

21 Q I see. Now, with the presence of the "H"
22 antigen in the seminal fluid, that you analyzed, could
23 that "H" antigen just have been as easily contributed
24 to the sample by the decedent's own blood type, the
25 fact that she was also a secretor?

1 A. Yes. As I said, an "O" individual will secrete
2 the "H" antigen, and a mixture of that -- that's why we
3 have to know what type the victim was. She was an "O"
4 secretor. So, yes, there would be "H" antigen and part of
5 the "H" antigen would have been contributed.

6 Q I see. And there's no way to tell which is which,
7 is that right?

8 A. No. I would look for a foreign type of antigen,
9 either "A" or "B" antigen.

10 Q Okay. But an "H" antigen could either indicate
11 an "A" secretor or an "O" secretor, is that correct?

12 A. Well, an "A" secretor would -- you would not
13 interpret it as an "A" secretor based on the "H" antigen
14 reading. It would be from the presence of the "A"
15 antigen. An "H" -- let me clarify this.

16 An "A" secretor, they can exhibit "H" antigen not
17 necessarily. Okay, you can have "A" or A & H.

18 THE COURT: What about an "O" secretor?

19 THE WITNESS: An "O" secretor will secrete "H"
20 antigen.

21 Q (By Mr. Shumate) Constantly. And I presume
22 that that presence of "H" antigen is also indicated in
23 the cigarette butt that you analyzed. If it would have
24 been smoked by, say, the victim, who secretes "H" antigen,
25 as well as by an "A" secretor, you could find both antigens

1 present in the same cigarette butt, is that correct?

2 A Yes. I cannot tell if it was smoked also by
3 an "O" secretor. I know it was smoked by an "A" secretor,
4 but an "O" secretor could also have contributed "H"
5 antigen to the cigarette butt.

6 Q Okay. And, again, the percentage of "A" secretors
7 in the male population is about 32 percent?

8 A Yes. It's not dependent upon male or female.
9 It's just 32 percent of population.

10 THE COURT: Are all "A" secretors?

11 THE WITNESS: Are "A" secretors, yes.

12 THE COURT: Yes. Forty percent of the population

13 THE WITNESS: Are type A.

14 THE COURT: -- type A. I have that.

15 Q (By Mr. Shumate) And 32 percent "A" secretors?

16 A Yes. Eighty percent of 40 percent.

17 MR. SHUMATE: Okay, thank you. That's all I have,
18 your Honor.

19 MR. BOWN: For purpose of the record, your Honor,
20 I think Mr. Shumate might stipulate that when we're talking
21 about the "rope," we do have the rope, and we would offer
22 two exhibits, P-30, which is purported to be rope which
23 was around the hands of the victim, and P-29, which purports
24 to be rope from the lower extremities, the legs of the
25 victim.

1 THE COURT: They're both rope from the victim?
2 MR. SHUMATE: Yes, sir.
3 MR. BOWN: Yes.
4 THE COURT: One from the hands and the other
5 from the legs?
6 MR. BOWN: Yes.
7 THE COURT: All right. And they're marked as
8 exhibits. The container is marked as exhibit what?
9 MR. BOWN: Twenty-nine is the lower extremities
10 and 30 is the hands.
11 THE COURT: All right.
12 MR. SHUMATE: And we have no objection to that
13 entry into evidence, your Honor.
14 THE COURT: All right, received in evidence,
15 those two exhibits.
16 (Plaintiff's Exhibits 29 and 30 received
17 in evidence.)
18 THE COURT: The containers are marked, so the
19 record is clear.
20 MR. SHUMATE: The containers are marked and
21 sealed.
22 THE COURT: Yes. And the contents, you tell me,
23 are rope, and you both agree, so I won't question it --
24 MR. SHUMATE: Yes, sir.
25 MR. BOWN: Thank you. May I have just a moment?

1 THE COURT: -- right now, but I may open it
2 later.

3 MR. BOWN: I have no further questions of this
4 witness, your Honor.

5 MR. SHUMATE: Your Honor, I've come up with another
6 line that I probably should try to get into briefly while
7 she's here.

8 THE COURT: You go right ahead.

9 Q (By Mr. Shumate) Miss Kerr, the examination of
10 various substances in this case also included an examina-
11 tion of some hair samples, is that correct?

12 A Yes, it did.

13 Q Now, an actual report was written by Mr. Robert
14 Brinkman, of the State Crime Lab, one of your associates,
15 is that correct?

16 A From one of the items that was examined. The
17 remainder of the items the report was submitted by me.

18 Q Okay. And you have that report present in front
19 of you, among all those yellow sheets?

20 A Yes, I do.

21 THE COURT: Her report or his or both?

22 THE WITNESS: I have both.

23 MR. SHUMATE: Hers.

24 THE COURT: All right.

25 Q (By Mr. Shumate) What sample did you have an

1 opportunity to look at, as far as origin, can you tell us
2 that, where they came from?

3 Did you look at hair samples taken from Mr. Goodman?

4 A. Yes, I did.

5 Q. Did you look at hair samples taken from the
6 victim at the medical examiner's office?

7 A. Yes, I did.

8 Q. Did you also have an opportunity to examine a
9 hair sample designated as ME#31, taken from -- or 31ME
10 taken from the victim at the medical examiner's office?

11 A. Yes, I did. That is on the report that was
12 written by Robert Brinkman, however.

13 Q. I see. But you had a chance to examine all
14 three hair samples, is that correct, or all three sources?

15 A. Yes, I did.

16 Q. Okay. As I understand it, most of the hair,
17 submitted from the medical examiner's office, came from
18 the victim, was identifiable as the victim's hair, is
19 that correct?

20 A. It was consistent with having come from the
21 victim, yes.

22 Q. So that we can lay some foundation, can you
23 describe to us the process that one goes through in order
24 to examine hair samples, things that you look for and how
25 one begins to make a determination as to whether or not a

1 given hair sample is consistent from any source?

2 A. All right. First of all when we do our hair
3 examination, we examine it to make sure that it is hair,
4 of course, and that it is of human origin. Then we try
5 to determine, through different characteristics, the body
6 origin of where the hair came from. Basically when we
7 do a hair comparison, the work is done with head or pubic
8 hairs.

9 If the hair can be identified as to the origin -- body
10 origin of the hair, then a comparison is possible. This
11 is done using a low-power magnification in a microscope,
12 and then for the actual comparison, we go to a comparison
13 microscope, which in essence is two microscopes wedged
14 together, and allows us to look at the two, the unknown
15 and the known samples side by side. We look at different
16 characteristics in the hair, its different magnifications.
17 There's basically three different structures in the hair,
18 basic structures, and that would be the cuticle or the
19 outside covering of the hair. We look at the thickness,
20 the cuticle damage. We look at clarity, color. We look
21 at the cortex which is like, oh, the wooden part of a
22 pencil. This contains the pigment granules, and stuff,
23 and other bodies that may be present in the hair, ovoid
24 bodies, or fusi or different characteristics. This is where
25 the color characteristics of the hair would come through.

1 We look at the relative diameter of the hair in comparison.
2 We look at the pigment distributions throughout the
3 shafts of the hair, whether it's distributed toward the
4 outside of the hair or toward the middle of the hair.
5 And in some hairs, down the center of the hairs, there's
6 a structure called the medulla. It can either be a
7 continuous -- I think of it like the lead in a pencil. It
8 can be a continuous structure or it can be intermittent
9 or broken, or in many cases it can be completely absent
10 from the hair.

11 We look at all of these characteristics. We just
12 don't look at one hair from our unknown. It's necessary
13 to obtain a good representative sampling from our suspect
14 and victim so that we can observe the characteristics that
15 are exhibited by the hair, because every hair in the
16 head is going to be a little different, and you've got to
17 look at the whole range of the characteristics exhibited.
18 And then once these characteristics are observed, you
19 can compare it with the unknown hair to tell if it would
20 fit into parameters set by the standards, the hair samples
21 submitted. And then the conclusions reached by the hair
22 would either be it is consistent with and could have
23 originated from but not to be exclusive of other people
24 with similar characteristics, or it is dissimilar to and
25 could not have originated from or that the characteristics

1 are overlapping between the two, that it would be incon-
2 clusive. It's useful as an exclusionary as to be able
3 to say whether that hair could not have come from a, you
4 know --

5 THE COURT: When you say, "numerous factors,"
6 compared them and then from that, establish a probability?

7 THE WITNESS: Yes. But we cannot state, you
8 know, 80 percent of the population is going to exhibit this.
9 Those figures just aren't available in the hair population
10 field.

11 THE COURT: Okay.

12 Q (By Mr. Shumate) With that background, can you
13 tell us -- in your examination, as I understand it, you
14 identified the various characteristics of the hair samples
15 submitted to you from the defendant Bruce Dallas Goodman,
16 is that correct?

17 A Yes, I did.

18 Q And you compared those hair characteristics with
19 the characteristics of the samples given to you from the
20 body of the deceased, is that correct?

21 A Yes, I did.

22 Q And you found that Mr. Goodman's hair and the
23 deceased's hairs were dissimilar, is that correct?

24 A Yes.

25 Q Now, did you also have an opportunity to examine,

1 what has been referred to in Mr. Brinkman's report as
2 31ME, a hair sample removed from the sock of the decedent
3 at the medical examiner's office?

4 MR. BOWN: We will stipulate that item was
5 removed from the sock of the victim.

6 THE COURT: All right.

7 Q (By Mr. Shumate) Did you also have an opportunity
8 to examine item 31ME?

9 A Yes, I did.

10 Q And can you tell us what your findings were with
11 regard to that item, whether or not it was similar or
12 dissimilar to the victim's or Mr. Goodman's hair?

13 A It was dissimilar to the suspect, Mr. Goodman's
14 hair.

15 Q I see. Was it dissimilar to the victim's hair
16 as well?

17 A Yes, it was.

18 Q I see. So it did not appear to come from either
19 Mr. Goodman or the victim, is that correct?

20 A No, it did not.

21 THE COURT: Is that a single hair?

22 THE WITNESS: Yes. It was just a small hair.
23 It was difficult to tell if it was a body hair or a head
24 hair.

25 THE COURT: But a human hair?

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THE WITNESS: Yes.

THE COURT: All right.

Q. (By Mr. Shumate) Do you recall what color it was?

A. Light brown.

MR. SHUMATE: I see. That's all I have, your Honor.

THE COURT: Do you have redirect?

MR. BOWN: I do, your Honor.

REDIRECT EXAMINATION,

BY MR. BOWN:

Q. With regard to that hair, do you have any experience or knowledge about how hair adheres to one's body, particularly clothing?

A. Yes. It's a principal of the science that there can be a hair transfer between people, items or their environments.

Q. Particularly with regard to the hair that was found on the sock, is there any way of knowing when that hair attached itself to the sock?

A. No, there is not.

Q. Is it conceivable that I could be picking up a hair in the courtroom today on my socks dissimilar to mine?

A. Well, if you didn't have your shoes on, yes. Not

1 to be flippant.

2 Q Is it possible on my clothing, anywhere on my
3 clothing?

4 A Yes.

5 Q Okay. And there is no way of knowing where or
6 when that hair attached itself to the sock?

7 A No, there is not.

8 Q Could it have been there for weeks?

9 A Possibly. Yes.

10 MR. BOWN: Okay. No further questions.

11 RE-CROSS-EXAMINATION,

12 BY MR. SHUMATE:

13 Q Only one item, and we've probably covered it
14 before.

15 In all of the hair samples submitted to you, from the
16 medical examiner's office, both 31ME, the dissimilar
17 sample, as well as all the others that came from the
18 medical examiner and the body of the victim, did you find
19 any similarities in any of those hairs with the hairs
20 submitted to you from Mr. Goodman?

21 A No, I did not.

22 MR. SHUMATE: Okay. That's all I have, your
23 Honor.

24 THE COURT: Anything?
25

* *

1 REDIRECT EXAMINATION,

2 BY MR. BOWN:

3 Q Is hair transfer -- does it have to happen?
4 In other words, I've been around Mr. Christiansen. Do
5 I have to have his hair on me?

6 A No.

7 Q Did you have any other samples of hair -- of
8 known hair submitted to you for comparison with that
9 31ME?

10 A No, I did not.

11 Q How long was 31ME?

12 THE COURT: That's the hair from the sock?

13 MR. BOWN: Hair from the sock.

14 THE COURT: Not an exhibit but referred to as
15 31ME?

16 THE WITNESS: Yes. I have it with me. It was
17 approximately an inch.

18 MR. BOWN: Okay. No further questions.

19 MR. SHUMATE: If we can take it out, I think
20 we'd better have it marked and admitted.

21 MR. BOWN: We would stipulate to its introduc-
22 tion, your Honor, once it's identified.

23 THE COURT: All right.

24 THE WITNESS: Okay. This is what was removed
25 from the sock. These are the items that Mr. Brinkman --

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MR. SHUMATE: Let's do it 37-A, B and C.

MR. BOWN: These were all removed from the sock?

THE WITNESS: Yes. There's two that have fibers and one that has hair.

MR. SHUMATE: Only one hair, is that correct?

THE WITNESS: Yes.

THE COURT: All right, we haven't gotten into the fibers.

MR. SHUMATE: Just one, Paul, I'm sorry, just 37.

THE COURT: Do you have a stamp or sticker that goes on them?

THE CLERK: Yeah.

MR. SHUMATE: I'll offer into evidence Defendant's Exhibit No. 37, which is identified as 31ME, the hair taken from the sock at the medical examiner's office.

THE COURT: Identified by the witness as a hair not from the victim, not from the accused, is that right?

MR. SHUMATE: Yes, sir.

MR. BOWN: And we have no objection.

THE COURT: That's your testimony, young lady?

THE WITNESS: Yes, it is.

THE COURT: All right, it's received.

(Defendant's Exhibit 37 received in evidence.)

1 RECROSS-EXAMINATION,

2 BY MR. SHUMATE:

3 Q One final area, again. Miss Kerr, in the
4 examination of the ropes, did the ropes from the victim,
5 supplied to you from the medical examiner's office, have
6 any distinctive smell or characteristics that you could
7 identify of some substance on them?

8 A Not that you could positively identify. There
9 was a black, greasy petroleum-type smell to the rope.

10 MR. SHUMATE: Okay, thank you. That's all I have.

11 THE COURT: Do you have anything?

12 MR. BOWN: No, your Honor.

13 THE COURT: Any reason Martha Kerr should not
14 be excused?

15 MR. BOWN: I would so move.

16 MR. SHUMATE: No objection, your Honor.

17 THE COURT: All right, young lady, you're welcome
18 to leave if you have other commitments; on the other hand,
19 you're welcome to stay if you want.

20 THE WITNESS: Okay, thank you.

21 THE COURT: All right. Nice to see you again.

22 (Witness excused.)

23 THE COURT: Your next witness? Mr. Bailiff,
24 would you help her?

25 MR. BOWN: Your Honor, my next witness has been