

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.

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

1 _____

2 _____

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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.)

[Signature]
Signature of Notary Public



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