1	A Several nours, I suppose.
2	Q You never examined any of the swatches?
3	A That is correct, I have not.
4	CARTER MR. KEEFE: I have no further guestion.
5	MR. SMITH: Thank you, sir. You may step down.
6	(Witness sworn.)
7 .	WILLIAM WILSON,
8	called as a witness, having been first duly sworn,
9	was examined and testified as follows:
10	DIRECT EXAMINATION
11	BY MR. SMITH:
12	Q Will you please state your name?
13	A William Wilson.
14	Q Mr. Wilson, what do you do for a living?
15	A I'm a forensic scientist at the Northern
16	Illinois Crime Laboratory.
17	Q How long have you been working in that
18	capacity?
19	A At the Northern Illinois Lab, I have been there
20	since April of 1988.
21	Ω Did you, prior to that work at any other
22	similar Laboratories?
23	A Yes?
24	Q Where was that?

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I worked for approximately eight years in the State of Ohio with the Bureau of Criminal Identification and Investigation.

What is it that you do for the Northern 0 Illinois Crime Laboratory specifically?

- I'm a forensic serologist.
- Is that what you did in Ohio? 0
- Yes..
- Tell us about your educational background?

I have a Bachelor of Arts Degree in criminal Α justice and I have my Forensic Scientist Degree from George Washington University, Washington D. C.

I have also attended various seminars and training school in the capacity of my job.

And exactly what does your job entail?

Serology is an all encompassing term that means the study of body fluids and blood, evidence analysis involving the comparison and analysis of evidence that would be considered microscopic in nature, fluids, hair fibers and soil.

During the course of your employment have you had occasion to examine blood samples as well as body fluid samples?

Yes, sir. A

- Q And approximately; y how many examinations of this type have you performed during the course of your employment over these years?
 - A I would estimate several hundred.
- Q Mr. Wilson, I would like to direct your attention to late September of 1989, did you have the occasion to receive a Vitullo evidence collection Kit from the Waukegan Police Department?
 - A Yes, sir.
- Q And I'm going to show you People's Group Exhibit Number 13 and ask you if you recognize this exhibit. If so, what do you recognize that to be?
- A I can recognize the evidence kit by my initials, the date and case number written on the side with my evidence tag which has been perforated.
- Q And if one can open up the contents of this Kit, do you also recognize the contents of that kit?
- A Yes, sir. Enclosed are various envelopes, tubes, a cardboard box, and a paper bag all bearing my initials, date and case number.
- Q As far as the blood samples, did you examine the blood samples in this kit?
 - A Yes, I did.
 - Q And these blood samples that were labeled, was

the blood from Lisa Krause?

A Yes.

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- Q What did your examination of the blood of Lisa Krause reveal?
- A According to the analysis, we performed at the laboratory, I discovered that Lisa Krause's blood type was ABO Type B. She was a secreter and that her enzyme pattern was Esterase D, Type 1, BPGM, possible phosphoglucomatese Type 2 --
- Q Mr. Wilson, the Esterase and phosphoglucomatese, could you explain what these are?
- A These are enzymes that are found in everyone. They are genetically controlled as to what the type is going to be.
- For example, if your mother is 1 and your father is 1, you are going to be a 1.
- Q And the numbering, these are scientific notations for the different types of each one of these enzymes.
- A Yes, these are the numbers that have been assigned to the specific types.
- Q Pardon me, did you indicate what her secreter status was?
 - A According to our analysis her secreter status

was that she is a secreter. She is a secreter.

Q Did you also perform an examination of the rest of the contents of this Kit?

A Yes, sir, I did.

Q Specifically and examining the vaginal swabs and smears in this kit, did you find any evidence of the presence of seminal material or spermatozoa cells?

A My microscopic examination of the vaginal and rectum smears that were submitted --

MR. KEEFE: I object to the witness reading from the report.

THE COURT: Don't read from your report. Use the report to refresh your memory.

THE WITNESS: According to my notes and my reports,

I determined that there were no spermatozoa present on
the microscopic slides submitted in the kit.

Q Did you also examine People's Exhibit 13,A and if you could open the contents of this bag -- let's start offering -- again, if you could open the contents of People's Exhibit Number 13, A and tell me if you recognize the contents of that Exhibit and if so, tell me what they are and whether or not you examined and analyzed them?

A Yes, sir, I have my intials and date written on

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the back. This is a pair of women's underwear.

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Q That was submitted to you ;in the rest of the kit?

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A Yes, sir.

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Q Did you examine that pair of underwear?

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A Yes, sir, I did.

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Q And what did your examination of that pair of underwear reveal?

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A According to my microscopic examination of the three areas that I removed from the underwear, I determined the presence of spermatozoa cells.

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Q And you say there are three areas that you removed, are these the cut out areas found in the crotch section of the underwear?

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A Yes, sir.

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Q Did you examines each one of these three separately;y?

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A Yes, sir, I did.

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Q Could you explain to us what the testing process that you used in that examination is?

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A When an article of clothing is submitted to our laboratory, I go through what is known as a chemical test. It is a tests that screens possible stains that could be of forensic use on situations like this on a

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pair of underwear.

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I stake a piece of filter paper and moisten it with distilled water.

CARTER MR. KEEFE: I object. The witness appears to be testifying to a standard procedure.

THE COURT: He should state what he did in this case.

BY MR. SMITH:

- Q If you could tell us what you did specifically with this underwear?
 - A This is what I did.
 - Q If you could finish with your answer?
- A I moistened the filter paper with distilled water and placed it against the crotch area of the underwear and dropped certain chemical solutions on the moistened filter paper and where there are positive reactions, I further go into the panties and remove the area that comes up positive.
 - Q Is that what you did in this case?
 - A Yes, sir.
- Q After having removed these areas, what did you then do?
- A I extracted a small bit of the cloth and extracted any type of stain material on the microscope

slide and examined it under the microscope.

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Q In this case, what did your examination under the microscope of these three separate stains reveal?

A They revealed the presence of spermatozoa cells.

Q After you performed that microscopic examination, what did you then do with regard to Exhibit 13,A?

A I further removed a cut up portion and soaked them in test tubes to determine if there were any secreted blood group presences.

Of these three different samples, what did your examination in that regard reveal?

A According to the results, I determined that two of the stains revealed a Type A and H or B and O secreted substances present and on one stain I found the presence of secreter typ H and type O secreted substance.

Q You said Type H or Type O, could you explain that, what H and O are and if there is an equivalent term?

A As a baby is developing as a fetus, the blood type begins its Type H and as the Type develops according to the genetic pattern, H becomes A with the additional molecular sugar or H becomes B or becomes A by the

addition of both sugars.

If no sugars are added, Type H becomes Type O.

- Q So, Type H is a fetal equivalent to Type O in a delivered baby or adult?
 - A Right. It is a foundation blood type.
 - Q After having done that, what did you then do?
- A I proceeded to perform Electrophoresis on the three stains I removed from the panties.
 - Q Will you explain what Electrophoresis is?
- A Electrophresis is a serological technique used in separating enzymes according to their non-genetic pattern, you embed stained material into a milemetarthic (phonetic) jell, run an electric current through the jell itself and the protein is delivered into the jell according to their specific charge and molecular size.
- Q Could you tell us what the results of that were?
 - A Could I use my notes.
- Q If you could use them to refresh your memory and tell us what the results were?
- A Of the three stains that I removed from the stained piece, after the Electrophoresis procedure was completed, I found there was inactivity or inconclusive results.

- Q Did you perform any tests on the stains themselves or the samples themselves?
 - A Could I refer to my notes.
 - Q If they will refresh your memory?
- A I performed an Amylase Dispersion test and Anti-P30 Test.
 - What are these kinds of tests?
- A An Amylase Dispersion tests determines the presence of Amylase which may be present due to the presence of saliva.

Anti-P30 is something that is found in the male prostrate gland.

- Q Now then, after having performed all these tests on these different samples that are submitted that you took from the underwear, did you on a subsequent date in december, approximately December the 12 or shortly thereafter receive a note there's a set of blood samples from the Waukegan Police Department for testing in comparison with the earlier submitted sample?
 - A Yes, sir.
- Q I'm going to show you People's Exhibit Number 12 and I'll ask you if you could examine this and tell me if you recognize it and if you could open the contents and tell me if you recognize these contents?

A Yes, sir. This is the Waukegan Police
Department envelope that I recognize because it has my
initials, the date and my evidence tag when I sealed it.

Contained within is one plastic bag that has my initials, the date and case number which contains two tubes and blood wrapped in a paper towel with my initials, date and case number on the bottom.

- Q These blood samples are labeled from Alejandro Dominguez?
 - A Yes, sir, according to the label.
- Q Did you perform an examination of these blood samples?
 - A Yes.

- Q Could you tell us what the result of your examination of these blood samples were?
- A Yes, sir. According to the tests that I performed, I determined that Alejandro Dominguez is a type O Secreter while the genetic pattern is Esterase D2-1, PGM2. (phonetic).
- O Did you compare that against the results of the blood tests from Lisa Krause and from the semen stains that you found in the underwear of Lisa Krause?
 - A Yes, sir, I did.
 - Q Could you tel us what your comparison revealed

as a result of each of these three different stains?

A Based on the Electrophoresis results, I could not draw any conclusion at all because my determination in the examination of the stains from the underwear were inconclusive or showed no activity.

- Q What about based on the fluids grouping?
- A Based on the fluids grouping, I found Alejandro Dominguez is a Type O secreter and eliminates him as being a possible source of one of the stains on Lisa's panties.
- Q Of the one stain that you found in the panties that you could not eliminate him as the possible source, were you able to eliminate Lisa Krause as the source of that stain?
 - A Yes.

- Q As to the other two stains, were you able to draw any conclusion or ability to eliminate Lisa Krause or Alejandro Dominguez?
- A I could not eliminate Lisa Krause of the type B substances found there.

Oftentimes in secreter's type H substances will also be secreted in body fluids. Therefore, I could not eliminate her as being a possible source of the type H secretion I found in the underwear.

And were you able to make similar 1 determinations in the third stain? 2 Yes, sir, the third stain only showed type H 3 secretions present. 4 Now, is People's Exhibit Number 12 in 5 substantially the same condition as when you examined it? 6 A Yes, sir. And then also People's Exhibit 13, is that in 8 the same or substantially the same condition? 9 Yes, sir. 10 A And then also People's Exhibit 13-A, the 11 underwear are they also in the same or substantially the 12 same condition as when you examined them? 1.3 Yes, sir. 14 MR. SMITH: I don't have any other questions, Mr. 15 Wilson, at this point in time. Your witness. 16 CROSS EXAMINATION 17 BY MR. KEEFE: 18 Mr. Wilson, do you recall exactly from what 19 portion of the pair of panties the stains were found? 20 The inside crotch area. 21 All three stains. Do you know how close they 22 23 were to each other?

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I would say the three stains were within about

an inch area.

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- Q When did you receive the Vitullo Kit?
- A According to the sheet that was submitted, September 21st, 1989.
 - Q That also is the date that you received the the swabs and the panties on the same date, is that right?
 - A The test tubes containing the swabs?
 - O Yes?
 - A Yes, sir.
 - Q Could you tell how old the semen stains were?
- 11 A No, sir.
 - O So you have no way of knowing if the stains could have been a week old or two weeks old?
 - A No. sir.
 - 0 Or two days old?
- 16 A That's right.
 - Now, you said that you could not eliminate Alejandro Dominguez as the donor of one of these stains which you labeled as stain B, is that correct?
 - A Yes, sir.
 - Ω Why is that?
 - A Because the Amylase secreted substances were type H and Mr. Dominguez is a Type O secreter and Typ O secreters would secret Type H.

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- A According to statistics put out by the FBI, I believe Type O are present in 45 percent of the population.
- Q Would there be any difference between male and female or about the same?
 - A I would imagine close to fifty.
- Q So then the best that you could do on that particular examination is basically narrowed down to 45 percent of the male population, is that correct?
 - A The factor of secreter status?
 - Q How many people are secreters?
 - A Approximately 80 percent.
- O So, would you know approximately what percentage of the male population would be type O Secreters?
- A Statistically, you would have to multiply 45 times 80 percent.
 - Q There is quite a few?
 - A About 36 percent.
- Q Now, you testified that you examined the enzymes patterns as well in your examination of the blood standards of Lisa Kruase and the blood standard of Alejandro Dominguez, is that right?

1 A Yes, sir. 2 Now, in your examination of the stain, you were not able to determine what the enzyme patters were? 3 That is correct because of the inactivity they 4 Α were inconclusive. 5 Do you know why there would be no activity? 6 7 No, sir. You say you have done hundreds of similar 8 examination in the past? 9 10 Α That's a rough estimate. And what percentage of the cases would there be 11 no activity in the enzyme pattern? 12 I cannot make an estimate on that. I cannot 13 really recall. 14 15 Is that something you encounter frequently or rarely? 16 It is something we have to deal with at the 17 18 laboratory. So in other words, you don't know? 19 Correct. 20 А You cannot give any possible explanation why 21 there would be no enzyme pattern activity? 22

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No, sir.

Is there a less likelihood there would be an

enzyme pattern activity if the semen stains are older? 1 That's a possibility, yes. 2. I don't suppose you could give us a time frame 3 as to when we might expect to see inactivity in the 4 enzyme pattern? 5 It depends on how the article of clothing is 6 stored -- in a freezer or refrigerator it would be better 7 than if it were stored in the back seat of a car in July. What if any articles of clothing were placed 9 into a Vitullo evidence collection kit and then sent to 1.0 the Northern Illinois Police Crime Laboratory. 1.1 It depends how the kit was stored. 12 A Do you know how the kit was stored? 13 No.sir. 14 Α Do you know when these items were collected and 1.5 placed in this kit? 16 According to the notes I took at the time the, 17 date sealed on the kit was 9-19-89. 18 So, That's two days prior to the date that they 19 were received at the lab, is that correct? 20 That is correct. 21 And when that kit was received at the lab, was 22 it worked up immediately? 23

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No, sir.

- Q Was it placed in storage?
- A Yes, sir.

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- Q Was that refrigerated?
- A Yes, sir.
- Ω Would two days be enough time for there to be no enzyme pattern activity in the semen stains?
 - A That's hard to say, I don't know.
- Q In your work as a forensic scientist, you are never called upon to attempt to make a determination as to how old a stain might be?
 - A No.sir.
- Q In your examination of the items in the Vitullo kit the only place that you found presence of spermatozoa was on the article of panties, is that right?
 - A Yes, sir. I believe that is true.
- Q Did you make a comparison or hair standards as well?

A In this case according to the report that I issued at the time, item three Exhibit 8 is identified as one sealed envelope containing a hair standard. Item three, Exhibit 7 was head hair combings, nothing of apparent evidentiary or comparative value was found as well was Exhibit 9, pubic hair combings also nothing of apparent evidencial or comparing value was found.

- Q Did the pubic hairs come from Lisa Krause or Alejandro Dominguez or both?
 - A In this Vitullo Kit, that came from Lisa Krause.
 - Q Were you subsequently given hair samples labeled as being form Alejandro Dominguez?
 - A Yes, sir, that came in as item four.
- Q Did you happen to make any type of comparison with a hair sample labeled as being from Alejandro Dominguez with the samples that were labeled as being from Lisa Krause?
 - A No, sir.

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- Q Did you make an examination of the head and lower pubic hair samples that were taken from Lisa Krause?
- A Yes, sir, I did according to the report that I issued at the time, Item 3, Exhibit 8 stated "nothing of comparative value was found."
- Q Nothing of comparative evidentiary value, is that what you said?
 - A Yes.
 - Q The envelope was empty?
- A Apparently.
 - Q So there were no hair samples in there?

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- A Correct.Exhibit 10 showed pubic hair standards submitted as comparison standards, but there were too few to make a comparison with.
 - Q From whom did the pubic hairs come from?
 - A Lisa Krause.
- Q So you did not perform any examination upon these pubic hairs, is that correct?
 - A That is correct.
- Q Now, in your examination of the enzyme pattern, the results were labeled either as "inactivity," or "inconclusive," is that right? I mean, that is what you testified to as well?
- A Yes, sir, for the standard recovered from the panties.
 - Q What exactly does "inconclusive, mean?
- A That means there might have been some activity there but it was undeterminative.
- Q The pattern had to be clear in order to be able to call them a type 1, Type 2 or Type 2-1 and if the bands are in this state then the report is inconclusive?
 - A Apparently, yes, sir.
 - Q Do you recall?
 - A No, I don't.
 - Q Is there anything that would refresh your

recollection? 1 2 Α Yes, sir. What would that be? Q 3 Our reports of our notes. Α Do you have these with you? 5 Q Yes.sir. 6 Α Could you use these to refresh your 7 recollection? 8 Yes, sir, according to the Electrophoresis 9 worksheet that I performed on December 29th, 1989, I 10 listed inactivity for all three enzymes of stain A; 11 inactivity meaning inconclusive; inactivity for stain B, 12 no activity, inconclusive and no activity for stain C. 13 MR. SMITH: Is there some relevance to the answers to 14 my questions? 15 CARTER MR. KEEFE: Apparently it might go to the issue of 16 how old the stains were in the garment that was submitted 17 to the crime lab. 18 MR. SMITH: He already testified he cannot testify to 19 the dating of the stain. 20 CARTER MR. KEEFE: I was about to ask that question. 21 I don't know where we are going. THE COURT: 22

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the patterns were indistinct or were smeared, my question

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would have been, "Would that be the cause of the age of the stain -- the reason for the conclusion of "inconclusive," so I'm asking the question -- I have no further questions.

THE COURT: We will take a ten minute recess.

(Brief recess.)

PAUL HENDLEY,

called as a witness, having been first duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. SMITH:

- Q Will you please state your name?
- A Paul Hendley.
- Q What is your profession. What do you do for a living?
 - A I'm a Sgt. of Police, City of Waukegan.
- Q Sgt. Hendley, I'd like to direct your attention to the evening hours of September the 19th, 1989. Did you have occasion to receive a Vitullo Rape Kit from Michael Stevenson of Naval Investigative Services that night?
 - A Yes.
- Q I'm going to show you Group Exhibit 13. I'm going to ask you if you will take a look at that and tell me if you recognize it?