

1 A That's correct.

2 Q Besides the mouth, what were you talking about?

3 A The mouth or the rectum.

4 CROSS EXAMINATION

5 BY MR. STIDHAM:

6 Q On State's Exhibit 45 and 48, you found no blood and no
7 sperm. Is that correct?

8 A That's correct.

9 Q This is the book you found at Damien's?

10 A That's correct.

11 Q Do you know where it came from?

12 A (EXAMINING) Inscription here is, "Crittenden County
13 Library."

14 (WITNESS EXCUSED)

15 MICHAEL DEGUGLIELMO

16 having been first duly sworn to speak the truth, the whole truth
17 and nothing but the truth, then testified as follows:

18 DIRECT EXAMINATION

19 BY MR. FOGLEMAN:

20 Q Will you please state your name and spell your last name?

21 A Michael DeGuglielmo, D-E-G-U-G-L-I-E-L-M-O.

22 Q What is your occupation?

23 A I'm employed as the director of forensic analysis for
24 Genetic Design.

25 Q What is Genetic Design?

1 A Genetic Design is a genetic testing company that
2 specializes in human identification. We test in three
3 particular areas. My forensic lab does basically criminal case
4 work such as this. A paternity lab which handles cases of
5 disputed parentage, both private and for governmental agencies,
6 and a bone marrow tissue typing lab for bone marrow transplants.

7 Q What education, training, experience and background do you
8 have to qualify you in this field?

9 A Bachelor of Science degree in biology, post baccalaureate
10 studies in biology and chemistry, Master of Science degree in
11 microbiology and genetics, continuing education in forensic DNA
12 analysis, radioisotope techniques, and statistical
13 interpretations, as well as continuing education through
14 numerous forensic agencies and organizations such as the
15 American Academy of Forensic Sciences, the FBI lab in Quantico,
16 and some of the regional forensic associations as well.

17 MR. FOGLEMAN: We would submit the witness as an
18 expert.

19 MR. STIDHAM: No objection.

20 THE COURT: You may proceed.

21 BY MR. FOGLEMAN:

22 Q In the course of your work with Genetic Design, did your
23 lab receive certain items from the Arkansas Crime Lab?

24 A Yes, sir, we did.

25 Q Were these in relation to the case involving James Michael

1 Moore, Steve Branch and Chris Byers?

2 A Yes, sir.

3 Q And specifically did you receive certain possible tissue
4 recovered from ligatures?

5 A Yes, sir.

6 Q And how were those items labeled upon receipt?

7 A There were two items listed as Q4, "possible tissue
8 recovered from ligature from Chris Byers," and Q39, "possible
9 tissue recovered from ligature from James Michael Moore."

10 Q Did you also receive some cuttings from some pants?

11 A Yes, sir.

12 Q How were those items labeled?

13 A They were labeled as Q6 "parentheses 2S parentheses,
14 cuttings from blue jeans questioned stain," and item Q10,
15 "parentheses 2S parentheses questioned stain" and item Q10,
16 "parentheses 1S parentheses cuttings from blue jeans questioned
17 stain."

18 Q In regard to the possible tissue recovered from the
19 ligatures, what tests were run on these items?

20 A Our lab does DNA analysis in all the cases that we handle.
21 There are essentially two types of DNA testing, traditional DNA
22 testing which has been done for quite some time is referred to
23 as a restriction fragment length polymorphism, or RFLP.

24 The second type of DNA testing is based upon a technique
25 called plenorase chain reaction, or PCR. The initial type of

1 testing requires a substantive quantity of DNA.

2 Q What does that mean?

3 A Well, I can tell you typically we're targeting
4 approximately four hundred nanograms of DNA.

5 Q What does that mean?

6 A A nanogram is a metric measurement used in a lot of
7 scientific discussion. The best way to explain it to you if you
8 take a dime, a dime weighs approximately one gram and a nanogram
9 is one billionth of a gram. So that's the amount of DNA that we
10 would be looking for in the actual processing.

11 While four hundred nanograms is not a lot, really, it is a
12 substantive amount that from some items of evidence in -- well,
13 in cases where there's evidence other than just specimens taken
14 from parties for control, it is difficult to obtain that much
15 DNA.

16 With PCR based testing, the sensitivity is many times below
17 one nanogram and so we're able to do testing where we couldn't
18 do it with the RFLP based testing.

19 For this particular case, the analysis we did was PCR based
20 testing because of the amount of material we had to work with.

21 Q Is that because it is more sensitive?

22 A Yes, sir.

23 Q What were the results on this Q4 and Q39, the possible
24 tissue from ligatures?

25 A In those particular items we were not able to detect any

1 DNA from the isolation. When we initially begin a test, the
2 first thing that we do is to go through whatever the material is
3 -- if it is tissue or blood -- and to remove the DNA from it so
4 we can work with it.

5 Initially we go through and we quantitate that to determine
6 how much DNA is present if it's there. We were not able to
7 recover and detect any DNA from those two items, and
8 subsequently the testing yielded no results as well.

9 Q What are the reasons for the inability to get DNA from
10 these possible tissue specimens?

11 A It can be one of several things. First of all, tissue
12 specimens even more so than bloodstains or seminal stains tend
13 to degrade, in other words, decompose and break down. The
14 reason for that -- ah, fluids that make stains dry and when they
15 dry, they are fairly well preserved and they can last for a
16 longer period of time. But tissue or any biological material
17 that is not preserved in some way will break down.

18 Tissue specimens that you're going to analyze generally are
19 best if they are frozen because that prevents them from
20 decomposing. When that decomposition occurs, the DNA breaks
21 apart and becomes in very small pieces so it is very difficult
22 if not impossible to test it.

23 The other possibility is these were very small samples, and
24 there may have been too little there to have recovered from for
25 the testing anyway.

1 Q So despite your best efforts you were unable to get any DNA
2 from those items.

3 A That's right.

4 Q In regard to the cuttings from the pants in Q6 and Q10 what
5 type of analysis was made and what were the results?

6 A All of the items that were submitted in this particular
7 case were analyzed using the same particular test. It's a PCR
8 based test called HLA DQ Alpha. The HLA stands for human
9 leucocyte antigen. It's a gene that is present in our bodies in
10 what is called a histocompatibility complex. It basically
11 recognizes self. It is what is responsible for tissue rejection
12 in transplants and for tissue typing matches. The particular
13 marker we are looking at is the D gene and a subset of that
14 called DQ Alpha.

15 In this particular case we did isolate a small amount of
16 DNA from the two questioned cuttings from the blue jeans. In
17 the initial information we were given from the Crime Lab there
18 was a possibility that these could be either mixed stains or
19 potential seminal stains.

20 With any evidence involving a possible sexual assault, we
21 use what's referred to as a differential extraction. And the
22 purpose there is to separate sperm cells from any other material
23 that might be there so we could match them to the appropriate
24 donors if there were two individuals comprising a mixed stain.

25 We refer to those as the epithelial, or nonsperm portion,

1 and the sperm, or male portion, of the sample that we have. The
2 initial step, the quantitation in this case, showed a very small
3 amount of DNA basically right at a marginal level of detection
4 for the two sperm fractions, that being items Q6 and Q10, and we
5 detected no DNA present from the nonsperm or epithelial
6 portions.

7 The physical HLA DQ Alpha analysis itself, though, there
8 was not enough material for us to get a result or the result did
9 not -- the testing did not appropriately amplify, possibly
10 because of an inhibitor. Unfortunately, blue jeans many times
11 do not provide the best substrate. There are numerous
12 references to this in literature. And it's most likely because
13 of some of the sizings or dyes that are used in producing them.
14 There's no hard and fast rule, but just some particular pairs of
15 blue jeans will not allow us to get an amplification so that we
16 can obtain results from it.

17 Q From all of that, what can we conclude about the source of
18 the DNA or probable source of the DNA in the two cuttings from
19 these pants?

20 A What I know from those two particular items, is that we did
21 obtain a small amount of DNA, basically a threshold amount for
22 our testing. The testing that we use is specific for human or
23 higher primate. By that I mean there is some cross reactivity
24 between higher primates as far as the DNA sequences. Human
25 beings, gorillas, chimpanzees and great apes will have some

1 similarity in the actual DNA sequence. Because of that, they
2 are not just human specific, but we know that the DNA that we
3 detected is from the source of a higher primate.

4 The other thing is that the small amounts of DNA we
5 detected were present in the male or sperm portions of the
6 extraction which would be indicative of the DNA having come from
7 a sperm origin.

8 CROSS EXAMINATION

9 BY MR. STIDHAM:

10 Q Those are a lot of big words, but what I gathered was that
11 you're talking about possibilities. You cannot say for certain
12 that there were sperm stains on these clothes, can you?

13 A No, sir. As we discussed earlier, in forensic science the
14 only way that people will definitively say, to my knowledge,
15 that there are sperm there is if they visually observe them
16 under a microscope. And with a very limited specimen, most of
17 the crime labs and our lab as well generally will not consume
18 material in order to do that.

19 We know that the extractions will separate male and female
20 components, and we also know that the material we're looking at
21 has to be human specific or higher primate specific to obtain a
22 result.

23 Generally speaking, that is the way the testing is handled.

24 Q Did you see any sperm?

25 A No, sir. We did not do a microscopic. We did not want to

1 consume any of the material.

2 (WITNESS EXCUSED)

3 MR. FOGLEMAN: Your Honor, that is all the
4 witnesses we have available today. We tried at noon
5 to contact some witnesses to get them here but were
6 unable to do so. So we would request a recess until
7 Monday.

8 THE COURT: All right.

9 MR. FOGLEMAN: Your Honor, we have agreed to
10 stipulate that the sunset on May 5th was at 7:49 P.M.

11 THE COURT: All right, ladies and gentlemen, a
12 stipulation is an agreed fact between the parties that
13 you may consider in evidence.

14 We're going to take our weekend adjournment at
15 this time. So with the usual admonition not to
16 discuss the case -- and of course this will be a
17 weekend recess -- we'll be recessing until Monday
18 morning at 9:30.

19 You are again reminded that there will be media
20 coverage, and you are not to view, listen to or read
21 that coverage or let anyone discuss it with you. In
22 fact it is not likely you will make any independent
23 investigation on your own this far from Crittenden
24 County, but you're not to do that as well.

25 With those reminders and the usual admonition of

IN THE CIRCUIT COURT OF CLAY COUNTY, ARKANSAS
WESTERN DISTRICT
CRIMINAL DIVISION

STATE OF ARKANSAS

PLAINTIFF

VS.

NO. CR-93-47

JESSIE LLOYD MISSKELLEY, JR.

DEFENDANT

PRETRIAL AND TRIAL PROCEEDINGS

CORNING, ARKANSAS

VOLUME 6

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BEFORE THE HONORABLE:

DAVID BURNETT, CIRCUIT JUDGE

BARBARA J. FISHER
OFFICIAL COURT REPORTER
P. O. BOX 521
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(501)236-8034

1 the Court not to discuss the case among yourselves or
2 with anyone, you may stand in recess until Monday
3 morning at 9:30.

4 (ADJOURNMENT)

5 CORNING, ARKANSAS, JANUARY 31, 1994, AT 9:30 A.M.

6 JERRY DRIVER

7 having been first duly sworn to speak the truth, the whole truth
8 and nothing but the truth, then testified as follows:

9 DIRECT EXAMINATION

10 BY MR. FOGLEMAN:

11 Q Will you please state your name and occupation?

12 A Jerry Driver. I'm the chief juvenile officer of Crittenden
13 County.

14 Q Are you acquainted with the defendant?

15 A Yes, I am.

16 Q Are you also acquainted with Damien Echols?

17 A Yes, sir.

18 Q And Jason Baldwin?

19 A Yes, sir.

20 Q If you recall, when was the first time that you saw these
21 three people together?

22 A Around November 15th of '92, I believe.

23 Q Where was this?

24 A This was at Lakeshore Trailer Park.

25 Q What were you doing there?