'	MR. RANDALL: State calls Joe Crow.
2	THE COURT: You may proceed.
.3	<b>000</b>
4	JOSEPH CROW,
5	being duly sworn by the deputy clerk, testified as follows:
6	DIRECT EXAMINATION
7	QUESTIONS BY MR. RANDALL:
8	Q State your name and your occupation, please.
9	A Joseph Crow, Criminalist, St. Louis Metropolitan
10	Police Department.
11	Q Mr. Crow, can you tell this jury what a criminalist
12	does in his day to day work with the police department?
13	A Receive evidence submitted by police officers,
14	perform tests on the evidence received, write a report con-
15	cerning the evidence received and the results of the tests
16	and to testify in court concerning the evidence received, the
17	test performed and the results.
18	Q Now, when the Sex Crimes Unit of the police departmen
19	receives a rape kit or sexual assault kit from the hospital,
20	where do they take it?
21	A They bring it to the laboratory.
22	Q And is it one of your duties to examine the specimens
23	brought in in those kits?
24	A Yes, it is.
25	Q I want to ask you about an examination that you did

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on sexual assault kit that was brought in by Detective Fred Turner concerning victim Kimberly Porter. Did you examine the specimens in that sexual assault kit?

A Yes, I did.

Q Can you tell the jury what specimens you had to work with?

A There was a vaginal smear and anal smear and oral smeal, a vaginal swab, and an anal swab and oral swab and a pair of panties, a blood sample and a saliva sample.

Q Now, when you specifically, what do you do when you look at these things, this is before there's at this point, there's no suspect, right? When you did this examination?

A In this particular case, there was no suspect, however, the procedure is the same if there is a suspect or not. I do a microscopic examination of the anal, oral and vaginal smears looking for the presence of human spermatazoa.

Q Now, can you tell the jury what's the difference between a vaginal swab and a vaginal smear andhow those are prepared at the hospital and what their purpose is when you have them?

A The vaginal swab is like what they use to retrieve a vaginal swab is they use a cotton swab similar to a Q-tip however, they are about six inches long. In the case of a vaginal swab the doctor would insert the swab into the victim's vagina and rub the cotton part of the swab on the

A Yes.

vaginal wall. The purpose of which is to pick up any material from the vagina. The anal swab is placed in the victim's anus about, on, someplace about three inches, again the walls of the rectum are swabbed. And oral swab, the area between the cheek and gums are swabbed. The three swabs are then taken and rolled across a piece of glass. The idea is to deposit part of the material on the swab on to the glass slide. The glass slide then becomes the smear.

Q Okay. So what is on the swab should be the same is on the smear, they're not two separate tests, they're just taken -- the material taken from the oraface and putting it on the slide?

A Yes.

Q The swab itself, is that saved?

A Yes, it is.

Q Why?

A For one of two reasons. If the smear is negative for spermatazoa, there is the possibility that the person who had intercourse with the victim was aspermatic. It could either be a vasectomized male or he could have a pathological disease that would cause him not to have or not to produce spermatazoa.

Q When you say aspermatic, that means there are no sperm in the seminal fluid?

vaginal smear, did you find anything?

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Yes.

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Q Did you compare the defendant's saliva with the seminal fluid that you found on or with the sperm and seminal fluids that you found on the panties and the jacket and the vaginal smear or rather vaginal swab that were collected from Kimberly Porter?

A Yes, I did.

Q Okay. Just so -- can you give us a little explanation of what -- how this comparison is done chemically, what is it in the saliva and other bodily fluids that is comparable to each other and you can tell this is similar or this is dissimilar.

A Everybody has an A.B.O. blood type. You might be a positive or you're negative you have on blood. Eighty per cent of people, their blood type, their A.B.O. blood type is also found in their other body fluids that includes your saliva, in males, their seminal fluid and in females their vaginal secretions. In approximately twenty per cent of the people, even though your blood type might be A, an examination of your saliva or your vaginal secretions or your blood, you do not see that antigen.

Therefore, to perform these tests we can not use blood, we must use other body fluids. The most convenient and the easiest one to get is, I'm sorry, is saliva. So we used or I use saliva to determine what the blood type of the male seminal fluid is and I use saliva to return the

the blood type of the females vaginal secretions. 2 Did you compare and do an antigen typing that you're Q 3 describing here of the defendant's saliva? Yes, I did. 5 And what is -- is there a category for the type of Q 6 bodily fluid he has or the antigens in the body fluid? 7 Mr. Erby's saliva contained the H. antigen only. 8 The H. antigen indicates that the person is a secreter, 9 that is his A.B.O. blood type appears in his saliva. Since 10 there was no A. or B. found, Mr. Erby has to have type O. blood. 11 Therefore, he is in a -- he is designated as a type O. secretet. 12 O Now, did you examine the seminal fluid on the 13 vaginal swab prepared at the hospital? 14 Yes, I did. A 15 And did you get an antigen typing from that? Q 16 Α Yes, I did. 17 Q What type was that? 18 The only antigen found was the H. antigen. A 19 Okay. So that seminal fluid came from what type of Q 20 a secreter? 21 Well, knowing that the victim was also a type O. A 22 secreter --23 I may have -- go ahead a little bit. Do you know Q 24 the victim is also a type from her saliva sample? 25

The saliva sample of the victim was conveyed to the

A

laboratory in the sexual assault kit.

Q So with that knowledge ahead of time, what did this test reveal?

A That the victim had intercourse with someone who was either a type O. secreter, in which case the H. antigen came both from the victim and the suspect or the victim and the male or the person she had intercourse with was a non-secreter and everything came from her. We know that it could not have been a type A. person or a type B. person because neither of those antigens were present, therefore, she had intercourse with either an O. secreter or a non-secreter.

Q Did you get a similar result when you tested the stain on the panties or did you find any? Were you able to find anything on the stain of the panties other than the presence of seminal fluid, could you get a typing on them?

A Attempts at typing the stain on the panties were inconclusive.

Q How about the blue jacket?

A The blue jacket, the H. antigen was found on the jacket, a test was run to see if any vaginal secretions were in the stain and that test came up negative. Therefore, I decided that the stain was all seminal fluid. Therefore, the H. antigen had to have come from the person who deposited the stain. Therefore, the person who deposited that stain had to have been a type O. secreter. It could not have been a

1	non-secreter.
2	Q I want to show you State's Exhibit 22. And ask if
3	you recognize this inside out blue jacket?
. 4	A Yes, I do.
5	Q Okay. Now, there are a couple holes in the front,
6	did you cause either of those holes?
7	A I caused both of those holes.
8	Q That was in collecting your samples?
9	A Yes, it was.
10	Q If we assume that the person who had sexual inter-
11	course with Kimberly Porter also spilled that seminal fluid
12	on the jacket, that would mean she had sexual intercourse
13	with somebody who was a type O. secreter?
14	A Yes.
15	Q And the defendant, based on your testimony is a
16	the saliva is a type O. secreter?
17	A Yes.
18	Q How far does that narrow it down? How many people
19	are type O. secreters?
20	A Approximately one-third of the general U.S. population
21	are type O. secreters. So cut it down, it eleiminated two-
22	thirds of the males and left one-third remaining.
23	Q This is State's Exhibit marked State's Exhibit 22A,
24	the blue jacket is State's Exhibit 22. Do you recognize
25	that package and can you tell us what's inside that package,

if you do recognize it?

A I recognize the slide mailer and it contains the slide where I place --well, after cutting a portion of the jacket out and extracting the stain from the material, I placed the liquid on the glass slide, dried it and looked at the material microscopically and the slide that I placed that liquid on is inside of this slide here.

- Q Okay. I want to show you what's been marked State's Exhibit Number 25 and ask if you recognize that?
  - A Yes, I do.
- Q Those are the panties that came with Kimberly Porter's sexual assault kit from the hospital?
  - A Yes, it is.
- Q And I want to show you now what's been marked State's Exhibit 25A and ask if you can tell me what 25A is, if you recognize it?
- A This is the glass slide containing the liquid that I extracted from the stain in the crotch of the red panties.
- MR. RANDALL: Your Honor, I would ask State's Exhibit 22A and 25A be admitted into evidence.
  - MR. OCHS: No objection.
  - THE COURT: BE so received.
- Q (by Mr. Randall) Mr. Crow, I want to show you this package which has been marked on the outside State's Exhibit 26 that designates a contents, do you recognize that?

1	A Yes, I do.
2	Q What is that?
. 3	A This is the vaginal smear that came in the sexual
4	assault kit on Kimberly Porter.
5	Q Now, is that the smear or the swabs?
6	A This is the swab.
7	Q Okay. And I want to show you State's Exhibit 27,
8	and ask if you can identify that?
9	A Yes, I do. This is the vaginal smear.
10	Q Okay. And these swabs are taken and rubbed on that
11	or rolled on to that, these swabs create that smear?
12	A Yes.
13	Q Okay. And finally, State's Exhibit Number 28,
14	do you recognize what that is?
15	A Yes, I do.
16	Q What is that?
.17	A This is the saliva sample that Mr. Erby gave to me
18	at the St. Louis Police Department laboratory.
19	Q You personally retrieved the saliva from the defendant
20	A He did it to himself in my presence.
21	Q Okay. He puts a piece of cotton in his mouth?
22	A Chews on it.
23	MR. RANDALL: I would ask State's Exhibit 26, 27 and
24	28 be admitted into evidence.
25	MR. OCHS: As to State's Exhibit 28, in line with

my previous objection heard by this court.

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THE COURT: Objection be overruled. Be so received.

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Q (by Mr. Randall) Now, Mr. Crow, I want to ask you questions concerning an examination of a sexual assault kit that was done by Donna Bell of your office. You know who

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6 Donna Bell is?

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A Yes, I do.

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Q She's also a criminalist?

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A Yes, she is.

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Q Do you have a record and have you reviewed records indicating her examination of the sexual assault kit that was made at the hospital and brought to the police lab by

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Detective Dennis Pollihan?

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A I have a report of the sexual assault kit that

Donna Bell worked and it was examined for Officer Pollihan,

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however, I am not sure if he was the one who actually brought

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Q I see he's the one who requested the examination?

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A Yes.

the kit in.

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Q And when your office, the police laboratory receives a rape kit, is it a record like this record that Donna Bell

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made kept everytime she does one of those examinations?

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A Yes.

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Q And so it's kept in the day to day course of business?

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A Yes, it is.

Is there an indication on that what that is?

Q

A The slide mailer says vaginal smear and the metro-politan police, city of St. Louis evidence sticker that is affixed to it is marked specimen Q-l and Q-lA is a vaginal smear.

- Q And that's on her record there?
- A Yes, it is.
- Q And if you would look at what's been marked State's Exhibit Number 7, do yousee Donna Bell's initials on there anywhere?
  - A Yes, I do.
- Q And can you tell from the markings on that package what that is and whether or not it is a part of what she examined in her record?
- A The cardboard mailer is stamped anal smear and the metropolitan police, City of St. Louis evidence sticker is marked Q-lB according to the record, Q-lB is an anal smear.
- Q Referring again, I would ask at this time that State's Exhibit 6 and 7 be admitted into evidence.
- MR. OCHS: I have no objection in line with the previous agreement.

THE COURT: Be so received.

Q (by Mr. Randall) Now, referring to the record of Mrs. Bell, prepared in her examination, can you tell what her findings were concerning the anal swab and vaginal swab or smear and smear, rather?

A A serological examination disclosed the following: the presence of spermatazoa heads on the vaginal smear and swab.

Q And on the oral swab and panties and oral smear, there was nothing found on those?

A No, there was not.

Q Now, the specimens that she examined in that rape kit, specifically vaginal swab and anal swab that these smears were created from, did you personally examine them?

A Yes, I did.

Q And the same kind of antigen typing that you conducted in the Kimberly Porter case, did you also do that in the Vadie Vaughn case and with this vaginal and anal swab?

A Yes, I did.

Q And the -- what results did you get from that examination?

A That both the victim, Vadie Vaughn, and the defendant Mr. Erby are type O. secreters. The anal swab was inconclusive as to A.B.O. blood type and the vaginal swab revealed the presence of the H. antigen.

Q And what can you conclude from that?

A That the victim had intercourse with either a type

O. secreter or a non-secreter, that Mr. Erby is a Type O.

secreter. The results are consistent with the victim and
the suspect having had sexual intercourse and that approximately

fifty per cent of the male population could have had intercourse with the victim and we would have had the same results.

- Q Did you also examine sexual assault kit that was brought into the lab concerning a rape of Bernadette Brandon?
  - A Yes, I did.
- Q At the time of your examination, were you aware she had bathed immediately after her rape incident?
  - A No, I did not.
- Q Well, in your examination, was anything found of significance in any seminal fluid or any spermatazoa found anywhere on any of those items?
- A The vaginal, anal and oral smears were negative for human spermatazoa, they were then checked for seminal fluid, they were negative for seminal fluid. The panties, they were not examined, they were unable to be worn and anything that would have come up on those, we would have had to have assumed it was placed there prior to the incident.
- Q Her panties were so badly torn that she didn't put them back on after the rape so they actually wouldn't have contained anything, is that what you're trying to say?

MR. OCHS: Judge, he's leading the witness.

THE COURT: Be sustained as to form.

- Q (by Mr. Randall) I want to show you State's Exhibit 13, do you recognize those?
  - A Yes, I do.

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In none of the three cases were any -- were any foreign hairs dissimilar to the victim's own hair found?

None were found. A

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Q So insummary, Kimberly Porter's case, you can narrow it down to if the person who raped her also left this seminal fluid on her jacket which is pretty logical conclusion, we can narrow it down to someone within thirty-three per cent of the population?

A Yes.

Q And this defendant is within that same thirty-three per cent of the population?

A Yes.

Q In the Vadie Vaughn case, we can only narrow it down to fifty per cent of the population?

A Yes.

Q And this defendant is in that fifty per cent because he's a non-secreter?

A Yes.

Q And in the Bernadette Brandon case, we found nothing?

A Yes.

MR. RANDALL: Nothing further.

THE COURT: You may inquire.

MR. OCHS: Thank you, Judge.

## CROSS-EXAMINATION

# QUESTIONS BY MR. OCHS:

Q Mr. Crow, under examination by Mr. Randallyou testified that by looking at the seminal fluid that you found on the jacket in the Kimberly Porter case you were able to

Q And the portion that you examined, you were not able to find any fluids that would be common, I guess, from a vaginal fluid, am I messing this up?

A What I did was I did, I cut a stain out and then I took a small portion of that stain that I cut out and used it to do electropherdic test and the other portion to do the typing, I did not find any vaginal acid phosphotates on the portion that I did the electropherdic test on.

Now, again, Mr. Crow, would that lead you to conclude that the stain that you examined was from a male and not a female?

A It would lead me to believe that it was only from a male.

Q And what degree of scientific certainty can you say that you deal with percentage, what scientific percentage?

A The color test that is involved in this would not give you a false negative unless the amount of vaginal secretions were probably down at somewhere less than one per cent or two per cent, the total stain. The percentage of mixtures in which the amount of vaginal secretions is present yet too weak to give it a color test. I did not give any.

Q Isn't it possible that some of the secretions on that jacket were from a female?

A Yes.

Q Would that have any effect on your test of H. antigens?

Let me rephrase the question, Mr. Crow. I'll withdraw the

last question. In testing that sample, if the vaginal fluids

or the phosphotates, whatever it is you were looking for,

was too low of a percentage to determine with the test you

performed, could there still be an H. antigen show up that

could have been secreted from a female?

A I believe that the -- how is the word, that the -- if
there was not enough or if there was not enough vaginal
secretions present to give a color test in the acid phosphotates
then it is safe to assume that there was not enough present
to react in the H. antigen test.

Q Again, could it be possible to find H. antigens without finding any evidence of a vaginal, I guess, fluids in line with the previous question that it came from H. antigen, have come from the female and not the man. You said it's safe to assume but is it possible?

A In a -- in a normal female or --

Q Is there a possibility you can give me a yes or no answer on this?

A No.

If I'm going to have to say yes or no, I would say that it is impossible to find an H. antigen from the vaginal secretions if the acid phosphotate test came up negative for vaginal secretions.

Q So that would lead you to believe that that sample on that jacket came from a male, is that correct?

A Yes.

Q And with what degree of medical or scientific certainty can you say that?

A I would say that within a reasonable degree of scientific certainty that that stain came from a male.

Q And the results of this test that you performed with the saliva sample from Lonnie Erby and the testing of the samples from Vadie Vaughn lead you to what conclusion as to, again, because you refer to your notes, tell me what the conclusions were?

A Vadie Vaughn was the -- in Vadie Vaughn's case, it was fifty per cent.

- Q And the Kimberly Porter analysis, what was that?
- A There were two of them to the --
- Q What's the first one?

A On the intercourse that is on the vaginal swab, it was fifty per cent, that is fifty per cent she could have had intercourse with fifty per cent of the people and we would have gotten, we would expect these results. On the jacket since we were able to excluding the non-secreters, it dropped down to thirty-three per cent.

Q So in Rimberly Porter, thirty-three per cent of the male population of the United States could have been responsible

for	that	rape, are the results of that test you performed?
	A	Yes.
	Q	And in the Kimberly or in the Vadie Vaughn, fifty
per	cent	of the male population of the United States could
have	had	these same results?
	A	Yes.
	Õ	Now, you had testified that you had found some or you
had	exam:	ined some hair samples from the victims?
	A	No.
	Q1	Or you had some records that showed those hair
samj	ples 1	had been examined?
	A	Yes, I did.
	Q	Now, was their hair pulled from the head, do you have
tho	se re	cords with you, Mr. Crow?
	A	Yes, I do.
	Q	Do you have the records referring to Vadie Vaughn?
	A	Yes, I do.
	Q	And what hair samples refer to those records who
fil	led -	- who make those records, who performed those tests?
	A	Harold Messler.
	Q	Is he with your department?
	A	Yes, he is.
	Q	Could you tell the jury what specimens he took from
Vad	ie Va	ughn?
	A	Well, Mr. Messler did not personally take the hairs.

Now, have you ever done any hair test yourself or

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1	examination of hair samples?
2	A Yes, I have.
3	Q And in those examinations of comparing the hair
4	samples given to you in a rape kit, what specifically are you
5	looking for?
6	A Hair that is not that of the victim.
7	Q Now, did you have any report or summary of an
8	examination done on any hair by Lonnie Erby with you today?
9	A On his actually on his hair, I'm not
10	Q Or any hair samples given to you or taken pursuant
11	to any order from Lonnie Erby?
12	A Yes, there were.
13	Q And what were those hair samples?
14	A They were pulled head hair and pulled pubic hair.
15	Q And was there any examination done on the pulled
16	head hair, pubic hair, head combings or pubic combings from
17	either Vadie Vaughn, Bernadette Brandon or Kimberly Porter?
18	A There were tests run on the hair samples on all three
19	victims.
20	Q And was there any examination done in reference to
21	hair pulled from Lonnie Erby, from his pubic hair or from
22	his head?
23	A There was not, no.
24	Q And what's the reason for that?
25	A During the examination of the victims' hairs there

were no hairs found in the combings that were not consistent with having come from the victims themselves, that is there were no hairs found that were not the victims' hairs.

- Q When was that test done?
- A Let's see, on Kimberly Porter, it was done on 5-27-86.
- Q How about Bernadette Brandon?
- A Bernadette Brandon, it was 5-28-86.
- Q And how about on Vadie Vaughn?
- A 5-28-86.
- Q So were there any results from any hair tests, Mr. Crow, from examining those records?
  - A Yes, there were.
  - Q And what were those results?
- A That no foreign hair, that is no hair not that of the victim were found in the pubic or head combings of any of the three women.

MR. OCHS: I have nothing further.

#### REDIRECT EXAMINATION

### QUESTIONS BY MR. RANDALL:

Q And then since they didn't find, since Mr. Messler didn't find any foreign hairs from any of the victims, then he doesn't even bother looking at Lonnie Erby's hair, he knows their hair, there were no foreign hairs on them? That's why Mr. Messler didn't -- Mr. Erby's hair were not examined, an examination of his hair couldn't possibly have

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the hairs that were taken from the defendant, that was done

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A Yes.

MR. RANDALL: Nothing further.

MR. OCHS: Just one question.

#### RECROSS-EXAMINATION

## QUESTIONS BY MR. OCHS:

- Q Do you know whether or not Mr. Randall and I had any discussion about taking of this hair test?
  - A Pardon?
- Q Do you know whether Mr. Randall and I had any discussions prior to those hair samples being submitted to the lab?
  - A No. I do not.

MR. OCHS: I have nothing further.

THE COURT: May the witness be excused?

MR. RANDALL: Yes.

THE COURT: Will you step to the side here?

(A discussion was had off the record.)

(At 4:07 p.m., the hour of adjournment having arrived, the jury, being duly admonished by the Court per Instruction No. MAI-CR 1.08, by agreement is allowed to separate for the night, until 9:15 A.M., Thursday, the 12th day of June, 1986, at which time, the further following proceedings were had out of the hearing and presence of the jury:)

### THURSDAY, JUNE 12, 1986