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PETITIONER'S EXHIBIT #27
Patricia Zajac's affidavit & CV

Exhibit EE

Affidavit of Dr. Patricia Zajac



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IN THE CIRCUIT COURT OF CLAY COUNTY, ARKANSAS,
IN THE CIRCUIT COURT OF CRITTENDEN COUNTY, ARKANSAS

JESSIE LLOYD MISSKELLEY, JR.

Petitioner,

vs.

STATE OF ARKANSAS,

Respondent.

Case No. CR 93 47

**AFFIDAVIT OF PATRICIA L.
ZAJAC**

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AFFIDAVIT OF DR. PATRICIA L. ZAJAC

State of California)
) ss
County of Contra Costa)

Before the undersigned Notary Public, duly qualified and acting in and for said county and state, appeared Dr. Patricia L. Zajac, to me known to be the affiant herein, who stated the following under oath:

"1. I, Patricia L. Zajac, am currently a Professor of Criminal Justice and the Chair of the Department of Criminal Justice Administration at California State University, East Bay (formerly Hayward), where I have been on the faculty since 1979. My faculty duties at California State University, East Bay have included teaching courses in Comparative Evidence Evaluation, Criminal Identification, Administration of Justice, Ethics and Justice Administration, Evidence in Corrections and Law Enforcement, Sexual Assault and Child Abuse Investigation, Forensic Research Seminars, and Crime Solving Seminars.

2. I earned a Bachelor of Science Degree in Criminalistics with a minor in Chemistry from the University of California, Berkeley, in 1967. I received a Master of Arts degree in Criminal Justice/Forensic Science from California State University, Sacramento, in 1980, and a Master of Public Administration from the University of Southern California in 1994. I thereafter earned a Doctor of Public Administration degree from the University of Southern California in 1996.

3. Between 1970 and 1981, I was employed as a criminalist by the Alameda County Sheriff's Department Crime Laboratory. My duties in that capacity required that I analyze a

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wide range of physical evidence relating to active criminal investigations and prosecutions. I was also responsible for developing and implementing the Laboratory's serology program by researching and developing methodology, establishing testing protocols and training personnel.

4. Between 1981 and 1985, I was the Manager, Laboratory Products, and Product Manager for Electrophoresis at Sartorius Filters, Inc., where I developed electrophoresis products and testing procedures for forensic, clinical and research applications.

5. I have extensive experience in the methods and protocols for collecting and processing evidence, the analysis and comparison of physical evidence, including serological testing, crime scene reconstruction and homicide investigation. I have presented and published numerous scholarly papers on a range of topics, including the serological analysis of blood/body fluid evidence, evaluation of various methodologies for testing blood/body fluids, blood testing protocols and appropriate laboratory standards and practices for assessing, confirming, documenting and reporting results.

6. I am a Fellow of the American Academy of Forensic Sciences, Criminalistics Section, a member of the California Association of Criminalists, and an Associate Member of the International Association of Forensic Identification.

7. During the past thirty-five years, I have been qualified and testified as an expert numerous times in federal and state courts, rendering opinions on a variety of issues related to the collection, preservation, testing and evaluation of physical evidence. My curriculum vitae is attached hereto as Appendix I.

8. Michael N. Burt, counsel for Jessie Lloyd Misskelley, Jr., asked me to review documents pertaining to serological and DNA testing and conclusions on evidence items for the

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presence of semen, and testimony and arguments related to this testing.

9. Mr. Burt requested that I review the documents and provide an analysis and opinion as a result of this review of the materials.

10. I received via email attachments the following documents from Mr. Burt:

10.1 "Report of Laboratory Analysis:" four (4) page report dated 06/01/93, Laboratory Case #93-05716, Agency Case #93-05-0666, signed "Kermit B. Channell II, Serologist"

10.2 "Semen Examination" worksheets, Lab. No. 93-05716, dated:

5-7-93

5-11-93

5-12-93

5-19-93

10.3 "Saliva Examination" worksheet, Lab. # 93-05717/05716, dated 5/11/93

10.4 "Blood Examination" worksheets, Lab. No. 93-05716, dated:

5-11-93

5-12-93 (3 pages)

10.5 "P-30" worksheets, dated:

5-18-93

6-9-93

10.6 State Crime Laboratory "Telephone Conversation Record" dated:

5-18-93

8-11-93

10-11-93

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10.7 Two-page hand-printed letter to Genetic Design, Inc, dated May 19, 1993, signed, Kermit B. Channell II, Serologist.

10.8 Arkansas State Crime Laboratory one-page letter to Genetic Design, Inc., dated May 19, 1993, signed Kermit B. Channell II, Serologist.

10.9 Forensic Case Report from Genetic Design, to Kermit B. Channell II, dated July 13, 1993. One-page report with one-page "Attachment #1."

10.10 Pretrial and Trial Proceedings, State of Arkansas vs Jessie Lloyd Misskelley, Jr., Volume 9, pages 1723-1761; Volume 10, pages 1762-1797.

10.11 Pretrial and Trial Proceedings, State of Arkansas vs Jessie Lloyd Misskelley, Jr., Volume 5, pages 995-1050.

10.12 Pretrial Hearings and Trial Proceedings, State of Arkansas vs Damien Wyne Echoles and Charles Jason Baldwin:

Volume 5, pages 901-920

Volume 6, pages 1322-1378

Volume 7, pages 1378-1397.

10.13 Perkin Elmer "Quantiblot" Protocols, "Defendants Exhibit 168985"

10.14 Arkansas State Crime Laboratory "Forensic Biology Quality Manual," Revised 1/9/2004.

10.15 FBI "Procedures for the Serological Identification of Biological Substances on Evidentiary Materials," December 23, 2002.

Items 10.1-10.9 are attached hereto and marked collectively as Appendix II.

11. Mr. Burt requested review specifically of testing of "stains" on items Exhibit 45 and

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48 (Q-10 and Q-6 respectively). These were described as Blue Pants and Blue Jeans.

12. On review of the lab notes, the items 45 (Q-10) and 48 (Q-6) were examined visually and with laser light. Subsequently, areas on the left and right thigh of item 45, and the back and front of item 48 were tested for the possible presence of seminal stains with the presumptive test for Acid Phosphatase (AP). These stains were further examined microscopically for the presence of spermatozoa (sperm) and electrophoretically for P30 (an antigen specific to the male prostate).

13. Tests for AP on Item 48, "back" were negative and this stain was not examined further. The stain on the front gave a "very light" reaction for AP, and negative for sperm. The P30 test on this stain was positive; however, the background "control" (unstained area, indicated as "mud") also was positive for P30. The "very light" AP reaction is not considered a "positive" test for semen. AP is present in low amounts in other biological materials and high amounts in semen. Therefore, there can be no conclusion as to possible presence of semen.

14. On Item 45, Serologist Channell obtained a positive AP result, negative for spermatozoa, and positive P30. However, the background control on this item also was positive for P30. Therefore, there can be no conclusion as to possible presence of semen.

15. There are no notes that appropriate standards, negative reagent controls, or substrate controls (background) were analyzed along with these stains for Acid Phosphatase. This is an essential part of the testing procedure: Standards would be known semen, as well as other body fluids, to determine strength of reactions for proper interpretation. Negative reagent controls would be "blanks" of chemicals used in the tests to be sure there is no contamination. Substrate controls, as mentioned above, would be the background (mud in this case) to determine if there is contaminating or interfering substances.

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16. Since the background controls on both items 45 and 48 gave positive results for P30, it is most likely that had these background controls been analyzed for AP, they also would have been positive for Acid Phosphatase, since P30 is more specific and AP is a more general presumptive test.

17. Serologist Channell correctly stated in his report of 06/01/93 that "no semen was found on any items."

18. Sections of the stains from Items 45 and 48 were subsequently sent to Genetic Design, Inc., for DNA testing. In the letter from Mr. Channell dated May 9, 1993, these stains were listed as "questioned stain." Handwritten notations next to these two items state "? Poss. Bacterial in nature." Per the report from Genetic Design dated July 13, 1993, the test results of these two stains were stated as: "DNA isolated from the blue jeans items Q6 and Q10 could not be amplified due to inhibition." The Appendix #1 listed results of these two stains as "no result."

19. There were no "bench notes" (analyses notes) from Genetic Design indicating what samples were actually analyzed. There is no mention or notes that substrate controls from the items were analyzed along with the stains. Given the previous P30 false positive results on the background "mud," it was imperative that the background be tested for the DNA (it is imperative in any protocol, but even more so in this instance).

20. It is my opinion that whatever contaminant in the background gave the false P30 also gave the AP results on Item 45, the "very faint" AP results on Item 48, and the weak DNA results for both items. These clearly do not indicate the presence of semen.

21. Testimony and arguments at trial expanded and enhanced the results beyond the scientific conclusions of "no semen was found" to state that the stains were semen and the DNA

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was from sperm. This was misleading to the jury and scientifically unfounded and incorrect.

22. First, Mr. Channell stated, and closing arguments reiterated, that he conducted two (2) screening tests of the items for presence of semen: laser and Acid Phosphatase (AP). He further stated the stains were sent to Genetic Design for "more sensitive DNA" testing. This is most misleading to a jury and scientifically wrong:

22.1 Laser is not a screening "test" or presumptive test, but merely an extension of visual examination for possible locations on garments to further examine. Nowhere in the protocols is there mention that the laser is a screening test.

22.2 The AP is a presumptive test, meaning that it is a screening "test" and not conclusive for presence of semen. There were no substrate controls analyzed on these items to indicate possible contaminants which might also cause a "positive" for AP on Item 45. This was very important, especially since this substrate control gave a positive for P30. The "very faint" AP results on Item 48 cannot be considered a positive test for semen.

22.3 There was a third test that was negative for semen: microscopic exam for spermatozoa.

22.4 There was no mention in the arguments of the specific P30 test which, although positive on the stains, was also positive on the substrate control, meaning the stains gave a "false positive."

22.5 There was no mention in testimony that the report of Serologist Channell stated "no semen found on any items." Serologist Channell had a professional responsibility to clearly state to the court and to the jury that his tests showed "no semen."

23. Although the DNA testimony said human or higher primate DNA on these items, the

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fact remains that no semen was identified by the tests and the report from Genetic Design does not support this testimony or the arguments. This is not only grossly misleading to the jury, but scientifically incorrect and without scientific foundation. There were no test results to support this conclusion. In fact, to the contrary: results showed no semen. The DNA report states that these samples "could not be amplified due to inhibition," and that there were "no results."

24. Had the defense at the original trial retained a competent criminalist/serologist in 1993-1994, these misinterpretations and the serologist's failure to adhere to protocol would and should have been presented to the court in support of a motion to exclude the serology and DNA evidence from trial. Further, bench notes of Genetic Design (which I have been informed no longer exists) could have been obtained and examined for further failure to adhere to protocols.

25. I have been informed that the applicable legal standard for the admissibility of scientific evidence at the time of trial was that stated in *Prader v. State*, 307 Ark. 180 (1991) in which the Arkansas Supreme Court 'impress[ed] upon the trial judge his or her heavy responsibility in determining whether the correct protocol was followed in the particular test at issue' and further ruled that '[i]f the laboratory that performed the test did not follow reliable procedures to ensure accurate test results, the test should not be admitted.' (Id. 188). In this case, had the defense retained a competent criminalist/serologist in 1993-1994, that expert would and should have testified that the state's serology and DNA experts did not follow reliable procedures to ensure accurate test results. Even if such motion was unsuccessful, a competent criminalist/serologist would and should have been presented at trial in support of an argument that the state's serology/DNA evidence was scientifically unreliable.

26. If called to testify in court, I would provide truthful and accurate testimony about all

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the subjects covered above."

IN WITNESS WHEREOF, I hereunto set my hand this 3rd day of June, 2008.

Dr. Patricia L. Zajac
DR. PATRICIA L. ZAJAC

Subscribed and sworn to before me this 3rd day of June, 2008.

[Signature]
Notary Public

My commission expires: 3/11/11



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CALIFORNIA JURAT WITH AFFIANT STATEMENT

State of California

County of

Alameda

} ss.

☒ See Attached Document (Notary to cross out lines 1-6 below)

☐ See Statement Below (Lines 1-5 to be completed only by document signer[s], *not* Notary)

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Signature of Document Signer No. 1

Signature of Document Signer No. 2 (if any)

Subscribed and sworn to (or affirmed) before me on this

3rd

day of

JUNE

2008

by

(1)

Patricia L. Zajac

Name of Signer

☐ Personally known to me

☒ Proved to me on the basis of satisfactory evidence to be the person who appeared before me (.) (.)

(and

(2)

Name of Signer

☐ Personally known to me

☐ Proved to me on the basis of satisfactory evidence to be the person who appeared before me.)



Place Notary Seal Above:

OPTIONAL

Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.

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Title or Type of Document: _____

Document Date: _____ Number of Pages: _____

Signer(s) Other Than Named Above: _____

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OF SIGNER #1**
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**RIGHT THUMBPRINT
OF SIGNER #2**
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Exhibit EE-1

Curriculum Vitae of Dr. Patricia
Zajac

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CURRICULUM VITAE

PATRICIA L. ZAJAC, BS, MA, MPA, DPA
1300 Quarry Ct. #206
Pt. Richmond, CA 94801
(510) 232-9965 / (510) 885-3929
pzajac@sbcglobal.net

MARCH 2008

EDUCATION:

DOCTOR OF PUBLIC ADMINISTRATION, 1996: University of Southern California, Los Angeles

MASTER OF PUBLIC ADMINISTRATION, 1994: University of Southern California, Los Angeles

MASTER OF ARTS, 1980: Criminal Justice/Forensic Science
California State University, Sacramento

BACHELOR OF SCIENCE, 1967: Criminalistics, University of California, Berkeley

PROFESSIONAL EXPERIENCE:

CALIFORNIA STATE UNIVERSITY, HAYWARD, CA.

Department of Criminal Justice Administration:

- * Department Chair, September 2004 to present
- * Professor: September 2002 to present
- * Associate Professor: September 1997 - September 2002
- * Assistant Professor: September 1990 to September 1997
- * Instructor: 1979 to 1990
- * Major Selection Advisor

* Courses:

Comparative Evidence Evaluation
Criminal Identification
Administration of Justice
Sexual Assault and Child Abuse Investigation
Crime Prevention and Control
Police/Community Relations
Ethics and Justice Administration
Evidence in Corrections and Law Enforcement
Crime Solving Seminar
Seminar on Health Care Fraud Investigation
Forensic Research Seminar

Director, Liberal Studies Program, July 2000-September 2004

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OHLONE COLLEGE, FREMONT, CA. Administration of Justice:
Spring 1994 to present

- * Adjunct Faculty, Course: "Criminalistics"

CALIFORNIA STATE UNIVERSITY, SACRAMENTO, CA. Department of
Criminal Justice, 1989 to 1990

- * Instructor, Criminal Justice/Forensic Science
- * Courses:
 - Biological Evidence
 - Comparative Evidence Evaluation
 - Physical Evidence

ALAMEDA COUNTY SHERIFF'S DEPARTMENT CRIME LABORATORY, San
Leandro, CA; 1970 to 1981

Criminalist: Analysis of Physical Evidence in Criminal
Proceedings

- *Crime Scene Investigation/Evidence Collection
- *Laboratory Analysis, Interpretation, Reporting of Results
- *Court Testimony

Coordinated Lab, Law Enforcement, Legal, Medical personnel
for County-wide Sexual Assault Investigation Program

Developed and Implemented Serology Program:

- *Research and development of methodology
- *Publications in professional journals and book
- *Established testing protocols
- *Trained personnel from Alameda County and worldwide

Developed, implemented and maintained County-wide Breath
Alcohol Program.

SARTORIUS FILTERS, INC., Hayward, CA; 1981 to 1985

Manager, Laboratory Products
Product Manager, Electrophoresis

- *Developed Electrophoresis product line for forensic,
clinical and research applications and laboratories
- *Presented workshops, lectures, and training for forensic,
clinical and research laboratories
- *Technical and marketing support for electrophoresis and
laboratory filtration
- *Developed and authored technical applications
- *Designed and implemented Quality Control Program

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AUTOSENSE CORPORATION, Hayward, CA; 1985 to 1990

Vice President

- *Co-founder and co-inventor: Breath Alcohol Ignition Interlock/Monitor System
- *Standards and Protocols for Nationwide Certification
- *Internal Standards for Chemistry and Engineering
- *Legislative Activities and Court Liaison

PROFESSIONAL MEMBERSHIPS:

- *American Academy of Forensic Sciences - Fellow, Criminalistics
- *California Association of Criminalists
- *ASTM - Member; Committee on Forensic Science
- *International Association for Identification-Associate Member
- *Strathmore's Who's Who, Life Member (1996)

ADDITIONAL ACTIVITIES:

*UNIVERSITY OF CALIFORNIA, BERKELEY, Extension Division; 1984, Instructor: "Electrophoresis Techniques and Methodology"

*Book/Manuscript Reviewer:

Prentice Hall Publishers; books and manuscripts on Criminal Justice Administration Topics

Criminal Justice Policy Review Journal: manuscript Review, Criminal Justice Topics

CRC Press: Review of Manuscript on Fundamental Principles of Forensic Science

- * Advisory Council Member, Administration of Justice, Chabot College, 1996 to present
- * Advisory Council Member, Administration of Justice, Ohlone College, 2000 to present
- * Community Policing Advisory Board, CSUH, 2003-2004

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* Patents Issued:

U.S. Patent No. 4,678,057; Issue Date 7/7/87
Inventors: B. Elfman and P.L. Zajac
"Breath Alcohol Analyzer"

U.S. Patent No. 4,809,810; Issue Date 3/7/89
Inventors: B. Elfman and P.L. Zajac
"Breath Alcohol Analyzer"

Canadian Patent No. 1,288,321, Issue Date 9/3/91
Inventors: B. Elfman and P.L. Zajac
"Breath Alcohol Analyzer"

PRESENTATIONS

"Preliminary Study of Ignition Interlock Patterns," P.L.Zajac, (Presenter), J.E. Guffey, M.G. Neithercutt; Western and Pacific Association of Criminal Justice Educators, San Francisco, CA, November 1991.

"Forensic Document Examinations in Investigations," Patricia L. Zajac, High Technology Crime Investigation, Monterey, CA, 1992.

"Some Prisoner Deaths and Physical Conditions," M.G. Neithercutt and Patricia L. Zajac (Presenter), "Is Corrections in Need of Correction?" Western and Pacific Association of Criminal Justice Educators, Irvine, CA, 1992.

"Police At Work: A Week in Review," M.G. Neithercutt and Patricia L. Zajac (Presenter), National Social Science Association Conference, Las Vegas, NV, April 12-14, 1994.

"A Theory of Empowerment and Primary Crime Prevention," Patricia Zajac (Presenter) and Marc Neithercutt, Western and Pacific Association of Criminal Justice Educators Conference, October 20-23, 1994, Salt Lake City, UT

"Use of Technology to Intervene in Human Behavior in a Human Factors Engineering Approach to Drunk Driving Deterrence: A Preliminary Report on an Empirical Study," Patricia L. Zajac, Western and Pacific Association of Criminal Justice Educators Conference, November 15-18, 1995, Reno, NV.

"Use of Technology in Human Factors Engineering Approach to Drunk Driving Deterrence: Results of Empirical Study and Implications for Criminal Justice Policy," National Social Science Association, November 13-15, 1996, New Orleans, LA.

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"Forensic Laboratory Conditions: Mere Poor Press or Much Deeper Problems?" Patricia L. Zajac (Presenter and Session Chair) and M.G. Neithercutt, Western and Pacific Association of Criminal Justice Educators, Conference, November 6-8, 1997.

"Forensic Laboratory Conditions: Public Relations or Systemic Failings?" Patricia L. Zajac (Presenter), and M.G. Neithercutt, National Social Science Association, San Diego, April 1998.

"Alcohol Abusers Who Drive vs High-Risk Drivers Who Drink: Driving Records of DUIs for Non-Alcohol Related Offenses," Patricia Zajac, National Social Science Association, Conference, November 5-6, 1998, New Orleans, LA.

"Effectiveness of Physical Evidence in Crime Investigation," Patricia Zajac, Western Society of Criminology Annual Meeting, February 25-28, 1999, Oakland CA.

"Case Study in Health Care Fraud Investigation and Techniques," Patricia Zajac, participant in leading workshops, National Health Care Anti-Fraud Association, Cleveland, Ohio, March, 1999.

"Evaluation of The Effectiveness of Physical Evidence in Investigations," Patricia Zajac, National Social Science Association, Annual conference, November 15-18, 2000, New Orleans,

"Evaluating Forensic Evidence: A Methodical Approach to finding Brady and Innocence Claims in Police Crime Labs," Patricia L. Zajac, HABEAS CORPUS PRACTICE: STRATEGIES FOR LIFE Conference, April 27-29, 2001, San Francisco, CA.

"Reviewing and Challenging Forensic Evidence and Expert Testimony," Patricia L. Zajac, FEDERAL DEFENDERS ANNUAL DEATH PENALTY CONFERENCE, August 23-24, 2001, Boise, Idaho.

"Challenging Scientific Evidence," Patricia L. Zajac, HABEAS CORPUS PRACTICE Seminar, October 26-28, 2001, San Francisco, CA.

"Forensic Fraud: Litmus Test for Injustice," Panel: Dr. Patricia L. Zajac, George Castelle, Jennifer Friedman, California Attorneys for Criminal Justice Annual Fall Seminar, December 8, 2001, Oakland, CA.

"Forensics Underpinning Conviction Errors: 'Science' or Charlantry?" Patricia L. Zajac (presenter) and M.G. Neithercutt, National Social Science Association, 11 April 2002, Las Vegas, NV

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"Forensics and Exonerated 'Offenders'," Patricia L. Zajac (presenter) and M.G. Neithercutt, National Social Science Association, 3 August 2003, Alaska.

"Crime Labs: Pitfalls, Mistakes and Misconduct," Dr. Elizabeth Johnson and Dr. Patricia Zajac, Habeas Corpus Resource Center, Spring Conference Series, May 10, 2004

"Scientific Forensics in Crime Investigation," Dr. Patricia L. Zajac, Math/Science Division, Ohlone Community College, December 3, 2004

"Challenging the Prosecution's Physical Evidence," Dr. Patricia L. Zajac, Habeas Corpus Resource Center, Fall Conference, DECONSTRUCTING FORENSIC EVIDENCE, November 2, 2007, San Francisco, CA

II. (prior presentations)

"Forensic Applications of Blood Examination and Immunology," California State University, Hayward, 1974

"Typing of PGM in Bloodstains on Cellulose Acetate," Semiannual Spring Seminar of California Association of Criminalists, Long Beach, 1974

"Blood Examination in the Crime Lab," Bay Area Antibody Club, 1975

"Blood Analysis in the Crime Laboratory," Alameda-Contra Costa Medical Association Blood Bank, 1976

"Rapid Phenotyping of the Group Specific Component (Gc) in Dried Bloodstains by Immunofixation on Cellulose Acetate," 49th Semiannual Spring Seminar of the California Association of Criminalists, Palm Springs, CA 1977.

"Bloodstain Individualization: Results of Collaboration Between Alameda County Sheriff's Department Crime Laboratory and University of California, Berkeley-Research Laboratory," 51st Semiannual Spring Seminar of California Association of Criminalists, Big Bear, CA 1978.

"Dried Bloodstain Analysis Program in Alameda County, Criminalist Management Association, San Leandro, CA 1978.

"Dried Bloodstain Analysis Program at the Alameda County

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Sheriff's Department Crime Laboratory, " Northwest Association of Forensic Scientists, San Francisco, CA, 1978.

"Electrophoretic Procedures on Cellulose Acetate for Analysis of Blood and Bloodstains in Forensic Laboratories," Southern Serology Study Group, California Association of Criminalists, Orange County, CA 1978.

"Immunohematology in the Crime Lab," Serum Cell Society, L.A., CA, 1978. "Possible Errors in Hemoglobin Phenotyping in Bloodstains," and "Rare Gc Variants in Routine Case Work," 53rd Semiannual Spring Seminar of the California Association of Criminalists, San Diego, CA 1979.

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PUBLICATIONS

1. Zajac, P.L., "Breath Testing and the Breathalyzer," LIAISON, Vol. XVIII, No. 17, Sept. 1971
2. Zajac, P.L. and A.E. Sprague, "Typing of Phosphoglucose (PGM) Variants in Dried Bloodstains by the Grunbaum Method of Cellulose Acetate Electrophoresis," J. FOREN. SCI. SOC., Vol. 15, 1975
3. Grunbaum, B.W., and P.L. Zajac, "Differentiation of the Genetic Variants of Glucose-6-Phosphate Dehydrogenase in Bloodstains by Electrophoresis on Cellulose Acetate," J.FOREN.SCI.SOC., Vol. 16, 1976.
4. Grunbaum, B.W., and P.L. Zajac, "Rapid Phenotyping of the Group Specific Component by Immunofixation on Cellulose Acetate," J. FOREN.SCI., (1978) Vol. 23, No. 1
5. Grunbaum, B.W., and P.L. Zajac, "Phenotyping of Erythrocyte Acid Phosphatase in Fresh Blood and in Bloodstains on Cellulose Acetate," J.FOREN.SCI., (1978), Vol. 23, No. 1
6. Grunbaum, B.W., G.C. Harmor, B.DelRe, and P.L. Zajac, "Electrophoresis of Esterase D in Fresh Blood and in Bloodstains on Cellulose Acetate," J. FOREN. SCI., (1978) Vol. 23, No.1
7. Zajac, P.L., and B.W. Grunbaum, "Determination of Group Specific Component in Dried Bloodstains by Immunofixation on Cellulose Acetate," J.FOREN.SCI. (1978), Vol. 23, No. 2.
8. Zajac, P.L., and B.W. Grunbaum, "Problems of Reliability in the Phenotyping of Erythrocyte Acid Phosphatase in Bloodstains," (1978) J.FOREN.SCI. Vol 23, No. 2.
9. Grunbaum, B.W., and P.L. Zajac, "A New Technology for Individualization of Dried Blood in The American Crime Laboratory," Monograph, Office of Criminal Justice Planning, State of California, 1979.
10. Zajac, P.L., "Evaluation of Current Technology for Utilization of Blood and Bloodstains in Crime Laboratory Casework," Master's Degree Thesis, California State University, Sacramento, 1980.
11. Grunbaum, B.W., and P.L. Zajac, "A New Technology for Bloodstain Phenotyping," INDIAN JOURNAL OF CRIMINOLOGY AND CRIMINALISTICS, (India) Vol.1 No. 1, March 1981.
12. Zajac, P.L., "Bloodstain Phenotyping in Crime Laboratory Casework," HANDBOOK FOR FORENSIC INDIVIDUALIZATION OF HUMAN BLOOD AND BLOODSTAINS, B.W. Grunbaum, ed., Sartorius GmbH, W. Germany, 1981.

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13. Zajac, P.L., "Drunk Driving Deterrence System," BRIEFLY SPEAKING, Southern Alameda County Bar Association Newsletter, Vol. II, No. 4, October 1985.
14. Guffey, J.E., M.G. Neithercutt, and P.L. Zajac, "Probation, Auto Ignition Interlocks, and Drunk Driving Offenses," JOURNAL OF OFFENDER MONITORING, Vol. 4, No. 1, Winter 1991.
15. Guffey, J.E., P.L. Zajac, M.G. Neithercutt, "Some Preliminary Results of Using Probation Ignition Interlocks with Drunk Drivers," NATIONAL SOCIAL SCIENCE JOURNAL, Vol. 6, No. 1., 1992-93 Winter/Spring
16. Neithercutt, M.G., and P.L. Zajac, editors, "Crime Prevention and Control," Reader, Department of Criminal Justice Administration, California State University, Hayward, 1994.
17. Zajac, Patricia L., "D.N.A. and Criminal Investigation," A MATTER OF JUSTICE, The Criminal Justice Club Newsletter, California State University, Hayward, Vol. 2, No. 2, Spring, 1994.
18. Neithercutt, M.G., and Patricia Zajac, "Physical Conditions and Prisoner Deaths: A Clinical Report," JOURNAL OF OFFENDER REHABILITATION, Vol. 22, No. 1/2, 1995.
19. Neithercutt, M.G., and Patricia L. Zajac, "A Week in Review: The Police at Work," NATIONAL SOCIAL SCIENCE PERSPECTIVES JOURNAL, Proceedings of the April 1994 National Social Science Association, Las Vegas Conference, Vol. 5, No. 2, Fall 1995.
20. Zajac, Patricia L., "Can Technology Be Used To Intervene In Behavior In A Human Factors Engineering Approach To Drunk Driving Deterrence?" Doctoral Dissertation, University of Southern California, Los Angeles, August, 1996.
21. Zajac, Patricia L., "Operant Conditioning and Behavior Modification Theory," Section VII, pp. 1-8; "The Medical Treatment Model," Section XIII, pp. 6-13; "Ignition Interlocks for Drinking Drivers," Section XV, pp. 1-13, in ANTHOLOGY: COMMUNITY BASED CORRECTIONS, M.G. Neithercutt, B.G. Carmichael, eds., California State University, Hayward, 1996.
22. Zajac, Patricia L., and M.G. Neithercutt, "Forensic Laboratory Conditions: Public Relations or Systemic Failings?" Proceedings of the National Social Sciences Association, Vol. 13, # 3, April, 1998.
23. Zajac, P.L., "Forensic Laboratory Conditions," and "A Week in Review: The Police at Work," in READINGS: CRIME PREVENTION AND CONTROL, 1999, M.G. Neithercutt, editor.

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24. Zajac, Patricia L., "Operant Conditioning and Behavior Modification Theory," Section VII, "Contract Living Arrangements," pp. 1-7.
"The Medical Treatment Model," Section XIII, pp. 5-12;
"Ignition Interlocks for Drinking Drivers," Section XV, "Furloughs; Education, Work, Etc." pp. 1-13. In ANTHOLOGY: COMMUNITY BASED CORRECTIONS, 2nd Edition, M.G. Neithercutt, B.G. Carmichael, eds., California State University, Hayward, 2001.
25. Zajac, Patricia L., COMPARATIVE PHYSICAL EVIDENCE AND ITS EVALUATION Course Reader, Fall 2001, revised 2002, 2003, 2004, 2005, 2006, 2007, 2008.
26. Zajac, Patricia L., and M.G. Neithercutt, "Forensics Underpinning Conviction Errors: 'Science' or Charlatany?" National Social Science Association, in progress.

003386

REVIEWER FOR PUBLICATIONS (BOOKS AND JOURNAL ARTICLES)

12/17/1996 "Sex and the Federal Law: Symbolic Measures to Limit Sexual Behavior,"
for CRIMINAL JUSTICE POLICY REVIEW

1/13/1997 "Criminal Justice," text book review for ADDISON, WESLEY, LONGMAN
publishers.

1/17/1997 "Fundamental Principles of Forensic Science," review of book for CRC
Press,

4/9/1997 Review of "The Effects of Three Rape Educative Interventions on Attitudes
Toward Rape," for CRIMINAL JUSTICE POLICY REVIEW.

5/26/1998 "The Case of Leroy Hendricks," for CRIMINAL JUSTICE POLICY
REVIEW.

3/31/1999 "Elements of Criminal Justice," by Inciardi, for Harcourt Brace Publishers.

4/14/1999 Survey for "Technical Working Group for Fire and Explosives."

003387

Exhibit EE-2

Bench Notes

003388

APPENDIX II-Affidavit of Dr. Patricia Zajac

003389

105 (Rev. 1-14-87)

Balew samples collected
by K.B. Channell 5/7/93
8:00 AM M.E. SECTION.

Semen Examination

Victim: Christopher Byers
(MEA 329-93)

Lab No.	93-05716
Contributor	West Memphis P.D.
Date	5-7-93

Specimen	Acid Phos.	Fluorance Crystals	Sperm Cells	p30	Groupings		Remarks
					ABH	Enzymes	
21 Oral Smear Slides x2			—				TAK+
Oral Swabs x3			—	—			
22 Rectal Smear Slides x2			—				None
Rectal Swabs x3			—	—			
23 Nasal Smear Slides x2			—				
Nasal Swabs			—	—			
24 Penile Slide			—				None
Penile Swabs			—	—			

FEU/DOJ

003390

Semen Examination

						Lab No.	Contributor	Date
						93-05716	W. Memphis P.D.	5-11-93
Specimen	Acid Phos.	Florence Crystals	Sperm Cells	p30	Groupings		Remarks	
					ABH	Enzymes		
25 WALLET		NOV					* SEE blood sheet for description.	
							muddy	
26 Blue Jeans							LASER used -	
back ② 15	-						PANTS turned inside out - also.	
Front ② 25	Very Light +		-	+	(False Positive Results)			
27 Tennis shoe		NOV						
28 SHIRT							Shirt is muddy LASER used	
(inside short pant) 15	-							
(Left front pocket) 25	-							
(inside neck) 35	-							
29 T-shirt							LASER used	
(Front) 15	-							
30 Blue Pants								
Left thigh 15	+	Light	-	+	* PBOCD			
Right thigh 25	+	Light	-	+	Are False			
					Positives →			
					SDC actual			
					PC, PC			

REU/DOJ

003391

Semen Examination

Lab No.	93-05716
Contributor	W. Memphis P.D.
Date	5-12-93

Specimen	Acid Phos.	Florence Crystals	Sperm Cells	p30	Groupings		Remarks
					ABH	Enzymes	
Q11 Tennis shoe		'NOV'					
Q12 Cap		'NOV'					
Q13 Tennis shoe		'NOV'					
							5-18-93
Q29 Sock							Yellowish stain noted
(Ankle area) 15	—						
Q30 Undershirt							Laser used
(Front pants) 15	—						
(Inside pants) 20	—						
Q32 T-shirt							Shirt is dry & moldy - specimen to be turned over to CDC
Front shirt area 15	—						

003392

FALDO

ADD 1846

Lab No.	93-05717/05716
Contributor	W. Memphis P.A.
Date	5-11-93

[illegible]

REVIEWS

ADD 1847

Items: $Q_5, Q_6 + Q_7$

BLOOD EXAMINATION

Specimen	Pheno.	Hemo.	Anti-H	Blut.	Crust.	Enzymes	Remarks
5 Wallet, blue velcro 'BSA'							Evidence Q5 and Q6 packaged in brown paper bag w/fiber tape seal w/INITIALS ? on tape
Misc. pictures: + Boy Scout ID etc. 'Michael Moore'							Fiber Tape seal w/LS on tape; Clear Tape seal w/ABR on tape, 'E-7 Blue Jeans + Blue wallet CF93-05-0666 ABR 250 5-6-93'
Re inside wallet							
(E-7)							
6 Blue Jeans Re on front (R) pocket							Sealed w/above. Jeans are dirty - soil + mud → pants are damp (12) back (R) side (23) front (R) leg
(E-8)							
7 Tennis shoe, D black w/blue ET inside '(Cuba Trail) Gear'							Packaged in brown paper bag w/fiber tape seal w/LS on tape; Fiber tape seal w/INITIALS; Clear tape seal w/ABR on tape 'E-8 (1) Black Tennis shoe purple interior CF93-05-0666 ABR 250 5-6-93'
No shoe string							
Tongue ID							
inside heel ID							
on inside tongue							

100

FBI/DOJ

003395

ADD 1848

Below Items Q8
are packaged separately then
taken in (brown Royal) bag
(fiber tape seal
w/LS on tape)

BLOOD EXAMINATION

Specimen	Photo.	Hemo.	Anti-H	Elut.	Crust	Enzymes	Remarks
(E-1)							
28 short, blue short sleeve			NOVN				Packaged in brown paper bag w/fiber tape seal w/LS on tape, fiber tape seal w/SH on tape, clear tape seal w/ABR on tape.
(Boy Scouts of America) 15 on top in neck							(E-1) Blue Boy Scout shirt CF 93-05-0666 ABR 250 5-6-93
(E-2)							
19 T-shirt short sleeve w/polkadots white (14 small front)							Packaged in brown paper bag w/fiber tape seal w/SH + LS on tape. Clear tape seal w/ABR on tape.
(E-3)							(E-2) white polka-dot shirt CF 93-05-0666 ABR 250 5-6-93 shirt dirty + old knot.
110 PANTS, blue 'Gitanos' 16 in waist			NOVN				Packaged in brown paper bag w/fiber tape seal w/SH + LS on tape, clear tape seal w/ABR on tape.
							(E-3) Pair of Blue pants CF 93-05-0666 ABR 250 5-6-93 Pants are very dirty.

Lab No.

93-05716

Contributor

W. Memphis P.D.

Date

5-12-93

Remarks

100

ENCLOSURE

003396

BLOOD EXAMINATION

Specimen	Pheno.	Hemo.	Anti-H	Eut.	Crust	Enzymes	Remarks
(E-4) 11 Tennis Shoe, ② Feet white 'Franklin' no shoe string							Lab No. 93-05716 Contributor W Memphis P.D. Date 5-12-93 Packaged in brown paper bag w/ fiber tape seal w/ JS + LS on tape. Clear Tape seal w/ ABR on tape. E-4 (1) white Tennis shoe CF 93-05-0666 ABR 250 5-6-93
(E-5) 12 Cap, bag Scout blue/yellow							Packaged in brown paper bag w/ fiber tape seal w/ JS + LS on tape. Clear Tape seal w/ ABR. E-5 Blue/yellow Cap Scout Cap CF 93-05-0666 ABR 250 5-6-93
(E-6) 13 Tennis Shoe black w/ purple 'CUBA' w/ shoe string							Brown paper bag w/ fiber tape seal w/ JS + LS on tape. Clear Tape seal w/ ABR. E-6 (1) Black Tennis shoe purple interior CF 93-05-0666 ABR 250 5-6-93
A/S yellow envelope, (received from Packard)							

699

FBI/DOJ

003397

BLOOD EXAMINATION

Lab No.	93-05716
Contributor	W. Memphis P.D.
Date	5-12-93

Specimen	Pheno.	Hemo.	Anti-H	Elut.	Crust	Enzymes	Remarks
114 Wooden Stick (E.V.)	—						Wrapped in brown paper w/white ev. tape seal w/ABR on tape, Fiber Tag seal w/LS on tape. Property returned Tag Attached 93-05-0964.
115 T-Shirt, 'Share Club' blue + green stripes w/pink or color	—	—					Photographed in brown paper paper bag w/white ev. tape seal w/ABR on tape, Fiber Tag seal w/LS on tape. (E.V.) Clothing Item (1) Pair Blue Jeans (1) Stripped shirt Retrieved from Gary Chadwick's Transient on 5-7-93. CF 93-05-0666 Triple Homicide ABR 250 5-7-93
116 Blue Jeans 'Rustler' H.M. WASH	+	—					Stains noted on both leg fronts, thigh area.

1.00

FBI/DOJ

003398

Case number

Analyst

Date

P 30 93-057116 Q10^{1C} P 30 SEMEAL P 30 _____
P 30 " Q10²⁵ P 30 _____ P 30 _____
P 30 " Q10¹⁵ P 30 _____ P 30 _____
P 30 " Q6²⁵ P 30 _____ P 30 _____
P 30 " Q6¹⁰ P 30 _____ P 30 _____
P 30 93-05547 Q1 P 30 _____ P 30 _____
P 30 " Q2 P 30 _____ P 30 _____
P 30 BLK P 30 _____ P 30 _____

120 Volts

22 Milliamps

30 min.
Time

003399

Case number

K.B. Channell
Analyst

6-9-93
Date

P 30 <i>93-06822 Q1</i> ¹³	P 30 <i>BLIS</i>	P 30 _____
P 30 <i>" Q1</i> ¹²	P 30 <i>SEMFU</i>	P 30 _____
P 30 <i>Mud/control</i>	P 30 _____	P 30 _____
P 30 <i>93-07118 Q1</i>	P 30 _____	P 30 _____
P 30 <i>" Q2</i>	P 30 _____	P 30 _____
P 30 <i>" Q3</i>	P 30 _____	P 30 _____
P 30 <i>8230 Q10</i> ²³	P 30 _____	P 30 _____
P 30 <i>" Q10</i> ²⁵ <i>control</i>	P 30 _____	P 30 _____

120 Volts *18* Amps *30* ^{hr} Time

003400

James Wells (Genetic Design)
1-800-633-9913
X2005

State Crime Laboratory
Telephone Conversation Record

Date: 5-18-93

Time: 8:00 AM

Caller: John Rader

Agency: Genetic Design

Agency Phone Number: 1-800-247-9540

Crime Lab Case Number: 93-05716

Conversation Notes:

Blood from Victim (+3)
Blood from suspect: Echols + Annan (+2)
Q sample (+2)

Send cover letter w/ info
on case (limited).

1 wk or 10 days if promising
results.

John Rader will fax info and
call me when sample received.
JK

6/23/93 9:25 John Rader -
Ligatures - No results - no implication
Tissues on knife - " " "

003401

MAY 19, 1993

Genetic Design, Inc
7017 Albert Pick Rd.
Greensboro, NC 27409

~~CONFIDENTIAL~~
RE: DNA Analysis

The following samples have been requested for possible DNA analysis by Inspector Gitchell, West Memphis Police Department. (501) 732-7555

Agency case #: 93-05-0006

Serology case #: 93-05716

Type of offense: Triple Homicide

VICTIMS: Christopher Byers w/m DOB: 6-23-84

James Michael Moore w/m DOB: 7-27-84

Steve Branch w/m DOB: 11-26-81

SUSPECTS: Damien Wayne Echols w/m DOB: 12-11-74

Richard G. Cummings w/m DOB: 3-6-70

003402

Enclosed are the following items:

K₁ Blood sample From James M. Moore
K₁ Blood " " Christopher Byers
K₁ Blood " " Steve Branch
K₂ Blood " " Damien W. Echols
K₄ Blood " " Richard Cummings

Q6 (25) Cuttings From blue jeans - positive P30

Q10 (15) Cuttings From blue jeans - positive P30

Q37 possible Tissue recovered From Knife

Q38 possible Tissue recovered From Ligature
From Christopher Byers

Q39 Possible Tissue recovered From Ligature
From James Michael Moore

James M. Moore II, Analyst
(501) 227-5747

003403

State Crime Laboratory
Telephone Conversation Record

Date: 8-11-93

Time: 9:40 AM

Caller: Det Ridge

Agency: W. Memphis PD

Agency Phone Number:

Crime Lab Case Number: Triple homicide case (Kermits)

Conversation Notes: * 'Genetic Design' re DNA analysis 2; stage -
Should 'For. Sci. Assoc.' re examine items? 150 items;
HLA DQ X

Were samples after search warrant found to have blood,
biological material or anything?

Is there any reason to do DNA on any post search warrant
collected samples?

W. Memphis to obtain samples from other
suspects; Court order exists for sampling.

Advised Det Ridge that if 'Genetic Design' did
PCR analysis on the samples and did not have
enough sample to yield a result, then another
testing lab probably would not have any better results.

Advised him to talk to Kermit to determine
the need for collecting samples from other
suspects.

EV

Q125 885

003404

State Crime Laboratory
Telephone Conversation Record

Date: 10-11-93

Time: 10:30

Caller: Det. Ridge

Agency: W. Memphis P.D.

Agency Phone Number: _____

Crime Lab Case Number: 93-05716

Conversation Notes: _____

Spoke w/ Det. Ridge about
samples sent to Amstar Design. I told
him that samples could be submitted
to other lab but in my opinion
would not be worth while. If
Amstar design could not obtain
results via PCR, the chance of
other lab obtaining results would
be very negligible.

I told him that I had one
stain from Mitchell shirt (Q85) which
probably would not yield results but
I would send it off.

Th

003405

ARKANSAS STATE CRIME LABORATORY



sent 5/19/93
to

May 19, 1993

Genetic Design, Inc.
7017 Albert Pick Road
Greensboro, N.C. 27409

RE: DNA Analysis

The following samples have been requested for possible DNA analysis by
Inspector Gitcheell, West Memphis (AR) Police Department (501)732-7555:

Agency Case #: 93-05-0666
Serology Case #'s: 93-05716/93-05717/93-05718
Type of Offense: Triple Homicide
Victim's: Christopher Byers, w/m, DOB: 6-23-84
James Michael Moore, w/m, DOB: 7-27-84
Steve Branch, w/m, DOB: 11-26-84

Suspect's: Damien Wayne Echols, w/m, DOB: 12-11-74
Richard G. Cummings, w/m, DOB: 3-6-70

Enclosed are the following items:

- K1 Blood sample from James M. Moore
- K1 Blood sample from Christopher Byers
- K1 Blood sample from Steve Branch
- K2 Blood sample from Damien W. Echols
- K4 Blood sample from Richard Cummings

- Q6(2S) Cuttings from blue jeans: questioned stain } 2. poss. Battered in nature
- Q10(1S) Cuttings from blue jeans: questioned stain }
- Q37 Possible tissue recovered from knife No product
- Q4 Possible tissue recovered from ligature from Christopher Byers } NO reactions
- Q39 Possible tissue recovered from ligature from James Michael Moore } yet more poss. Run. lat

Kermit B. Channell II
Kermit B. Channell II, Serologist

KBC:11

#3 Natural Resources Drive, P.O. Box 5274, Little Rock, Arkansas 72215
(501) 227-5747 • FAX: (501) 227-0713

003406

ADD 1859

STATE CRIME LABORATORY

P.O. BOX 5274
Number 3 Natural Resources Drive
Little Rock, Arkansas 72215

Laboratory Services
227-5747

REPORT OF LABORATORY ANALYSIS

Medical Examiner
227-6936

Investigating Office/Agency/Address

Det. Bryan Ridge
West Memphis Police Department
100 Court Street
West Memphis, AR 72301

Laboratory Case Number: 93-05716

Page 1 of 4

Date Received in Lab: 05/07/93

How Evidence Received: H C Masengale

Agency Case Number: 93-05-0666

Suspect(s):

Damien Wayne Echols
Michael Wayne Hutchenson
Kenneth Cagle
Richard Gordon Cummings Jr.
Steve Menard
John Mark Byers
Todd Moore
Christopher Morgan

Victim(s):

James Michael Moore

Date of Report: 05/01/93

EVIDENCE SUBMITTED BY MEDICAL EXAMINER'S OFFICE:

- Q1 Blood sample from James Michael Moore (ME 329-93)
- Q2 Oral swabs and smear slides — Blood, not further characterized
- Q3 Rectal swabs and smear slides
- Q4 Nasal swabs and smear slides — Blood, " " "
- Q5 Penile swabs and smear slides

EVIDENCE SUBMITTED BY WEST MEMPHIS POLICE DEPARTMENT:

- Q6 Wallet (E-7)✓
- Q7 Bluejeans (E-7)✓
- Q8 Tennis shoe, right (E-8)✓
- Q9 Shirt (E-1)✓
- Q10 T-shirt (E-2)✓
- Q11 Pants (E-3)✓
- Q12 Tennis shoe, right (E-4)✓
- Q13 Boy scout cap (E-5)✓
- Q14 Tennis shoe, left (E-6)✓
- Q15 Wooden stick (E-17)✓
- Q16 T-shirt (E-1: Gary Chadwick)✓
- Q17 Bluejeans (E-1: Gary Chadwick)✓
- Q18 T-shirt (E-1: Johnny Witner)✓
- Q19 Pants (E-1: Johnny Witner)✓
- Q20 Hook (E-19)✓
- Q21 Rope (E-19)✓

MISCELLANEOUS CLOTHING (E-1):✓

- Q22 Blue jeans
- Q23 Shirt
- Q24 Socks
- Q25 Plastic bag

003407

STATE CRIME LABORATORY

P.O. BOX 5274
Number 3 Natural Resources Drive
Little Rock, Arkansas 72215

Laboratory Services
227-5747

REPORT OF LABORATORY ANALYSIS

Medical Examiner
227-5036

Investigating Officer/Agency/Address

Det. Bryan Ridge
West Memphis Police Department
100 Court Street
West Memphis, AR 72301

Laboratory Case Number: 93-05716

Page 2 of 4

Date Received in Lab: 05/07/93

How Evidence Received: H C Masengale

Agency Case Number: 93-05-0666

Suspect(s)

Damien Wayne Echols
Michael Wayne Hutchenson
Kenneth Cagle
Richard Gordon Cummings Jr.
Steve Menard
John Mark Byers
Todd Moore
Christopher Morgan

Victim(s)

James Michael Moore

Date of Report: 06/01/93

- Q6 Knife and wooden scabbard (E-23)✓
- Q7 Ice axe (E-24)✓
- Q28 Tennis shoe, right (E-12)✓
- Q29 Sock (E-12)✓
- Q30 Underwear (E-10)✓
- Q31 Tennis shoe, right (E-11)✓
- Q32 T-shirt (E-9)✓
- Q33 Tennis shoe, left (E-14)✓
- Q34 Blue jeans (E-13)✓

ITEMS FROM RICHARD CUMMINGS

- Q35 Hammer (E-31)✓
- Q36 Knife (E-26)✓
- Q37 Knife (E-27)✓
- Q38 Hammer (E-29)✓
- Q40 Hammer (E-30)✓
- Q41 Knife (E-28)✓
- Q42 Tire Billy (E-25)✓
- Q39 Ligature - shoe string (NE 329-93)
- Q43 Knife (E-57)✓
- Q44 Knife (E-58)✓
- Q45 Knife (E-59)✓
- Q46 Hammer (E-41)✓
- Q47 Metal balls (E-41)✓
- Q48 Knife (E-41)✓
- Q49 Wire (E-49)✓

MS FROM STEVE MENARD (E-50)

- Q50 Socks✓
- Q51 Socks✓
- Q52 Shirt✓
- Q53 Shoe, right✓
- Q54 Shoe, left✓

003408

ADD 1861

STATE CRIME LABORATORY

P.O. BOX 5274
Number 3 Natural Resources Drive
Little Rock, Arkansas 72215

Laboratory Services
227-5747

REPORT OF LABORATORY ANALYSIS

Medical Examiner
227-5936

Investigating Officer/Agency/Address

Det. Bryan Ridge
West Memphis Police Department
100 Court Street
West Memphis, AR 72301

Laboratory Case Number: 93-05716

Page 3 of 4

Date Received in Lab: 05/07/93

How Evidence Received: H C Masengale

Agency Case Number: 93-05-0666

Suspect(s):

Damien Wayne Echols
Michael Wayne Hutchenson
Kenneth Cagle
Richard Gordon Cummings Jr.
Steve Manard
John Mark Byers
Todd Moore
Christopher Morgan

Victim(s):

James Michael Moore

Date of Report: 06/01/93

SPECT SAMPLES

- K2 Blood sample from Damien Echols (E-22)✓
- K3 Saliva sample from Damien Echols (E-22)✓
- K4 Blood sample from Richard Cummings (E-33)✓
- K5 Saliva sample from Richard Cummings (E-33)✓
- K6 Blood sample from Steven Skaggs (E-38)✓
- K7 Saliva sample from Steven Skaggs (E-38)✓
- K8 Blood sample from Thomas Polletta (E-36)✓
- K9 Saliva sample from Thomas Polletta (E-36)✓
- K10 Blood sample from Tim Dodson (E-35)✓
- K11 Saliva sample from Tim Dodson (E-35)✓
- K12 Blood sample from William Welch (E-44)✓
- K13 Saliva sample from William Welch (E-44)✓
- K14 Blood sample from Robert Deangelo (E-46)✓
- K15 Saliva sample from Robert Deangelo (E-46)✓
- K16 Blood sample from Robert Burch (E-37)✓
- K17 Saliva sample from Robert Burch (E-37)✓
- K18 Blood sample from Daniel LeFlier (E-43)✓
- K19 Saliva sample from Daniel LeFlier (E-43)✓
- K20 Blood sample from Tracy Laxton (E-45)✓
- K21 Saliva sample from Tracy Laxton (E-45)✓
- K22 Blood sample from James Martin (E-56)✓
- K23 Blood sample from Anthony Barnes (E-50)✓
- K24 Blood sample from Lance Renshaw (E-55)✓
- Blood sample from David Looney (E-54)✓
- Blood sample from Joe Gooch (E-52)✓
- K27 Blood sample from Michael Headlee (E-53)✓
- K28 Blood sample from Charles Morton (E-51)✓
- K29 Blood sample from Thomas Holland (E-61)✓
- K30 Saliva sample from Thomas Holland (E-61)✓
- K31 Blood sample from Christopher Morgan (E-62)✓

003409

STATE CRIME LABORATORY

P.O. BOX 5274
Number 3 Natural Resources Drive
Little Rock, Arkansas 72215

Laboratory Services
227-5747

REPORT OF LABORATORY ANALYSIS

Medical Examiner
227-5966

Investigating Officer/Agency/Address

Laboratory Case Number: 93-05716

Page 4 of 4

Det. Bryan Ridge
West Memphis Police Department
100 Court Street
West Memphis, AR 72301

Date Received in Lab: 05/07/93

How Evidence Received: H C Masengale

Agency Case Number: 93-05-0666

Suspect(s):
Damien Wayne Echols
Michael Wayne Hutchenson
Kenneth Cagle
Richard Gordon Cummings Jr.
Steve Menard
John Mark Byers
Todd Moore
Christopher Morgan

Victim(s):
James Michael Moore

Date of Report: 06/01/93

SUSPECT SAMPLES:

- Q32 Saliva sample from Christopher Morgan (E-62) ✓
- Q3 Blood sample from Steve Menard (E-55) ✓
- Q4 Blood sample from John Byers (E-57) ✓
- K35 Blood sample from Roy Todd Moore (E-59) ✓
- K36 Blood sample from L. G. Hollingsworth (E-65) ✓
- K37 Blood sample from Michael Leiter (E-67) ✓
- K38 Blood sample from Charles Craig (E-69) ✓

RESULTS OF EXAMINATION:

Human blood was identified on Q52. Blood, too limited in quantity for further characterization, was identified on Q44. Blood, not further characterized, was identified on Q1 and Q3. No blood was found on any other questioned items.

Tissue was recovered from Q37 and Q39.

No semen was found on any items.

Samples have been retained.

Kermit B. Channel II
Kermit B. Channel II, Serologist

KBC/jl

003410



7017 ALBERT PICK ROAD
GREENSBORO, NC 27409-6454

FORENSIC CASE REPORT

July 13, 1993

Kermit B. Channell, II
Serologist
Arkansas State Crime Laboratory
#3 Natural Resources Drive
Little Rock, AR 72215

On May 24, 1993, our laboratory received from you the following ten (10) items of evidence:

1. K1 Blood sample from James M. Moore.
2. K1 Blood sample from Christopher Byers.
3. K1 Blood sample from Steve Branch.
4. K2 Blood sample from Damien W. Echols.
5. K4 Blood sample from Richard Cummings.
6. Q6(2S) Cuttings from blue jeans: questioned stain.
7. Q10(1S) Cuttings from blue jeans: questioned stain.
8. Q37 Possible tissue recovered from knife.
9. Q4 Possible tissue recovered from ligature from Christopher Byers.
10. Q39 Possible tissue recovered from ligature from James Michael Moore.

On June 7, 1993, we received the following three (3) items of evidence for comparison:

1. K33 Blood sample from Steve Menard.
2. Q52(1B) Human blood recovered from shirt.
3. Q52(2B) Human blood recovered from shirt.

As requested, all thirteen (13) items of evidence were analyzed using HLA DQ α PCR DNA analysis. All PCR analysis was performed in duplicate with both positive and negative controls incorporated into the procedure. Human quantitation blots failed to detect the presence of human DNA in items Q37, Q4, and Q39. DNA isolated from the blue jeans (Items Q6 and Q10) could not be amplified due to inhibition. The results of the analysis are shown in Attachment #1. The HLA DQ α type 1.1, 3 obtained from the two cuttings from the shirt (Items Q52[1B] and Q52[2B]) is consistent with the type obtained from Steve Menard and occur in 2.7% of the North American Black population and 5.3% of the North American Caucasian population.

Sincerely,

GENETIC DESIGN, INC.

Michael DeGuglielmo
Director, Forensic Analysis

Attachment #1

Luci A. Garbouse
Prof. Commission Expires
8-12-97

003411

5/10

ATTACHMENT #1

DNA Probe/Locus	Item K1: James M. Moore	Item K1: Christopher Byers	Item K1: Steve Branch	Item K2: Damien W. Echols	Item K4: Richard Cummings	Item K33: Steve Menard
	4, 4	1.1, 4	1.2, 4	2, 3	2, 4	1.1, 3
DNA Probe/Locus	Item Q6(2S): Cuttings from Blue Jeans	Item Q10(1S): Cuttings from Blue Jeans	Item Q37: Tissue from Knife	Item Q4: Tissue from Ligature from Christopher Byers	Item Q9: Tissue from Ligature from James M. Moore	Item Q52(1B): Human blood from Shirt
	No Result	No Result	No DNA Detected	No DNA Detected	1.1, 3	1.1, 3
HLA DQα						

003412