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THE STATE OF TEXAS	1	IN THE 17TH JUDICIAL
COUNTY	1	COURT OF
JAMES W. HARRIS	1	DAVIES COUNTY, TEXAS

STATEMENT OF FACTS

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VOLUME 2 OF 4 VOLUMES

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ORIGINAL

1 When you took it to the Department of Public Safety?

2 A It was October the 1st, 1934.

3 Q And during the time that that exhibit was in your
4 care, custody, and control, did you add anything to it
5 or take anything from it or change it in any way?

6 A I did not.

7 MR. BECKCOM: Pass the witness.

8 MR. RAY: No questions.

9 THE COURT: You maybe excused. You will
10 remain under the Rule subject to call. Please do not
11 discuss your testimony with any other person other
12 than the attorneys.

13 MS. MARTIN: Okay, thank you.

14 THE COURT: Thank you, Ms. Martin.

15 MS. GARCIA: Pat Hulin.

16 THE COURT: You have been previously sworn?

17 MS. HOLIN: Yes, sir.

18 THE COURT: Have a seat in the witness
19 stand, please.

20

21 PATRICIA HOLIN.

22 a witness called on behalf of the State and having been
23 duily sworn, testified as follows:

24 DIRECT EXAMINATION

25 By MS. GARCIA:

1 Q Would you state your name?

2 A Patricia Hulin.

3 Q And, Ms. Hulin, what is your occupation?

4 A I'm a forensic serologist for the Department of Public
5 Safety here in Austin.

6 Q And what do you do in your position?

7 A I analyze blood stains and body fluids and compare
8 them to particular individual's blood types.

9 Q And how long have you been working for the Department
10 of Public Safety in this capacity?

11 A I've been there five and a half years.

12 Q And have you been working just in this one area for
13 the last five years?

14 A Yes, ma'am.

15 Q Had you worked in a similar area for any other
16 organizations prior to the Department of Public
17 Safety?

18 A Yes, ma'am, I worked for San Antonio P.D. for two and
19 a half years.

20 Q And what were you doing for them?

21 A I was a forensic serologist.

22 Q And where are your offices located?

23 A We're located at headquarters on Lamar, DPS.

24 Q And as part of your responsibilities do you do this
25 analysis for cases that just occur here in Austin or

1 for cases that occur all over the State of Texas?

2 A We analyze cases from all over the State.

3 Q And have you testified in court in connection with
4 your findings?

5 A Many times.

6 Q All over the State?

7 A Yes, ma'am.

8 Q Ms. Hulin, I'd like for you to look at two exhibits
9 that are in front of you, State's Exhibit No. 53 and
10 State's Exhibit No. 55, and ask you if you have
11 handled the contents prior to today?

12 A Yes, ma'am.

13 Q And how-- Let's begin with State's Exhibit No. 53.
14 What is in that bag?

15 A Okay, it's a rape kit from April Woolley.

16 Q Containing what types of items?

17 A Okay, in this particular kit there was a blood
18 specimen, vaginal specimen, also a rectal specimen and
19 an oral specimen.

20 Q And did you run tests in connection with all three of
21 these items?

22 A Yes, ma'am.

23 Q All right. Let me have you set those aside for just a
24 second and ask you to look at State's Exhibit No. 55
25 and tell us specifically what is in that bag.

1 A This is a blood sample and an oral sample from Carlos
2 Lavernia.

3 Q And have you also had those-- done some testing in
4 regards to those samples?

5 A Yes, ma'am.

6 Q Can you tell us on what date your testing was done in
7 connection with this case and if you did it on more
8 than one date?

9 A The testing was started on August 5th or '83, and then
10 it usually takes several days to complete everything.

11 Q When you began your testing in August or 1983, what
12 type of testing were you doing?

13 A I was typing Woolley's blood specimen. I was looking
14 at her vaginal, rectal, and oral swabs to identify any
15 semen and also typing these swabs.

16 Q At this point I'm going to ask you to come over to the
17 chart, please, so that I can get you to explain a few
18 of the things that you do in your profession.

19 So let's begin with where you began in August or
20 '83. These samples came into your custody. What did
21 you do?

22 A Okay.

23 Q Beginning with the blood.

24 A Right. I typed Woolley's blood as being an O
25 secretor.

1 Q Okay. can you please mark that on the chart?

2 Now, there are how many types of blood?

3 A There's four different types: O, A, B, and AB, and
4 then there's also depending on whether a person is a
5 secretor or non-secretor.

6 Q So the first thing you did was determine that her
7 blood was O type.

8 A That's correct.

9 Q And from there you determined whether or not she is a
10 secretor or a non-secretor?

11 A That's correct.

12 Q You determined that she was a secretor.

13 A That's correct.

14 Q What is the-- well, how do you determine that, that a
15 person is a secretor?

16 A Okay. there's one test. We test for the antigens,
17 the Lewis A antigen and the Lewis B antigen. And
18 depending on whether one is positive or negative tells
19 us whether that individual is a secretor. This is an
20 inherited trait. Secretor meaning that they are able
21 to secrete their blood group in their body fluids. If
22 somebody was a non-secretor, we would not be able to
23 detect their blood group in their saliva or semen or
24 vaginal fluids.

25 Q Now, you've referred to body fluids. Can you tell us,

1 please: What are body fluids?

2 A Okay, aside from blood we have a lot of dealings with
3 saliva, seminal fluid, vaginal fluid, and occasionally
4 sweat.

5 Q And in this case, as far as April was concerned, you
6 had her blood, her-- what else did you have?

7 A Oral specimen.

8 Q Which is saliva.

9 A That's correct. A rectal specimen and a vaginal
10 specimen.

11 Q I think it will be easiest, I think, to begin with
12 trying to explain what is a blood group substance and
13 what blood group substances show up in what types of
14 blood. And I think best way to do this, if you would,
15 is kind of make a chart for you us--

16 A Okay.

17 Q --to show what type of blood group substance is in
18 what type of blood.

19 A Okay. We use the word "substance" when we're talking
20 about body fluids. If we're not-- we're talking about
21 blood we just say blood type or blood group. But we
22 add the word substance when we're talking about a body
23 fluid. So somebody of a blood group O would contain
24 the H blood group substance in their body fluid.

25 Q They will always contain that.

1 A Right. Somebody that is a blood group A would contain
2 A and H. H is a precursor of any other blood
3 substance, so you will always have H present.

4 Q Now, would you have less A in a blood type A?

5 A It depends. Everybody is different. And so more
6 times out of any other testing, if you have an A, you
7 will have more A than the H. But that's not a hard
8 and fast rule.

9 Q Okay. If you will please continue.

10 A Somebody that is a blood group B-- now these are all
11 secretors-- will have B and H in their blood group
12 substance or in their body fluids. Somebody who's an
13 AB should contain A, B, and H. If an individual is a
14 non-secretor, then we would not be able to detect
15 their blood group substance.

16 So in the case where you have vaginal specimens
17 and looking for semen and you find semen, you always
18 have a mixture. And you never can separate these
19 mixtures.

20 So if an individual is an O secretor, you would
21 expect to find the H or-- I shouldn't put this here.
22 --you would expect to find the H, and it would mask a
23 non-secretor because you wouldn't expect to find
24 anything. So a non-secretor would not contain any
25 blood group substance.

1 Q Okay. Now, did you also type Mr. Gavernia's blood?

2 A Yes.

3 Q And what did you determine Mr. Gavernia to be?

4 A Okay, suspect is typed as an O non-secretor.

5 Q So there's-- Basically you found a distinction then--

6 A Right.

7 Q --between the victim and the suspect.

8 A Both blood group O's, but one is a secretor and one is
9 a non-secretor.

10 Q Okay. You can have your seat, but I might ask you to
11 get up again in just a minute.

12 (Whereupon State's Exhibit
13 (No. 55 was marked for
14 identification.

15 Q Let me stand you what has been marked as State's
16 Exhibit No. 55 and ask you if you can identify the
17 contents of that?

18 A Yes, these are slides that I prepared. They're
19 microscope slides that I prepared to try to identify
20 spermatozoa.

21 Q In connection with this case.

22 A That's correct.

23 Q And where were those slides prepared from? Where did
24 you get the items on the slides?

25 A I prepared a slide from the oral swab, the vaginal
swab, the rectal swab, there was a tampon and also a

1 stain taken from a pair of shorts.

2 Q So you basically took five items and took samples from
3 these five items to determine whether or not there was
4 spermatozoa.

5 A Right.

6 Q If there is spermatozoa on any of these items, what
7 does that tell you?

8 A That tells me that a male ejaculate occurred and that
9 there is semen present.

10 Q Did you find any spermatozoa on any of these items?

11 A Yes, ma'am. The rectal swab contained sperm. And
12 there was also spermatozoa identified on the stain on
13 the shorts.

14 Q The sample that you took from a pair of shorts, are
15 those the shorts that have been marked and admitted as
16 State's Exhibit No. 41?

17 A Let's see. Yes, ma'am.

18 Q Where were those samples-- where was that sample taken
19 from?

20 A This cutting right here. This is in the back of the
21 shorts. This is the back.

22 Q And you cut-- you yourself cut a piece of the shorts
23 out?

24 A That's correct.

25 Q In order to run your tests.

1 A That's correct.

2 Q And it was from this area where the spermatozoa was
3 positive.

4 A That's correct.

5 Q You did not find any spermatozoa on the vaginal swab,
6 the oral swab, or on the Tampax; is that correct?

7 A That's correct.

8 Q So basically there was no evidence that there had been
9 any recent ejaculation in either Ms. Woolley's vaginal
10 canal or in her oral--

11 A That's correct.

12 Q --area or on the Tampax.

13 A That's correct.

14 Q Now, from the tests that you ran on her shorts, once
15 you identified that there was spermatozoa on those
16 shorts, were you able to breakdown that substance any
17 further to have additional findings on the type or
18 person who could have contributed that sperm?

19 A Okay. All I found from that stain is the blood group
20 substance H. I did not find an A or a B or anything
21 other that would say the semen came from a secretor A
22 or a secretor B or a secretor AB.

23 Q So what does that lead you to conclude?

24 A That the semen donor was either a blood group O
25 secretor or a non-secretor.

1 Q Or any type of blood.

2 A That's correct.

3 Q So how many-- what types of persons have we
4 essentially eliminated as those that could have
5 donated the sperm?

6 A Okay. Now about if we go: how many could we say
7 could have contributed?

8 Q That will be fine.

9 A O secretor is found in 33 percent of the population,
10 so that's a third of the people, of males.
11 Non-secretors are 25 percent of the population. So
12 you add those two percentages together and you have
13 something like 58 or-- yes, 58.

14 Q So 58 percent of the population could have--

15 A That's correct.

16 Q --donated the sperm that was found on the shorts.

17 A That's correct.

18 Q Now, are your findings consistent with the typing of
19 and the secretor status of Mr. Lavernia?

20 A Yes, it would be.

21 Q So you have essentially eliminated a certain number of
22 the population as being possible donors, and you're
23 basically able to conclude, then, that Mr. Lavernia's
24 type is consistent with your findings from the lab.

25 A Yes. We cannot eliminate him.

1 Q You cannot eliminate him.

2 A That's correct.

3 Q But you have eliminated how much of the population?

4 A It would be 100 minus 58, which would be 42.

5 Q Were there any hairs recovered from any of the items?

6 A No, there were not.

7 Q So you were not able to do any hair analysis at the
8 lab.

9 A That's correct.

10 Q With you able to find any additional evidence on any
11 of the other items of clothing of Ms. Woolley that was
12 submitted to you?

13 A There was no other significant evidence.

14 Q In addition, Ms. Hulin, there was also some human
15 blood that was detected on the shorts; is that
16 correct?

17 A That's correct.

18 Q Were you able to determine who donated that blood?

19 A No, I did not type the blood. It was just assumed
20 that it came from the victim.

21 Q And the reason for that?

22 A The person wearing the shorts.

23 Q And the reason for that was? Did you know that she
24 was in her period at that time?

25 A There was a Tampon submitted and the vaginal swab was

1 very bloody, so I assumed it was her blood.

2 MS. GARCIA: I'll pass the witness.

3 THE COURT: Mr. Ray?

4

5 CROSS-EXAMINATION

6 BY MR. RAY:

7 Q Ms. Hulin, if you would-- and I'm certainly-- First of
8 all, what is your educational background, ma'am?

9 A I have a Bachelor's of Science degree in medical
10 technology. I've had three years of laboratory
11 experience at Bexar County Hospital. I've had eight
12 years as a forensic serologist. I've analyzed
13 thousands of blood cases. I've had training with the
14 FBI Serologic Research Institute in California. I'm
15 directly responsible for training of our field
16 chemists to be proficient in serology. I have also
17 published two articles concerning population studies
18 of blood samples and also enzymes in semen stains.

19 Q So you have a Bachelor's degree, then, in answer to my
20 question; is that correct?

21 A Yes, ma'am-- yes, sir.

22 Q All right. In order that I may be clear, you wrote up
23 under non-secretors in blood-- up in the non-secretors
24 you wrote an H, and then you X'ed it out because you
25 said it was-- if I recall correctly, because you said

1 it was not possible to tell under non-secretors
2 whether the H was present; is that correct?

3 A yes, you would not be able to detect the H.

4 Q On a non-secretor you would not be able to detect the
5 H.

6 A That's correct.

7 Q Yet in this case you were able to detect the H factor
8 in spermatozoa; is that correct?

9 A We're talking about a mixture-- a stain that is a
10 mixture of vaginal fluid and seminal fluid.

11 Q We're talking about a stain that is a mixture of
12 vaginal fluid and seminal fluid.

13 A That's correct.

14 Q So you do not know whether the H factor came from the
15 seminal fluid or the vaginal fluid.

16 A That's correct.

17 Q And Mr. Gavernia is a non-secretor, so you would not--
18 if it were his straight spermatozoa, you would not
19 have a H factor at all.

20 A That's correct. That's why we cannot eliminate him.

21 Q Well, it's also why you can't say it's his because--

22 A That's right.

23 Q Because he doesn't secrete the H factor.

24 A The H came from her.

25 Q Exactly.

1 A Okay. So that's why we're saying we've got this group
2 of individuals. Either the semen donor was a blood
3 group O secretor or the individual was a non-secretor
4 of any blood group.

5 Q 53 percent of the population are in that type O.

6 A That's correct.

7 MR. RAY: May I approach the witness a
8 minute, Your Honor?

9 THE COURT: You may.

10 Q What all-- Let's see. You have Nos. 53 and 55?

11 A Yes, and also these slides, 55.

12 MR. RAY: I don't have any further
13 questions, Your Honor.

14

15 REDIRECT EXAMINATION

16 BY MS. GARCIA:

17 Q Just a couple of questions, Ms. Mulin. From the
18 analysis that you commonly do at the Department of
19 Public Safety, are you ever able under this type of
20 testing to say positively who the offender or who the
21 suspect is? That that is the offender?

22 A No, we always work with percentages.

23 Q And basically that's what we're working with in this
24 case.

25 A That's correct.