

Miller, Robert

Testimony of Janice Davis Lyhane

1 A Approximately nine years.

2 Q And where were you employed prior to the Oklahoma City
3 Police Department?

4 A I was employed by the Oklahoma State Bureau of
5 Investigation. I also worked as a forensic chemist
6 specializing in serology and trace evidence. I was with them
7 approximately four years.

8 Q Would you relate, if you would, your educational
9 training and background for the jury, please?

10 A Yes, sir.

11 In May of '75 I graduated from Central State
12 University in Edmond, Oklahoma. I had a bachelor of science
13 degree. I majored in chemistry, minored in biology and a
14 minor in physics.

15 Q Okay. Have you attended any specialized training or
16 schools in furtherance of your profession?

17 A Yes, sir.

18 Q Would you relate those to us, please?

19 A After being employed by the Oklahoma State Bureau of
20 Investigation and later on with the Oklahoma City Police
21 Department, I attended numerous specialized schools in areas
22 of forensic sciences. These schools would include: Homicide
23 investigation at the University of Oklahoma in May of 1976;
24 investigation of sex crimes from the Southern Police
25 Institute in December of '76. Back at Central State

1 University in March of '77 I attended a forensic science in
2 criminal investigation seminar.

3 In July of '77 I attended the FBI Academy my
4 first time in basic serology. Serology is the dealing and
5 the identification of body fluids and the analysis of those
6 body fluids. My two-week's training course with the FBI
7 Academy in serology was working in their training laboratory
8 in Washington, D.C., on how they identify different body
9 fluids in the human and identifying specific genetic markers
10 in that body fluid.

11 In October of '79 I attended the FBI Academy on
12 my second occasion. This time was at the Crime Scene
13 Technician School. I trained with FBI agents in their
14 training laboratory on how to collect and preserve physical
15 evidence from major crime scenes.

16 In October of '79 at the U.S. Central Police
17 Institute in Oklahoma City I attended a school on the
18 geometric interpretation of bloodstains.

19 In January of 1980 I went to the FBI Academy on
20 a third occasion to attend their school on introduction to
21 the comparison of forensic hairs and fibers. This was a two-
22 week school where one week was specifically on the
23 identification of hairs and the comparisons of those hairs
24 forensically and the identification of fibers and the
25 comparison of those fibers forensically as they do in their

1 own laboratory.

2 In July and October, 1978, I had an occasion to
3 study with Professor Emeritus Dr. John MacLeod of Cornell
4 Medical School. My studies with Dr. MacLeod were on a one-to-
5 one basis on the identification and the morphological, which
6 would be the shape, of human spermatozoa, the male sperm
7 cell.

8 In April of 1980 I attended a basic
9 electrophoresis course at the Serological Research Institute
10 in Emeryville, California. Electrophoresis is an additional
11 way of identifying specific enzymes and proteins in body
12 fluids utilizing electricity.

13 In August of 1980 I attended an advanced
14 electrophoresis course on the analysis of bloodstains. In
15 February of '81 I attended an additional course on semen
16 identification utilizing electrophoresis. In November of '83
17 in Dallas, Texas, I attended a crime scene investigation
18 seminar. In approximately 1985 I returned to the FBI Academy
19 for a three-day international symposium on the identification
20 of comparison of forensic hairs.

21 Q Okay. Without being too personal, what is it that
22 you're doing today, now? You say --

23 A I have married, and I am assisting my husband in wheat
24 farming and cattle grazing.

25 Q When was it you left the employment with the Oklahoma

1 City Police Department?

2 A Shortly after I married in October '87.

3 Q Directing your attention back to the year of 1986,
4 1987, did you have an occasion as a -- strike that. I'm one
5 step ahead of myself.

6 Before I get to that, could you briefly explain
7 to the ladies and gentlemen of the jury exactly what your
8 duties and responsibilities of a forensic chemist are with
9 Oklahoma City?

10 A Yes, sir.

11 As I've stated, I have specialized in forensics
12 of serology, the analysis of body fluids and hair and fiber
13 identification and comparisons. As a forensic chemist for
14 the Oklahoma City Police Department, I analyzed physical
15 evidence involved in major criminal cases throughout Oklahoma
16 County and metropolitan area, most generally involved in
17 violent crimes, homicides, and sexual assaults. The body
18 fluids involved are analyzed using scientific technology.
19 Conclusions are made and reports of which I would come to
20 court and testify as to my analysis and explain to the jury
21 what my analysis meant in layman's terms.

22 Q Now, in reference to your duties and responsibilities
23 as a forensic chemist for the Oklahoma City Police
24 Department, did you receive items of evidence in reference to
25 the homicide of [REDACTED]?

1 A Yes, sir, I did.

2 Q Would you please relate to the ladies and gentlemen of
3 the jury what items you received in reference to that case?

4 A Yes, sir.

5 In September the 4th of '86, Technical
6 Investigator J. McCornack submitted evidence from the Medical
7 Examiner's Office taken from [REDACTED]. These items
8 included: A reference blood sample from her; reference
9 pulled scalp hairs; reference pulled pubic hairs; a pubic
10 hair combing; left hand and right hand fingernail clippings;
11 swabs taken from the vaginal cervix; swabs taken from the
12 vaginal posterior fornix; swabs taken from the anal area;
13 swabs taken from the oral area; a pink and white floral
14 nightgown; a pink night shirt; a multi-colored robe; a hair
15 net; and the brown paper sacks that had been placed over her
16 left and right hand to protect possible physical evidence; as
17 well as two Amcare sheets that were used to transport her
18 body from the crime area to the Medical Examiner's Office.

19 Later on on the same day, September the 4th of
20 '86, Technical Investigator Ron Wortham submitted the
21 following evidence of which he obtained at 1200 Northwest
22 31st: Hair taken from [REDACTED] body; more hair taken
23 from [REDACTED] body; hair and fibers taken from [REDACTED]
24 [REDACTED] bed; a vacuuming taken from her bedroom, being [REDACTED]
25 [REDACTED] a vacuuming taken from the kitchen; beige slip laying

1 beside Miss Fowler; a piece of white cloth taken from the
2 bed; an elastic waistband taken from underneath her body;
3 black cloth that was laying beside her head; a dental plate
4 that was taken from the bed; the white bedspread; a pink
5 blanket; another white blanket which ended up being more like
6 a sheet than a blanket; several pieces of cloth which include
7 a white cloth, a beige cloth, another white cloth that I
8 would describe more as a hanky, handkerchief, a floral cloth,
9 multi-colored, another floral cloth; a pillow and case, yellow
10 and floral; the white sheet from the bed of which Miss
11 [REDACTED] was laying on; the top sheet also from the bed; the
12 throw rug carpet; a liquid substance taken from the toilet;

13 On September the 5th and the 11th, 1986,
14 evidence was received from Mr. Edgar E. Collins. These were
15 reference body samples from Mr. Collins which included blood,
16 saliva, scalp, pubic, and facial hair.

17 On the same time was taken reference samples
18 from a Mr. Bobby Ray Booker. Again, from Mr. Booker was
19 taken reference blood, saliva, scalp, pubic, and facial hair,
20 all reference samples from him.

21 On the 11th of September, 1986, was submitted
22 reference samples taken from David Dwight Hilliard. Again,
23 reference blood, saliva, scalp, and pubic hair.

24 On September the 16th and October the 17th
25 samples of reference were taken from Mr. Howard Union. These

1 would include reference blood, reference saliva, scalp,
2 pubic, and facial hair.

3 Also received were samples of reference source
4 taken from Raymond H. Johnson. Again, a reference blood,
5 saliva, scalp, and public hair.

6 On February the 23rd and the 24th, myself, Miss
7 Joyce Gilchrist, Detectives Jerry Flowers and Bill Citty
8 assisted in taking reference body samples from Robert Lee
9 Miller, Jr. These samples included a reference blood sample,
10 reference saliva, reference facial, scalp, a scalp hair
11 combing, pubic hair, reference leg hair from each leg. I
12 again took another additional reference scalp hair from Mr.
13 Miller, reference facial hair and hair attached to his thigh
14 area.

15 On February the 24th, 1987, myself and
16 Detective Flowers assisted in taking samples from a Mr. Clem
17 Jeffries. These samples included reference blood, reference
18 saliva, scalp, pubic, and facial hair.

19 These are the items of evidence that I received
20 as a chemist working on the case of [REDACTED] in the
21 forensic laboratory at the Oklahoma City Police Department.

22 Q Okay. In reference to testing for body fluids and
23 other blood and so forth, can you tell the ladies and
24 gentlemen of the jury what tests you did in reference to the
25 items that you received in this case?

1 A Yes, sir.

2 Each item of evidence was gone over
3 meticulously looking for possible body fluids of which would
4 of course be in the dried state on the cloth, such as the
5 sheet of which Miss [REDACTED] was laying on. Specifically
6 stains of semen, seminal fluid were looked for and other
7 stains on the sheet. Of course, trace evidence, such as
8 hairs and fibers, were taken and preserved at that time and
9 were looked at and compared forensically at a later date.

10 Each item of evidence, if a bloodstain was
11 apparent on there, a sample was cut so that the type of the
12 blood could be determined and compared to Miss [REDACTED] to
13 determine if it could be possibly her blood or blood that's
14 foreign to her. If a stain was found, such as semen, which
15 was looked for in this case of being a possible sexual
16 assault, Miss [REDACTED] could not produce seminal fluid from her
17 body on her own. It's foreign to her. So, this body fluid
18 would be analyzed extensively to determine as much
19 information as possible from the donor of that fluid, the
20 semen.

21 MR. ELLIOTT: May I approach the witness, Your
22 Honor?

23 THE COURT: Yes.

24 Q (By Mr. Elliott) I now hand you what's been marked
25 for identification purposes as State's Exhibit Number 19 and

1 ask you to look at it, please.

2 A I can identify State's Exhibit Number 19. It bears my
3 signature and the date that I initially opened this envelope.

4 Q What is 19?

5 A State's Exhibit Number 19 contains sexual evidence
6 taken from Miss [REDACTED] at the time of her autopsy.

7 Q Okay. And I would ask you to open it now and remove
8 the contents. Can you identify the articles contained in
9 State's Exhibit 19?

10 A Yes, sir. Each of these items bears my initials, my
11 case number, and my item number that I placed on that when I
12 initially first came into contact with that item before I
13 ever broke the seal of that particular item.

14 Q Okay. Beginning with 19A, if you would, and proceed
15 through. Tell us which item is.

16 A 19A is a reference blood sample that was taken from
17 [REDACTED], which was originally contained in this glass
18 tube. It has the label with everyone's initials and
19 identifying marks of [REDACTED]. The blood is not in here
20 at this time.

21 19B were the vaginal swabs taken from the
22 cervix of [REDACTED].

23 19C, the vaginal swabs from her posterior
24 fornix.

25 19D, the swabs taken from the anal area of

1 Miss [REDACTED]

2 19E, the swabs taken from the oral area or the
3 mouth of Miss [REDACTED].

4 Q What was the condition of each of those items when you
5 received them?

6 A They were in a sealed condition when I received them.

7 MR. ELLIOTT: May I approach again, Your Honor?

8 THE COURT: Yes.

9 Q (By Mr. Elliott) I'll now hand you what's been marked
10 for identification purposes as State's Exhibits 15, 16, and
11 17.

12 A I can identify each, State's Exhibits 15, 16, and 17,
13 as they bear my initials, case and item number that I placed
14 on them when I came into contact with them.

15 Q And beginning with Item Number 15, can you tell us
16 what those are, please?

17 A Yes.

18 Item 15, State's Exhibit 15, is hair taken from
19 the bed of Miss [REDACTED].

20 State's Exhibit 16 is hair taken from her body.

21 State's Exhibit Number 17 is hair and fiber
22 taken from Miss [REDACTED]. Excuse me. They were taken from her
23 bed, State's Exhibit Number 17.

24 Q What was the condition of State's 15, 16, and 17 when
25 you received them?

1 A They were all in a sealed condition. The seal has
2 still not been tampered with. As I received it I opened it
3 at the opposite end.

4 Q Okay. I'll now hand you what's been marked as State's
5 Exhibit 14 and ask you to examine it, please.

6 A State's Exhibit Number 14 I can identify with my
7 initials, case and item number that I placed on it when I
8 came into contact with it.

9 Q Okay. Can you tell us what State's 14 is?

10 A Yes. This is the black cloth that was taken beside
11 the victim's head.

12 Q And what was the condition of State's 14 when you
13 received it?

14 A It was sealed. I broke the seal.

15 Q I'll now hand you what's marked as State's Exhibit 18
16 and ask you to examine it, please.

17 A State's Exhibit Number 18 I can identify with my
18 initials, case and item number that I placed on it when I
19 came into contact with it.

20 Q Okay. What is contained in State's 18?

21 A The white bedspread from Miss [REDACTED] bed.

22 Q And what condition was State's 18 when you received
23 it?

24 A It was in a sealed condition when I broke the seal.

25 Q Now, I'll hand you what's been marked as State's

1 Exhibit Number 20 and ask you to look at it.

2 A State's Exhibit Number 20 I can identify with my
3 initials, case and item number.

4 Q Can you tell us what's contained in State's 20?

5 A Yes. Originally contained my Item Numbers 10A and 10B
6 of which were nightgown, pink and white floral, and then a
7 pink night shirt.

8 Q What condition was State's 20 when you received it?

9 A In a sealed condition.

10 Q I hand you State's Exhibit Number 21 and ask you to
11 examine it, please.

12 A State's Exhibit Number 21 I can identify with my
13 initials, case and item number that I placed on it when I
14 initially came into contact with it.

15 Q Okay. Can you tell us what's contained in State's 21?

16 A Yes. It contains the Amcare sheets used to transport
17 Miss [REDACTED] body to the morgue, Oklahoma City -- Oklahoma
18 State Medical Examiner's Officer.

19 Q And, again, what condition was State's 21 when you
20 received it?

21 A It was in a sealed condition and I broke the seal.

22 Q And State's Exhibit 22. Ask you to examine it,
23 please.

24 A State's Exhibit Number 22 I can identify with my
25 initials, case and item number. They're placed on the outer

1 surface of the sack.

2 Q And can you tell us what was contained in State's 22?

3 A Was my Laboratory Item Numbers 26 through 32, which
4 include pink blanket -- these were from 1200 Northwest 31st --
5 which included a pink blanket, white blanket, white cloth,
6 face cloth, a white cloth, floral cloth, and then additional
7 floral cloth.

8 Q What condition again was State's 22 when you received
9 it?

10 A It was in a sealed condition and I broke the seal.

11 Q I hand you State's Exhibit 23 and ask you to look at
12 it.

13 A State's Exhibit Number 23 I can identify with my
14 initials, case and item number that I placed on this
15 container when I came into contact with it.

16 Q And, again, what is contained in State's Number 23?

17 A The bottom white sheet and the top white sheet taken
18 from the bed of [REDACTED].

19 Q Okay. Again, what condition was State's 23 when you
20 received it?

21 A It was in a sealed condition, and I broke the seal.

22 Q Now, I hand you what's marked as State's Exhibits 49
23 and 50.

24 A Yes, sir.

25 Q Ask you if you can identify those.

1 A Yes, sir. On each State's exhibit I can identify each
2 one with my initials, case and item number that I placed on
3 it when I came into contact with it.

4 Q And beginning with Item 49, can you tell us what Item
5 49 is?

6 A Item Number 49 is the reference blood sample that was
7 received from Robert Miller, Jr.

8 Q And Item 50?

9 A Item 50 was the reference saliva sample again received
10 from Robert Miller, Jr.

11 Q And what condition were Items 49 and 50 when you
12 received them?

13 A I received these items from Joyce Gilchrist in our
14 forensic laboratory. We work right across from each other in
15 the laboratory. And she had originally taken these items
16 from Mr. Miller and then she had given them to me at a later
17 time.

18 Q In what condition were they when she --

19 A They were secured in our laboratory. She had placed
20 her initials on them and, you know, had partially opened the
21 blood and taken some of the blood, and I took, you know, some
22 more of the blood from the tube. But it was secure in our
23 laboratory.

24 Q Now, in reference to State's Exhibits 19A through E,
25 14, 15, 16, 17, 18, 20, 21, 22, 23, 49, and 50, did you

1 perform any analyses or tests in reference to those State's
2 exhibits?

3 A Yes, sir.

4 Q And in reference to the homicide of Anna Fowler?

5 A Yes, sir, I did.

6 MR. ELLIOTT: Your Honor, at this time the
7 State would move the admission of State's Exhibits 19A
8 through E, 14, 15, 16, 17, 18, 20, 21, 22, 23, 49, and 50.

9 THE COURT: I think some have already been
10 admitted. What were the numbers you've suggested? 14, 15?

11 MR. ELLIOTT: Some of them, I believe, might
12 have, Judge, but I want to cover my base and make sure before
13 she testifies to her results.

14 THE COURT: Is that all?

15 MR. ELLIOTT: Yes, sir.

16 THE COURT: Any objection?

17 MR. EVANS: Not at this point, Judge.

18 THE COURT: They are all admitted.

19 Let me go back over. Go in chronological
20 order.

21 MR. ELLIOTT: Okay. State's 14 --

22 THE COURT: All right.

23 MR. ELLIOTT: -- 15, 16, 17, 18, 19A through E,
24 20, 21, 22, 23, 49, and 50.

25 THE COURT: All right. They are all admitted.

1 Q (By Mr. Elliott) Now, Mrs. Lyhane, in reference to
2 your analysis as pertaining to body fluids, blood, et cetera,
3 would you relate to the ladies and gentlemen of the jury your
4 results in reference to the items that were just introduced
5 into evidence?

6 A In reference to the serological analysis; is that
7 correct?

8 Q Yes, ma'am.

9 A On each item of evidence I was looking for a specific
10 body fluid, to identify that body fluid and to obtain as much
11 information as I could in reference to that body fluid to
12 know who it could have come from.

13 Beginning with Miss [REDACTED], I took the
14 reference blood sample that I received from her and subjected
15 it to numerous tests of which I was able to get a profile of
16 what genetic markers or what blood types, enzymes, and
17 proteins were contained in her blood and other body fluids.
18 I discovered that Miss [REDACTED] is a blood type "O" person
19 of the ABO system. She is a secretor, which means that in
20 her body fluids, other than her blood, such as her saliva,
21 her vaginal secretions, possibly even urine, that you would
22 be able to determine her ABO blood type without having
23 actually her blood. So, if you have vaginal secretions from
24 her and you subjected it to secretor typing tests, you would
25 be expected to find that she is blood type "O."

1 I did additional analysis utilizing electricity
2 to separate enzymes and proteins to identify specific genetic
3 markers from her in different systems other than what we're
4 familiar with, ABO system. These would include Peptidase A,
5 ESD, PGM, and PGM-subtyping, of which I concluded Miss Fowler
6 is a Peptidase A (1), an ESD (1), a PGM (2), and a PGM-
7 subtyping (2+). This will become more relevant as we see
8 what other body fluids we find in this case and what they
9 mean.

10 For instance, the vaginal swabs taken from her
11 cervix, the first thing I did was to look for the presence of
12 a foreign body fluid that we routinely look for in these
13 types of swabs and semen. Has the woman possibly been
14 sexually molested. In these vaginal swabs I was able to
15 determine that there were human sperm heads present. In
16 other words, there was a fluid in her vaginal canal that she
17 could not produce that would have to come from a male. I
18 subjected this swab to further testing to see if I could
19 determine the blood type of the semen donor and any other
20 pertinent information in reference to the semen donor. And
21 often times when we have a body of which has laid deceased,
22 is dead, and has laid there for some period of time, drainage
23 is going to occur from the vaginal area. And as I expected,
24 I was not able to conclude any additional information as to
25 the semen donor from this sample because I quantitated the

1 amount of semen that was present, and there was very, very
2 little semen. The sperm heads more or less stuck to the
3 tissue in her vaginal canal, but the liquid drained out.

4 The posterior fornix, which is a different area
5 of the vaginal canal, I again identified semen by
6 identification of sperm heads. I subjected that to secretor
7 typing and semen quantitation. The amount of semen present
8 was insufficient to determine anything about the semen
9 donor. But I did determine that there was a secretor blood
10 substance of "H" present, which is consistent with [REDACTED]
11 [REDACTED] body fluid. So, there was enough of her vaginal
12 secretion attached to it to pick up her blood type.

13 The anal swabs, sperm heads were identified,
14 which is a positive identification of seminal fluid that is
15 absolutely foreign to Miss [REDACTED]. She cannot produce this
16 in her body. It must come from a male individual. And I
17 subjected that to further testing of which semen was not
18 concentrated enough or sufficient on this swab to determine
19 anything else about the semen donor. I quantitated it by
20 identification of an enzyme, protein called P-30.

21 The oral swabs taken from her mouth no sperm
22 were identified, no other body fluid, other than, you know,
23 the blood attached to it. Her mouth was bloody. This is not
24 uncommon in this type of a case.

25 The nightgown and the night shirt of which were

1 attached to her at one point in time, I looked on numerous
2 places for semen stains. I looked for spermatozoa, acid
3 phosphatase, and P-30 and none was detected. So, I was not
4 able to find a body fluid of semen on the night shirt or the
5 nightgown. I did type some blood of which was human blood
6 type "O" from the pink night shirt around the color area
7 which was consistent with her injuries.

8 The next item, which would be State's Exhibit
9 Number 21, the Amcare sheets used to transport Miss [REDACTED]
10 from the crime scene to the State Medical Examiner's Office,
11 numerous hairs and fibers were taken of which I will disclose
12 of my conclusions to that at a later time.

13 Strictly speaking of biological evidence, we
14 must then go on to State's Exhibit Number 23, which is the
15 bottom white sheet that Miss [REDACTED] was laying on. As I
16 previously explained, she was laying there on the sheet. And
17 where her vaginal and anal area lay on the pelvic area, I saw
18 not only in the photographs taken from the crime scene before
19 the body was removed so I could see where those stains were
20 associated with her, there was a large stain slightly yellow
21 in color and had a smell, an odor to it of urine, which is
22 not uncommon with a deceased body. So, I suspected that that
23 would be urine that would drain from her bladder. But
24 contained right next to her was a stain, the exact size I
25 cannot be sure, but it was a smaller stain as compared to the

1 large urine stain, and it was much different as it was
2 stiff. When it dried it became stiff in the sheet. So, that
3 was my first clue to think that we had a semen draining from
4 the vaginal and possibly anal area of Miss [REDACTED] So, that
5 stain, of course, was cut for further analysis.

6 I took that stain and subjected it to the same
7 tests of which I would have reference samples in this case so
8 we can determine as much information as possible from it.
9 From that stain I identified the human fluid as semen or
10 seminal fluid. Again, cannot come from Miss [REDACTED] She
11 cannot produce this fluid. Females cannot produce semen. I
12 was able to do this and quantitate it to a fact through P-30
13 semiquantitation that it was a rather concentrated amount of
14 semen which would be consistent with that draining from a
15 vaginal area or anal area after an ejaculation. In other
16 words, it was very concentrated semen. So, I was able to
17 determine that the blood type of the semen donor -- I
18 subjected it to secretor analysis -- and I was able to
19 determine that the semen donor was a blood type "A." So,
20 that person, whoever it was, from their body fluid, other
21 than their blood, as well as their blood, we know that
22 they're blood type "A." And I also was able to determine
23 that their Peptidase A identification was a (1), their PGM
24 status was a (1). I did not get any results on the ESD as I
25 previously tested because ESD is not found in semen. It is

1 only found in blood. So, I, of course, did not obtain
2 results from that. But I tried and tried on numerous
3 occasions to obtain the PGM-subtyping of this (1) to
4 determine if it was a (1-), a (1+), or a (1-1+). But I was
5 not able to repeat my results to the satisfaction of being
6 able to call what it was. So, I was inconclusive as to that.

7 The vaginal swabs, from the cervix of which I
8 have previously testified that there was very little semen
9 present, I went ahead and subjected it to electrophoresis
10 analysis just in case I might be able to pick up an
11 additional genetic marker that was not coming from the
12 vaginal secretion of [REDACTED]. I did this and I did get
13 results, but they were all consistent with Miss [REDACTED] which
14 is what my previous tests had shown, that there was not
15 enough semen present to really give any results. So, this
16 was done and no additional information was obtained. The
17 swabs from the cervix, no results were obtained on the
18 electrophoresis analysis.

19 The anal swabs, all of the results were
20 consistent with the body fluid coming from [REDACTED]. So,
21 again, as I've previously stated, the semen that I identified
22 from the sperm heads from the anal swabs of [REDACTED] was
23 not sufficient in the amount of fluid present on that stain
24 to obtain any additional information. So, in this case in
25 reference to the serological or the body fluid analysis, the

1 stain that was found foreign to her was contained on the
2 sheet that she lay there between her legs, the semen. So, we
3 have a body fluid that we know she cannot produce and had
4 additional genetic markers that she could not produce.

5 When reference samples are received from
6 suspects in the forensic laboratory, each one of these items
7 is analyzed as could this person possibly be a possible donor
8 of evidence involved in this case. So, each item of
9 reference samples received were subjected to this.

10 In reference to State's Exhibit Number 49 and
11 50, which is a reference blood and saliva from Robert Miller,
12 Jr., I was able to obtain that Mr. Miller was a blood type
13 "A" in the ABO system, he was a secretor. So, not only from
14 his blood but his reference saliva sample that I took, or
15 that was taken from him by Miss Gilchrist, you could take
16 that stain, subject it to the proper tests and you're able to
17 say that the saliva which that person came from is a blood
18 type "A." Therefore, he is a secretor. So, a semen stain or
19 a semen body fluid that he would leave in a place would, of
20 course, be type "A."

21 The Peptidase A in this case was a (1) from Mr.
22 Miller, which is the same was Miss [REDACTED]. So, there
23 are no distinguishing genetic markers there that you could
24 distinguish between the two in a mixed body fluid as I had
25 from the semen stain on the sheet.

1 The ESD, Miss [REDACTED] was a (1). Mr. Miller is
2 a (2-1). But unfortunately with the technology that we have
3 now in forensic serology, we are not able to determine the
4 ESD factor in semen. Only blood. So, the semen at the scene
5 found on the sheet, we do not know the ESD donor of that
6 because, of course, it is semen.

7 The PGM, which is Phosphoglucomutase, which is
8 found in blood and semen, was determined to be a (1) by Mr.
9 Miller. Miss [REDACTED] is a (2). And the semen from the stain
10 from the sheet, I subjected it to the test, and it is a PGM
11 (1). In other words, I'm picking up the genetic marker PGM
12 from the semen and not from the fluids of Miss [REDACTED]. And
13 the reason I'm able to say this is because I quantitated that
14 stain and there is a sufficient amount of semen present that
15 I can say that the donor is a PGM (1).

16 If you take into consideration from a semen
17 stain left at this scene that the person is an "A" secretor,
18 a PGM (1), and a Peptidase A, then you will be able to say
19 that it would be approximately 13 percent of the population.
20 If you had additional information to determine whether it was
21 a Caucasian or a black, which in this case I'll talk about
22 the hairs, there were several Negroid hairs left, due to
23 statistics for the black race, then you would have one in
24 eight black males could leave the semen stain.

25 Q Okay. So, if I understood you correctly -- and do

1 correct me if I'm wrong -- that your results show that there
2 was certainly semen present in Mrs. [REDACTED] vaginal area.

3 A Yes, sir. Absolutely.

4 Q And on the stain on the sheet which had been
5 underneath her vaginal area.

6 A That's correct.

7 Q However, from the swabs from her vaginal area, both
8 the fornix and the posterior, there was just not enough to
9 determine the blood type of the donor.

10 A That's correct.

11 Q However, on the stain on the sheet underneath her
12 vaginal area, you were able to determine that the donor was a
13 blood type "A" secretor with a PGM of (1).

14 A And a Peptidase A (1).

15 Q Excuse me. Right.

16 And from your analyzing of Robert Lee Miller's
17 blood, you determined that he is "A" secretor, Peptidase A
18 (1), and PGM (1).

19 A That is correct.

20 Q Consistent with the donor of the seminal fluid found
21 on the sheet underneath Mrs. [REDACTED] vaginal area.

22 A Yes. He could not be eliminated. In other words, he
23 could have left that semen.

24 Q Now, in reference to the reference samples you
25 received from a Edgar Collins, a Bobby Ray Booker, a David

1 Dwight Hilliard, a Howard Union, a Raymond H. Johnson, and
2 Clem Jeffries, were you able to determine the blood type of
3 all of those individuals?

4 A Yes, sir.

5 Q Were any of those individuals of the blood type "A?"

6 A Yes.

7 Q How many and which ones?

8 A Mr. Jeffries was a blood type "A."

9 Q Were you able to determine his secretor status?

10 A Yes, sir.

11 Q And what was that?

12 A Mr. Jeffries is a nonsecretor; therefore, in his body
13 fluids, other than his blood, such as his saliva, of which I
14 received a reference sample, you cannot determine his ABO
15 blood type through routine absorption-inhibition standard
16 testings. So, in other words, by the testing methods that I
17 did in this case, he could not leave the semen. He could be
18 excluded as the semen donor.

19 Q In fact, in reference to any of these individuals --
20 and again correct me if I'm wrong -- as to Edgar Collins,
21 Bobby Booker, Dwight Hilliard, Howard Union, Raymond H.
22 Johnson, and Clem Jeffries, could any of those individuals
23 been the semen donor of the seminal fluid that you found in
24 reference to [REDACTED]?

25 A No, sir. They were all eliminated.

1 Q Now, you indicated in the course of your testimony
2 that you also did some analyses and investigation or viewing,
3 if you will for lack of a better term, in reference to
4 hairs. Could you explain, first of all, what process your
5 procedures are in reference to the identification in
6 observing and studying in looking at hairs?

7 A Yes, sir.

8 Human hairs, scalp and pubic, are routinely
9 analyzed in a forensic laboratory. This analysis is done
10 forensically by the adaptation of a microscope, specifically
11 a comparison microscope, so that you can look through a
12 microscope at a set of reference hairs and at the same time
13 look at an unknown hair. So, if you were visually looking
14 through the microscope, you could see two objects at the same
15 time and visualize them and compare them. There are numerous
16 microscopic characteristics that we compare in a forensic
17 hair comparison.

18 For a hair to be a match or to be consistent
19 with an unknown hair, a reference sample, it must be within
20 the realm of all these microscopic characteristics to the
21 unknown hair as to the reference hair. In other words, from
22 the root end of the hair to the tip end, however long that
23 hair be, we compare all the microscopic characteristics as we
24 visually look through there and see these characteristics.
25 If they are in that range, and they are the same, on a one

1 on one, a hair from the reference sample and that to the
2 unknown hair, then we are able to say that they could have
3 come from the same source. It is not a positive
4 identification. It is not like a fingerprint where you can
5 rule everyone else out in the world. But you can, on the
6 other hand, eliminate people very easily. So, you can say,
7 this hair is consistent with this individual but it is not
8 consistent with these. So, we know that the hair could not
9 have come from Miss [REDACTED], it's not like her hair. So, it's
10 foreign to her. So, if there were hairs found on evidence
11 and consistent with this case, be it her sheets, her
12 clothing, and in the area of her home, we can say that there
13 are hairs there that she cannot shed, you know, through her
14 daily routine of living there and that they cannot come from
15 her. So, then these are the hairs that we concentrate on and
16 then we compare to suspects to see if we can come up with a
17 match.

18 Q Are you able through your analysis to determine the
19 difference between say Caucasian hair, Negroid hair, or
20 Mongoloid hair?

21 A Yes, sir.

22 Q Okay. Is it always possible to make hair
23 comparisons? I mean, are there factors involved that would
24 prevent you from making a definite conclusion one way or the
25 other as to --

1 A Yes, sir, there are. Some of these reasons would be
2 that the hairs is not sufficient in length that you can see
3 enough quality throughout that hair for a forensic
4 comparison. In other words, it's a very short hair. A rule
5 of thumb -- it would, of course, vary from an examiner to a
6 forensic hair examiner. But a rule of thumb, a hair around a
7 half inch or more is utilized in a forensic hair comparison.
8 Again, it depends on the characteristics that you see in that
9 hair. Because, as in this case, I actually have a hair
10 that's an inch and a quarter long, a rather good size lengthy
11 scalp hair, but it could not be utilized for forensic
12 comparison, because when I looked through the microscope to
13 see the microscopic characteristics, such as the
14 pigmentation, it cannot be seen. It's completely opaque.
15 It's just looking at a piece of black tape laying on there.
16 And that's not what a hair comparison is about. A hair
17 comparison is comparing the cuticle, the scales, and the
18 pigmentation of how it varies throughout that hair in the
19 color and in the variety. So, if you can't see through a
20 hair to do this, you can't utilize it in a forensic
21 comparison.

22 Q So in other words, if a hair, for instance, is short
23 in length (indicating), it could be difficult if not
24 impossible to make a comparison?

25 A That's correct. However, there is information that we

1 may be able to obtain from that hair. We may be able to look
2 at it and say -- you know, we can measure it. It's a quarter
3 of an inch, it's a half an inch. And there are
4 characteristics there that we say are Negroid characteristic
5 or that it would be that of the black population, or there
6 are characteristics there that would be that of the Caucasian
7 race. So, we may be able to determine that it was a scalp
8 hair or a pubic hair. But as far as comparing it and
9 determine if we can decide if it could have come from an
10 individual, that's not possible. But we could actually say
11 maybe what type of a hair it is or what -- of what type race
12 it came from.

13 Q So, even though it might be too short to compare as to
14 the reference sample, it still would be comparison, for
15 lack -- comparable, for lack of a better term, to --

16 A With the identification that it's present. In other
17 words, if you found pieces and fragments of Negroid hair on
18 the bed and the clothing of Miss [REDACTED] -- Miss [REDACTED]
19 [REDACTED] has no Negroid characteristics in her hair. She is,
20 you know, Caucasian. She could not put these hairs there.
21 So, it's showing you that someone's been in that environment
22 of the black race. But, you know, there's not enough
23 sufficient amount of hair to compare just to determine who
24 that person was. You can just say they're not Caucasian,
25 that they are black.

1 Q You mentioned that if the hair is so opaque, it's just
2 like a black piece of tape laying on a slide. Would dirty
3 hair, unkempt hair, or unclean hair be one example that would
4 prevent a hair from being seen?

5 A Most generally the debris attached to a hair, looking
6 at a hair under power of anywhere from 100 to 400
7 magnification, you can see through the hair still and see the
8 debris of even received hair in cases that had been painted
9 over with a black paint to obliterate the hairs on the
10 surface, but you can still see through the hair and see that
11 the black chips of paint or the dirt surface on there. No,
12 I've never seen a hair so filthy that you couldn't analyze
13 it. But the pigments in the hair can be so concentrated that
14 you cannot see the differentiation of the pigmentation.

15 Q And you said something there, incidentally, that Mrs.
16 Fowler could not have placed those hairs there herself. Can
17 you explain the process of how we lose hair, or do we lose
18 hair?

19 A Yes. We all naturally shed hair from our scalp and
20 pubic region through a normal growing process of living. It
21 is theorized that we in the scalp hair, and on an average
22 basis, that we each lose approximately 150 scalp hairs a day.
23 We never really miss those hairs because through the natural
24 growing process those hairs are being replenished, and we
25 have so many hairs that it's really not noticed. That's

1 just on the average growing cycle. If you take 150 hairs
2 naturally shed by each individual, that's a lot of scalp
3 hair. These hairs are most generally shed when we are going
4 through our normal hygiene routine of washing our hair or
5 combing it, preparing for events of the day. However, we can
6 still shed hair throughout the day, and it would, of course,
7 depend on our hairstyle, how tight of a weave we have our
8 hair in, or how much hair spray we have, and how clean we are
9 to how much hair would actually be shed from where we go from
10 place to place on just an average basis. And again, if we
11 come in a confrontation with someone, physical struggle with
12 two people, between two individuals, you're going to have
13 hair most generally shed. And that's what we look for in
14 forensic hairs to compare, because most generally there are
15 hairs shed and left at a crime scene. And that's what we
16 look for.

17 We are able to determine from those hairs if
18 they positively cannot come from the individual that we know
19 that was laying there because she microscopically has a
20 certain characteristic to her hair, and yet these hairs
21 display a totally different look about them, and we know
22 that, number one, they're from a Negroid and they could not
23 have come from Miss [REDACTED]

24 Q Okay. If I understand you, me just walking from here
25 to you, it would be possible for me to get hair on this

1 carpet just walking up there to you.

2 A It's possible. More and most likely you won't shed
3 very many hairs in here today unless you really ram around in
4 your hair. But what's more important is these hairs do not
5 deteriorate. In other words, those hairs will sit where they
6 have laid and fell until they are either swept up with a
7 sweeper, vacuum cleaner, or some nature of that source, or
8 the wind would blow them someplace else. But when you
9 routinely see a lot of hair on a certain surface area, like
10 that of a bed, that are foreign to an individual such as
11 this, where Miss [REDACTED] is laying there dead, then it's a
12 very strong indication that the person that has been in
13 association with that bed with Miss [REDACTED] in a recent
14 association because the hairs are found in that general area
15 of the Negroid race, then it appears that a Negroid person
16 has been in that area.

17 Q Now, in reference to the State's exhibits that have
18 just been introduced that you've identified, would you relate
19 to the ladies and gentlemen of the jury your findings of your
20 analysis and your results there?

21 A In reference to the hairs?

22 Q Yes, ma'am.

23 A I'm not sure on reference to this State's exhibit, I
24 believe it's 19A, the pubic hair combing --

25 Am I correct on the State's exhibit number?

1 Q I believe 19A is the reference blood from Miss [REDACTED]
2 A Okay. Well, the combing that was taken from Miss
3 [REDACTED] at the time of autopsy, this is done routinely on
4 sexual assault victims, both deceased and alive, so that in
5 the confrontation of a sexual assault, if there's a hair
6 exchanged from one person's pubic area to another, then
7 possibly we can preserve these hairs that were transferred by
8 the combing of that pubic area. So, any hairs that are taken
9 from this comb or area where they are placed for security,
10 and that would be in a paper bindle in this area with a comb,
11 then these hairs would not be reference hairs. They are
12 referred to as unknown hairs. In other words, even though we
13 know they were combed from Miss [REDACTED] pubic region, we
14 don't know that they all originated from her. And that's the
15 purpose of taking a combing.

16 Along with that, afterwards, a reference pull
17 sample of hairs are taken from Miss [REDACTED] representative
18 samples of the hairs in her pubic region -- long straight
19 ones, short curly ones, very curly ones, and some that are
20 not so curly -- a good reference sample of those hairs, so
21 that when we do a forensic microscopic comparison, we have
22 the variety that's contained in her pubic region. So, this
23 type of comparison is routinely done.

24 In this instance, from her combing, there were
25 15 hairs received in the combing, of which I determined 13 of

1 them were pubic hairs, and they were consistent in all
2 microscopic characteristics of those of [REDACTED]
3 Therefore, it's my opinion that these 13 pubic hairs
4 originated from her pubic region. There was one scalp hair
5 contained in that of which, again, was consistent with Miss
6 [REDACTED] scalp hair. I also received reference scalp hair
7 from all areas of her scalp, the different textures -- the
8 fine, the coarse and the medium hair, the lighter hair and
9 the curlier hair and the straighter hair. These reference
10 hairs were compared on this one scalp hair, and I found a
11 hair of hers that was a one-on-one microscopic comparison
12 that was the same. So, I was able to conclude that this
13 scalp hair in my opinion originated from her.

14 There was an additional scalp hair found in
15 this combing that was determined to be a Caucasian but was
16 not consistent with her. Therefore, it was my opinion that
17 it did not derive from her scalp. So, it being a Caucasian
18 hair from her pubic combing, it was of quite concern of where
19 it would originate as she was laying their dead. In my final
20 analysis, which I discovered in my -- in reviewing my notes
21 for the testimony today, I discovered that that Caucasian
22 scalp hair was consistent with my scalp hair, as we are
23 trained to know what our own hair looks like. So, with
24 routine of analyzing cases we should shed any hair and
25 actually contaminate the evidence, we can identify our own

1 hair and identify it. After numerous hours of contemplating,
2 as I discovered this morning in reviewing my report for
3 testimony today, I finally discovered that that Caucasian
4 hair was consistent in all microscopic characteristics on a
5 one-on-one basis with the hair from my scalp that I pulled as
6 a reference hair. Therefore, it's my opinion that that scalp
7 hair originated from me.

8 MR. EVANS: Your Honor, may we approach the
9 bench?

10 THE COURT: If you must.

11 MR. EVANS: We must.

12 (The following was said outside the hearing of the
13 jury:)

14 MR. EVANS: Your Honor, I would at this time
15 move for a mistrial. There was a discovery motion filed
16 months ago that the State was to turn over to me all results
17 of all scientific tests. The last result I have had has
18 nothing about this sort of testimony and this sort of result
19 contained in the last report that I got regarding Miss
20 Lyhane's comparisons. For that reason I would move for a
21 mistrial.

22 THE COURT: From the testimony it appears that
23 it was just -- this analysis was made just yesterday or very
24 recently so as to not have been available to the State.

25 Is that your understanding of it?

1 MR. MACY: That's exactly right, Your Honor.
2 We didn't know this until this morning ourselves.

3 MR. EVANS: Well, that doesn't change the
4 surprise effect that it has on the defense's case. That's
5 the basis for my mistrial.

6 THE COURT: It's overruled.

7 MR. EVANS: Okay. I would object to further
8 and ask that the --

9 I'd object first to this testimony and ask it
10 be stricken.

11 THE COURT: Overruled.

12 MR. EVANS: Yes, sir.

13 (The following was said within the hearing of the
14 jury:)

15 Q (By Mr. Elliott) Miss Lyhane, do you have an
16 explanation as to why or how -- is probably the better way to
17 ask it -- how your scalp hair could have got in with this
18 sample?

19 A Yes, sir.

20 Q Okay. Could you tell us?

21 A At some point in time, after opening the envelope and
22 the paper bundle of which these hairs were contained, the
23 time of placing those hairs and securing them in a permanent
24 position in a microscope slide with Permout, which is a
25 permanent glue, I shed a hair into that and did not notice it

1 at the time that I did it. And later, after subjecting those
2 hairs to analysis, I was able to conclude that that's what
3 happened. And at some point in time it happened without me
4 seeing it.

5 Q So, in other words, what you've described earlier
6 could have happened when we shed our hair in a daily routine
7 through no jerking or pulling or so forth. Apparently it
8 just happened.

9 A That's correct.

10 Q Okay. Which -- is that common or uncommon?

11 A That's happened to me on several occasions.

12 Q Proceed, if you will, as to your Item Number 10A.

13 A Yes, sir.

14 State's Exhibit Number 20, the nightgown taken
15 from Miss [REDACTED], contained three scalp hairs, Caucasian.
16 They were consistent in microscopic characteristics in
17 reference to her scalp hair. Therefore, it's my opinion that
18 these scalp hairs originated from her. They are not foreign
19 to her.

20 Also found on this nightgown were three Negroid
21 hairs. All three of the hairs for one reason or another,
22 either due to their length or their characteristics within
23 that length, they are not suitable for forensic comparison.
24 In other words, I can only say that they originated from
25 someone of the Negroid race, but I cannot compare them to

1 reference sample.

2 Q At this point let me interrupt you for a moment.

3 On your report you've got the three Negroid
4 hairs listed under the column "hairs not consistent with any
5 of these." Now, are you indicating that you can exclude
6 Robert Lee Miller, Jr., by placing those hairs in that
7 category?

8 A No, sir. That category is placed columnized like that
9 that the hairs in that column are not consistent with either
10 the deceased, the victim, or they could not be compared or
11 they are not comparable to Mr. Miller. In other words, there
12 is additional information about the hairs in these columns of
13 which the little asterisk denotes that the sample is not
14 suitable for forensic comparison. But by this simple nature
15 that I can determine that it is of the Negroid race, I can
16 say it's foreign to Miss [REDACTED] -- she could not have
17 produced that -- and that it is someone of the Negroid race.

18 Q Moving on to your Item Number 10B, which is still
19 State's Exhibit 20.

20 A Miss [REDACTED] night shirt, one scalp hair was found.
21 This scalp hair was consistent in microscopic characteristics
22 as with Miss [REDACTED] reference scalp hair. Therefore, it's
23 my opinion that it is not foreign to her and that it
24 originated from her.

25 In addition, five pieces or fragments of

1 Negroid hair were found on this night shirt, five more
2 pieces. And these, like I said, could not have originated
3 from Miss [REDACTED]. However, they did originate, we know, by
4 their characteristics what little was present in those hairs
5 that they are from someone from the Negroid race.

6 I might add, this is not uncharacteristic of
7 criminal cases or of that of the Negroid race, because the
8 hair and in the way that the diameter is on Negroid hair, it
9 has a very wide diameter, goes very narrow and wide, which
10 makes it very curly, they have a tendency to be more prone to
11 break very easily. So, those people's from the Negroid race
12 hair will break in small fragments rather easily where hair
13 that has a diameter like Caucasian hair. It's more of a
14 smooth area in the diameter. They're more sturdy. So,
15 pieces are not that commonly found. They don't routinely
16 fall in small pieces like Negroid hair. So, this is
17 characteristic of the type of hair that's present.

18 Q Moving up to your Item 14A and B, which is State's
19 Exhibit Number 21.

20 A Yes. State's Exhibit Number 21, the Amcare sheets
21 that were used to transport Miss [REDACTED]. On the two sheets
22 three pubic hairs were found. They were Caucasian. They
23 were compared to Miss [REDACTED]. And they were like her hairs
24 in microscopic characteristics. So, it's my opinion they are
25 not foreign to her; therefore, they could have originated

1 from her.

2 In addition to those three pubic hairs, there
3 were two scalp Caucasian hairs. One was five inches long and
4 the other was six and a half inches long. Where these
5 Caucasian scalp hairs came from I do not know. They came
6 from someone that was either in contact with the sheets or
7 someone in the process of washing the sheets the hairs
8 clinged to it and they were there when the sheets were used
9 to transport her. We do not know. All we know is that there
10 are two Caucasian hairs that do not match to me, as the
11 examiner in this case, that opened the evidence and preserved
12 it, and they are not like Miss [REDACTED]

13 In addition to these sheets, there were six
14 fragments of hair found from someone of the Negroid race. In
15 other words, these hairs can positively be said they could
16 not have come from Miss [REDACTED] but they did come from
17 someone of the Negroid race. Six pieces.

18 Q Moving on to your Item Number 15, which is State's
19 Exhibit Number 16.

20 A Yes, sir. State's Exhibit 16 is the hair taken from
21 Miss [REDACTED] body at the crime scene. Included in this were
22 four hairs. Three of those were scalp hair, and they were
23 like Miss [REDACTED] reference scalp hair. Therefore, it's my
24 opinion that they could have originated from her.

25 In addition, the remaining hair was one and one

1 quarter inch long. It could not have originated from Miss
2 [REDACTED] and in my opinion that hair is of the Negroid race.
3 It is the hair which is completely opaque. You cannot see
4 through it. Its diameter fluctuates. It is of sufficient
5 length if I could see the characteristics in the hair for a
6 comparison. But because those characteristics cannot be
7 seen, they are so densely -- it is so densely pigmented,
8 which is characteristic of a Negroid hair, all I can say is
9 that they are of a Negroid race. It is. Excuse me.

10 Q And moving to State's Exhibit Number 15, which is your
11 Item 16, I believe.

12 A Yes, sir. This is hair taken from [REDACTED] bed
13 at the crime scene. And in this container was found two
14 hairs. These two hairs were determined to be Negroid hair
15 fragments. In others, there's no way they could be
16 associated with Miss [REDACTED]. They're foreign to her. But we
17 do know that they were associated and came from someone of
18 the Negroid race, but they are not suitable for a forensic
19 comparison.

20 Q Okay.

21 A Additional hair, State's Exhibit Number 17, is more
22 hair that was taken from Miss [REDACTED] bed at the crime
23 scene. It was in a separate container. This hair contained
24 four hairs. Three of them were scalp and they were
25 microscopically consistent with Miss [REDACTED] reference scalp

1 hair. Therefore, it's my opinion that they could have
2 originated from her and they are not foreign to her.

3 The remaining hair is that of a Negroid
4 fragment. In other words, it is not suitable for forensic
5 comparison, but I can determine it could not have originated
6 from Miss [REDACTED] and it did originate from someone in the
7 Negroid race.

8 Q State's Exhibit 14, which is your Item 23, I believe.

9 A Yes, sir. That's a black cloth taken next to Miss
10 [REDACTED] head: There were numerous hairs attached to this
11 cloth that were near her head. We are trained, of course, to
12 give an overall view of an object. We have a reference
13 sample of Miss [REDACTED] hair, that hair clinging to this
14 cloth but basically like her hair. So, a representative
15 sample of that clump of hair or hairs was taken of which I
16 took six hairs. I took coarse hairs, medium hairs, fine
17 hairs, and very fine hairs that would represent the sample of
18 the hairs attached to that cloth. These six hairs were
19 microscopically consistent with the hairs of Miss [REDACTED]
20 Therefore, it's my opinion that they could have originated
21 from her.

22 There was a remaining one hair of which was a
23 fragment of that of the Negroid race. Miss [REDACTED] could not
24 have produced it. It's foreign to her. But all I can say
25 that it is from the Negroid race. It's not suitable for

1 comparison.

2 Q These -- and you may have said. If I missed it I
3 apologize. These hairs that were consistent with having come
4 from Mrs. [REDACTED] that were in the black cloth, could you
5 determine which portion of her body those hairs came from?

6 A Yes, sir. They were scalp hairs.

7 Q Moving on to your Item 25, which is our State's
8 Exhibit Number 18.

9 A Yes, sir. State's Exhibit Number 18 is the white
10 bedspread from Miss [REDACTED] bed. It contained one hair. I
11 determined through a microscopic observation that this one
12 hair was that of a Negroid race. However, it was
13 insufficient for a forensic comparison. All I'm able to say
14 is it could not have originated from Miss [REDACTED], she is not
15 Negroid, but that it did originate from someone of the
16 Negroid race.

17 State's Exhibit Number 22, the white blanket,
18 contained three hairs, two scalp hairs. They were
19 microscopically consistent with Miss [REDACTED] scalp hair.
20 Therefore, it's my opinion that they could have originated
21 from her. They're not foreign to her. That the remaining
22 one hair is foreign to Miss [REDACTED] in my opinion, and this
23 hair originated from someone of the Negroid race. It was
24 insufficient in its microscopic characteristics for a
25 forensic comparison.

1 State's Exhibit Number 23, the white sheet of
2 which Miss [REDACTED] lay on, which I had previously testified to
3 the stain that I identified from that, this sheet also
4 contained numerous hairs. Eleven hairs were analyzed. They
5 were determined that they could not have originated from Miss
6 [REDACTED] because they contained Negroid characteristics in my
7 opinion, but due to their length in their microscopic
8 characteristics, they were just fragments, I could not
9 utilize them to compare to someone's reference sample. So,
10 all I was able to say, that those eleven hairs originated
11 from someone of the Negroid race.

12 Q Is it unusual or could you characterize it as unusual
13 based upon your experience that you have so many hairs all of
14 which are not suitable for forensic comparison? I mean, is
15 that an unusual finding?

16 A No, sir, not as -- not when we're dealing with someone
17 of the Negroid race, as I've previously explained. Their
18 hair breaks rather easily and it breaks in small fragments
19 because of the fluctuation in the diameter of the hair.
20 Instead of either hanging onto the head or being pulled from
21 the head, it just breaks and severs in very small pieces.

22 Q Backing up to State's Exhibit Number 14, the black
23 cloth, which is your Lab Number 23, is there any way to tell
24 or could you tell if the hairs, the scalp hairs, the six
25 scalp hairs that you've identified that were microscopically

1 comparable to Mrs. [REDACTED], is there any way you can
2 characterize those hairs as to whether they were clinging to
3 the cloth, embedded in the cloth, or attached to the cloth?
4 Is there any characterization you can make there?

5 A The best I recall -- I would have to look at the cloth
6 to be absolutely certain, but the way I recall, it was tied
7 in a knot and there were a lot of hairs contained in the knot
8 and around the cloth. So, it actually appeared it had been
9 around her head, possibly around her face. And it would be
10 consistent with that to the amount of hairs that were
11 entangled in the cloth.

12 Q One more question and then I'll sit down. I'm going
13 to back up to the serological analysis that you did and ask
14 you one question.

15 In reference to State's Exhibit 19D, the anal
16 swabs -- and again, if you indicated this, I apologize -- did
17 you identify semen or sperm on those samples which is your
18 Lab 8A and 8B?

19 A Yes, sir. I identified sperm heads in an anal canal.
20 It is very characteristic to only identify sperm heads
21 because the tails detach rather quickly when in a bacteria
22 environment, and the anal canal is very much a bacteria
23 environment. So, the tails that you may suspect to see in a
24 vaginal canal attached you rarely do see in an anal canal,
25 specifically with a deceased body. But because these human

1 sperm heads were found and were identified, it is a positive
2 identification of seminal fluid because that's how sperm
3 heads end up where they are found. They are carried in a
4 fluid. And this fluid is ejaculated from a male when he
5 reaches his sexual climax. Therefore, the fluid may go into
6 that canal and it may later drain from that canal so that you
7 are not able to determine anything else about it other than
8 the fact that it was once there. Because I did quantitate
9 this substance on the swabs, I was able to show that there
10 was very little seminal fluid there. And again, as I have
11 said, I believe the fluid drained from her body and it was
12 placed in that stain area right below her.

13 MR. ELLIOTT: No further questions, Your Honor.

14 THE COURT: You may cross-examine.

15 MR. EVANS: May we approach the bench first,
16 Your Honor?

17 THE COURT: Yes, if it's something I have not
18 ruled on.

19 (The following was said outside the hearing of the
20 jury:)

21 MR. EVANS: Judge, I would respectfully ask to
22 break at this time. It's a few minutes before five o'clock.
23 Miss Davis has testified to some new things that I was not
24 aware of. She hit the stand 20 minutes ago. And I would
25 like to have some time to consult some authorities and some

1 You may cross-examine the State's witness, Mr.
2 Evans.

3 MR. EVANS: Yes, sir.

4 THE COURT: You've previously been sworn and
5 you're still testifying under oath.

6 THE WITNESS: Yes, sir.

7 THE COURT: Yes.

8 Please be seated.

9 CROSS-EXAMINATION

10 BY MR. EVANS:

11 Q Miss Lyhane, bear with me here. This is pretty
12 technical. And you certainly have me at your advantage.

13 Let me make sure we understand one thing. You
14 found no hair in Miss [REDACTED] bed or you examined no hair at
15 the [REDACTED] scene that you can testify is consistent with
16 Robert Miller; is that correct?

17 A Not in a forensic comparison as that we normally do.
18 I did find hair that is Negroid as I have previously
19 testified, and he is a Negroid.

20 Q Yes, ma'am.

21 But aside from knowing Mr. Miller is black and
22 you found Negroid hairs at the scene, as far as putting the
23 hairs under the microscope and trying to match them up and
24 say they're consistent with each other, consistent -- the
25 hair from the scene is consistent with the hair, sample hair

1 taken from Robert's head, you weren't able to do that in this
2 case, were you?

3 A No, sir, I was not. That's correct.

4 Q Okay. Now, does that mean, Miss Lyhane, that Robert
5 is eliminated as a suspect in this case based on the fact
6 that you can compare microscopically no hair of his with that
7 found at the scene?

8 A No, sir, he is absolutely not eliminated as a suspect
9 in this case on my analysis.

10 Q So, if -- it would be erroneous for a chemist to come
11 into the courtroom and testify that since he or she found no
12 hair matching the defendant's or the suspect's at the scene
13 that the suspect is eliminated. You can't say that, can you?

14 A Not from my report as I have testified.

15 Q The fact that you find no hair that matches to the
16 suspect's hair doesn't mean that he wasn't at the scene.

17 A That's correct.

18 Q All right. Now, there was a hair that -- let's make
19 sure.

20 MR. EVANS: If I could approach the witness for
21 a second, Judge?

22 THE COURT: Yes.

23 Q (By Mr. Evans) Let's make sure that we're looking at
24 the same report, Miss Lyhane.

25 A Same report.

1 Q All right. Now, when you examined the hairs --
2 staying with the hair evidence for right now -- we're talking
3 about four hairs that were examinable microscopically that
4 did not -- that were not consistent with Miss [REDACTED] and that
5 were not Negroid; is that correct? It's complicated because
6 there's a bunch of hairs that we --

7 A That's correct. There are four Caucasian hairs that
8 were found in this case that do not match microscopically to
9 Miss [REDACTED]

10 Q Miss [REDACTED] pubic area was combed and we found a
11 scalp Caucasian hair that was inconsistent with Miss [REDACTED].
12 So, we know it wasn't Miss [REDACTED] scalp hair.

13 A Correct.

14 Q And that hair you determined to be yours.

15 A Yes, sir, that's my opinion.

16 Q Okay. Now, when we say that's your opinion, does it
17 necessarily mean that that hair is yours or just consistent
18 with yours?

19 A No, sir. That means that I believe because it is
20 microscopically consistent with my hair it could have come
21 from me. I'm not saying it came from no one else in the
22 world. I cannot say that with the technology that we have in
23 forensics today.

24 Q And when we say that the hairs, the dozens of them
25 that were consistent with [REDACTED], we can't say

1 scientifically that they were [REDACTED] hairs, can we?

2 A No, sir. That is not possible. It's not a positive
3 identification as fingerprints. However, it is a positive
4 elimination.

5 Q Okay. Now by that, by saying that you can eliminate
6 people on the basis of hairs, what do you mean?

7 A By that I can say positively that these Negroid
8 fragments, 32 of them, positively did not originate from [REDACTED]

9 [REDACTED] --

10 Q Okay.

11 A -- that were found on and around her body.

12 Q And moving down to the Amcare sheet, you found two
13 scalp Caucasian hairs that you can state categorically
14 positively were not [REDACTED] right?

15 A That's my opinion, yes, sir.

16 Q Okay. And there was something that Mr. Elliott didn't
17 ask you about yesterday. There was a pink blanket that was
18 part of the bed clothes of Miss [REDACTED], and on that pink
19 blanket were two scalp hairs consistent with [REDACTED] were
20 found; is that right?

21 A Uh-huh. That's correct.

22 Q And there was -- there were no hairs consistent with
23 Robert Miller.

24 A Correct.

25 Q Correct?

1 And there was a pubic Caucasian hair found on
2 the pink blanket that was part of Miss [REDACTED] bed clothes
3 that was inconsistent with Miss [REDACTED] hair; is that right?

4 A Yes, sir.

5 Q So, we have a pubic hair, a Caucasian pubic hair that
6 we know is not Mrs. [REDACTED] in Mrs. [REDACTED] bed; is that
7 right?

8 A If this pink blanket originated from her bed, yes,
9 sir. I'm not absolutely positive of that. I just have it
10 listed as a pink blanket. It came from somewhere in her
11 residence.

12 Q Now, since we have Caucasian hairs that are -- that we
13 know are not Mrs. [REDACTED] -- we have three of them. Let's
14 assume for the sake of argument that they are taken from her
15 bed. We can't rule out that in fact one of the semen donors
16 was in fact a Caucasian. That's a possibility, isn't it?

17 A Are you saying there's more than one semen donor in
18 this case?

19 Q I'm saying it's a possibility. Would you not concede
20 that it's a possibility that there could be more than one
21 semen donor?

22 A If there is more than one semen donor, we know that
23 both semen donors have the same genetic markers.

24 Q But it is possible, isn't it?

25 A Sure, it's possible, but it's most generally not

1 probable.

2 Q And it's possible that there is in fact one semen
3 donor and that that one semen donor is a white man. Isn't
4 that possible?

5 A I cannot say from the analysis of the body fluid of
6 the semen that the semen donor is white or black. I do not
7 have that capability with the analysis I was able to do.

8 Q He might be a black person, he might be a -- he might
9 be a black man, he might be a white man.

10 A In reference to the semen, what I base my stats on for
11 the black population was because of the 32 Negroid fragment
12 pieces of hair that were around the semen stain.

13 Q But we have foreign white hairs too; correct?

14 A We have --

15 Q We have foreign Caucasian hairs too.

16 A We have two scalp from the Amcare sheets and one pubic
17 from a pink blanket.

18 Q So, if we're willing to concede that it's possible
19 that the semen donor was white, that changes the statistics
20 that you quoted to Mr. Elliott yesterday, doesn't it?

21 A To some extent.

22 Q I think the statistics that you quoted to Mr. Elliott
23 yesterday were -- well, it came out to about 13 percent,
24 didn't it, Janice?

25 A Yes. Just a moment. Yes, sir.

1 Q Now, you're basing that 13-percent figure on the fact
2 that we know that the -- we at least know that the semen
3 donor was of a type "A" blood type; correct?

4 A Correct.

5 Q And that he was a secretor.

6 A Correct.

7 Q And that he had Peptidase A as a genetic marker.

8 A Peptidase A (1), yes, sir.

9 Q A (1).

10 And Phosphoglucomutase as another genetic
11 marker; is that right?

12 A Correct. It was a (1) also.

13 Q Now, how do we arrive at the 13-percent figure?

14 A You simply multiply 26 percent, which is the "A"
15 secretor of the black population, by 58 percent, which is the
16 percent of black population you would expect to have the PGM
17 (1). Multiply that again by 87 percent, which you would
18 expect the black population to have Peptidase A (1). With
19 that you come with .1312 which is 13.12 percent. Or if you
20 take the inverse of that and divide it into one, it would be
21 one in eight people. In this instance, I used the fact that
22 it was a male because it is semen -- a female cannot produce
23 it -- and the fact that the hairs that were around the body
24 in the area of the semen were Negroid hairs. She's not
25 Negroid. You know, that nature. So, I said one in eight

1 black males in my opinion.

2 Q Okay. If you change the figures to include whites,
3 white males also, how many white and black males have the "A"
4 secretor status?

5 A Just a moment.

6 Okay. To be of the white, the type "A" would
7 be 40 percent approximately. If we use the same stats that I
8 used in the black -- we'll change that to 35.8, which is the
9 Journal of Forensic Science, Volume 23, Number 3. I
10 furnished you a copy at preliminary hearing.

11 Q Yes, ma'am.

12 A Okay. So, we'll say 35.8 percent times 80 percent,
13 which is the secretor status. PGM (1) in whites would be
14 58.9. And referring to Peptidase A, you cannot find it on
15 that sheet. So, you would go to the following sheet I
16 furnished you with for the status here. Just a moment. It's
17 only on the blacks. Just a moment. I have to refer to
18 another piece. Would be 86.7 percent of the whites you would
19 expect to have -- no, excuse me -- 98.6 percent of the whites
20 to have Peptidase A (1). So, it would be 98.6.

21 Okay. In taking those figures, as I previously
22 stated, 35.8 percent being blood type "A" in whites, 80
23 percent of those people would be secretors, 58.9 percent
24 would be PGM (1), 98.6 percent of those people in the white
25 population would be expected to have Peptidase A (1). You

1 multiply those together and you get 0.166 or 16.6 percent, or
2 taking the inverse of that would be one in six white males.

3 Q Okay. You're saying approximately 13 percent of black
4 males would have these characteristics that you found in the
5 semen stain in Miss [REDACTED] bed and 16.6 percent of the
6 white males would have these characteristics; is that right?

7 A That's what you would expect to find when you did a
8 genetic study and did the frequencies of those.

9 Q Now, when you examined -- you examined other suspects
10 besides Robert in regards to this case, the Fowler case; is
11 that right?

12 A Yes, sir.

13 Q I think you talked about some of them.

14 You examined Edgar Collins; right?

15 A Yes, sir.

16 Q You examined Bobby Ray Booker, David Hilliard, Howard
17 Union, Raymond Johnson, and Clem Jeffries; is that correct?

18 A Yes.

19 Q Is that the extent of the other suspects that you
20 examined in regards --

21 A These were --

22 Q -- to this case?

23 A Yes.

24 Q So, you never examined an individual named Ra-Heru
25 Khepra; is that right?

1 A No, sir, I've never heard of that to my knowledge.

2 Q Nobody ever took you any of his hairs or examined any
3 of his bodily fluids; is that correct?

4 A Not in reference to this case.

5 Q Miss Lyhane, is there a length of hair or is there a
6 standard length a hair has to be before it's microscopically
7 comparable?

8 A As I said yesterday, more or less it's a rule of thumb
9 around a half inch becomes the point of where you begin to
10 think a hair could be forensically compared. Again, you've
11 got to look at that hair microscopically and look at those
12 characteristics to determine if in fact it has enough
13 microscopic characteristics to compare. As in the instance
14 in this case, we had a hair -- in my opinion it was a scalp
15 hair -- and it was one inch and one fourth long, yet it's
16 opaque and cannot be used for forensic comparison.

17 Q Now, Miss Lyhane --

18 THE COURT: You may proceed.

19 MR. EVANS: Yes, sir.

20 Q (By Mr. Evans) I have got the Handbook of Forensic
21 Science here. It's from the Federal Bureau of
22 Investigation. Would you agree that's a good reference book?

23 A Yes, sir.

24 Q Okay.

25 A It's specifically mainly for telling individuals who

1 are going to mail evidence to the F.B.I. laboratory in
2 Washington, D.C., how to mail it, how to prepare a report and
3 attach it with the evidence.

4 Q Well, let me see -- let me read you something and see
5 if you agree with it out of this book.

6 The F.B.I. is talking about evidence from class
7 characteristics only and specifically refers to hair
8 evidence, and the F.B.I. says: Such as evidence -- excuse
9 me -- no matter how thoroughly examined can only be placed in
10 a glass. A definite identification can never be made since
11 there is a possibility of more than one source for the
12 material found.

13 A Yes, sir, I agree with that. That's reworded of what
14 I've previously testified to.

15 Q Yes, ma'am.

16 Now, there is a new test on the horizon, or
17 actually it's here today, called DNA testing, isn't there?

18 A Yes, sir.

19 Q And this DNA testing is such that you can take bodily
20 fluids from rapists, a rapist/murderer in this case, you can
21 analyze those fluids, and the DNA testing can break those
22 fluids down to where the fluids would become just like a
23 fingerprint. Is that your understanding of the DNA testing?

24 A Somewhat. I do not know the limitations of those
25 examinations, how much of the body sample would be needed to

1 make the analysis and how old or fresh it would have to be
2 and under what conditions it was preserved. That I'm not
3 aware of.

4 Q Okay. You would agree though that were DNA done in
5 this case, we wouldn't be talking about one in 13, we
6 wouldn't be talking about 1 in 16 or 13 percent or 16 percent
7 or one in eight or one in four --

8 MR. MACY: May it please the Court.

9 I'm going to object to this line of questioning
10 and ask to approach the bench.

11 THE COURT: If you must. I can rule on it from
12 here now.

13 MR. MACY: We object to this as clearly --

14 THE COURT: Sustained.

15 MR. MACY: -- hypothetical.

16 THE COURT: It's speculative. It's not a part
17 of this case, Mr. Evans.

18 MR. EVANS: Well, I would ask to approach the
19 bench then, Your Honor.

20 THE COURT: All right.

21 (The following was said outside the hearing of the
22 jury:)

23 MR. EVANS: Judge, I would submit to the Court
24 that it is part of this case.

25 THE COURT: A little louder.

1 MR. EVANS: Sir?

2 THE COURT: Louder.

3 MR. EVANS: I would submit to the Court that it
4 is a part of this case. That certainly if we had a burglary
5 here, which we do, and that the State didn't try to raise any
6 fingerprints, that would certainly be an adequate cross-
7 examination field, and I'm sure the Court would allow me to
8 do that. All I'm doing is asking this witness if --

9 THE COURT: The difference is this witness is
10 not knowledgeable of DNA, nor is there any proof that it has
11 reached that point of scientific acceptability. I don't know
12 of anything.

13 MR. EVANS: Well, then she can say that if
14 she's not that knowledgeable. I don't think she has yet.

15 MR. MACY: Your Honor, to allow him to impeach
16 our witness as our evidence by a technique that was not
17 available at the time the crime was committed is improper.
18 DNA is not even yet today been accepted into Oklahoma court.
19 And for him to insinuate to this jury that we didn't do our
20 job because we didn't do --

21 THE COURT: That's the basis of my ruling. I
22 will not permit you to ask about it.

23 MR. EVANS: Your Honor, I would state that it
24 is acceptable, that it has been accepted in an Oklahoma
25 court. In Cleveland County it was accepted.

1 THE COURT: How about our appellate court?

2 MR. EVANS: Yes.

3 THE COURT: Court of Criminal Appeals?

4 MR. EVANS: Yes. The Court of Criminal Appeals
5 ruled on that and said that it was accepted. I can get you
6 the case if you need it.

7 THE COURT: What I'll let you do is inquire of
8 her knowledge of DNA and if it was available at the time that
9 she made her analysis.

10 MR. EVANS: All right. That's fair enough
11 then.

12 (The following was said within the hearing of the
13 jury:)

14 Q (By Mr. Evans) Miss Lyhane, as to the DNA type
15 testing, you have sufficient knowledge of it that you can
16 tell this jury and tell this Court that we would --- that had
17 it been used in this case certainly we would have been able
18 to break down who did the crime more than we have so in this
19 case. Would you agree with that?

20 MR. MACY: I object, Your Honor. You gave him
21 a predicate --

22 THE COURT: Sustained.

23 MR. MACY: -- question.

24 THE COURT: You may qualify the witness's
25 knowledge of this method and whether it was or it was not

1 accessible to her at that time.

2 Q (By Mr. Evans) Did you know about --

3 THE COURT: Depending on her answer, I'll see
4 what my ruling is.

5 Q (By Mr. Evans) Miss Lyhane, did you know about DNA
6 testing at the time you were doing the analysis in this case?

7 A If I did it was very limited.

8 Q But you had heard of it; is that right?

9 A To be quite sure of the cutoff point there, I'm not
10 absolutely positive. But if I did I was vaguely aware of it,
11 but I did not know particulars.

12 Q Okay. This case has been around -- the [REDACTED] case
13 has been around since September of 1986. Now we're finally
14 getting to trial in this case. So, the your analysis has
15 been an ongoing process though, hasn't it?

16 A The analysis in this case has been an ongoing
17 process. My analysis was completed when my report was sent
18 out.

19 Q But we know the analysis is an ongoing process because
20 it was just yesterday that you came up with yet another
21 tested result. Just yesterday, just yesterday morning you
22 discovered that one of the hairs that was foreign to Miss
23 [REDACTED] was your hair. Right?

24 MR. MACY: May it please the Court.

25 I object again. He's talking about a .

1 technique that was not available in 1986.

2 THE COURT: I understand, but I'm going to rule
3 on it in just one moment. Let me see the next question.

4 Go ahead.

5 Q (By Mr. Evans) Well, I think there's a question on
6 the floor, but let me ask you another one then.

7 As of last week was DNA analysis available to
8 your knowledge?

9 A I do not know the exact limitations of DNA
10 fingerprinting on body fluids.

11 Q All right.

12 MR. EVANS: No further questions.

13 THE COURT: Anything further, State, of this
14 witness?

15 MR. MACY: Just a minute, Judge.

16 REDIRECT EXAMINATION

17 BY MR. ELLIOTT:

18 Q Miss Lyhane, referring to one of the items that Mr.
19 Evans discussed with you is your Lab Number 26 on your hair
20 analysis chart, Item Number 26 being the pink blanket in
21 which you found a pubic Caucasian hair foreign to Mrs.

22

23 A Yes, sir.

24 Q Had her grandson slept on that blanket six months
25 before, you'd have no way of knowing at this point as we're

1 sitting here today that that could have been his hair; is
2 that correct?

3 A That is correct.

4 MR. ELLIOTT: All right. No further questions.

5 THE COURT: Anything further, cross-
6 examination?

7 REXCROSS-EXAMINATION

8 BY MR. EVANS:

9 Q But, Miss Lyhane, in regard to that pubic hair, the
10 hair that Mr. Elliott just asked you the question about, did
11 you test Miss [REDACTED] grandson to see if that was -- that
12 hair was consistent with his?

13 A No, sir.

14 Q Did you test the family members of Miss [REDACTED] to see
15 if that pubic hair was consistent with any of them?

16 A No, sir.

17 Q Did you test the technicians, the technical
18 investigators from the police department that got there on
19 the scene that were around the bed to see if that hair was
20 consistent with them, that pubic hair?

21 A No, sir.

22 Q Did you test the Amcare people, the people we know
23 their names? Did you test those Amcare people to see if that
24 pubic hair was consistent with them?

25 A No, sir.

1 Q Did you take one of Dr. Larry Balding's hairs, the
2 medical examiner that worked on this case? Did you take one
3 of Dr. Balding's pubic hairs and compare it to see if it was
4 consistent with his?

5 A No, sir.

6 MR. EVANS: Nothing further.

7 THE COURT: Is that all of this witness?

8 MR. MACY: That's all of this witness.

9 THE COURT: Thank you.

10 THE WITNESS: Yes, sir.

11 THE COURT: You may stand down.

12 THE WITNESS: May I be excused?

13 THE COURT: Yes.

14 No one's going to need this witness again, I
15 assume?

16 Yes. You may be excused.

17 THE WITNESS: Thank you.

18 THE COURT: Call your next.

19 I believe you have testified before.

20 THE WITNESS: Yes, sir.

21 THE COURT: You've been sworn and you're still
22 testifying under oath. Do you understand?

23 THE WITNESS: Yes, sir.

24 THE COURT: All right.

25 MR. MACY: May it please the Court.