

STATEMENT OF QUALIFICATIONS

(Use additional sheets if necessary)

Name of Lab: NCSBI Crime Laboratory (Raleigh) **Date:** November 25, 2002

Name: Brenda K. Bissette **Job Title:** Forensic Molecular Geneticist II

Discipline(s): Indicate all areas in which you do casework.

- | | |
|--|---|
| <input type="checkbox"/> Controlled Substances | <input checked="" type="checkbox"/> DNA |
| <input type="checkbox"/> Toxicology | <input type="checkbox"/> Firearms/Toolmarks |
| <input type="checkbox"/> Trace Evidence | <input type="checkbox"/> Questioned Documents |
| <input checked="" type="checkbox"/> Serology | <input type="checkbox"/> Latent Prints |

Education: List all higher academic institutions attended.

Institution	Dates Attended	Major	Degree Completed
UNC - Greensboro	1970-1973	Medical Technician	B.S.M.T.
UNC - Chapel Hill	1973-1974	Medical Technician	B.S.M.T.
NC State University	1990	Biochemistry	561- 3 semester hours
NC State University	1992	Genetics	501,502- 2 semester hours
NC State University	1996	Population genetics	minicourse

NC State University	1996	Population genetics	minicourse
Training			

Other Training: List continuing education, workshops, in-service and other formal training received.

See Attached SBI Transcript

Courtroom Experience: List the discipline(s) in which you have qualified to testify as an expert witness and indicate over what period of time and approximately how many times you have testified in each.

Forensic Serology - 220 times
STR - 75-100 times (Approximately 20 times per year)

Professional Affiliations: List any professional organizations of which you are or have been a member. Indicate any offices or other positions held and the date(s) of these activities.

American Society of Medical Technology
American Society of Microbiology
Southern Association of Forensic Scientists
American Society of Clinical Pathology

Employment History: List all scientific or technical positions held, particularly those related to forensic science. List current position first. Give a brief summary of principal duties and tenure in each position.

Job Title: Forensic Molecular Geneticist II Employer: NCSBI Crime Laboratory

Principal Duties: Analysis of blood and body fluid evidence in the lab and at crime scenes. Perform STR DNA analysis. Testify to findings in court.

Tenure: 1979-present

Job Title: Medical Technologist Employer: NC Memorial Hospital

Principal Duties: Bacteriologist - Plant culture identity and perform sensitivity testing on pathogenic bacteria.

Tenure: 1976-1979

Job Title: Medical Technologist Employer: Duke University Medical Center

Principal Duties: Bacteriologist (see above)

Tenure: 1975-1976

Job Title: Medical Technologist Employer: NC Baptist Hospital

Principal Duties: Bacteriologist (see above)

Tenure: 1975-1975

Other Qualifications: List below and scientific publication and/or presentation you have authored or co-authored, research in which you are or have been involved, academic or other teaching positions you have held, and any other information which you consider relevant to your qualification as a forensic scientist. (Use additional sheets if necessary)

Presentation Δ SAP/VAP by Electroimmuno-diffusion@ SAFS, Raleigh, NC 1979

Presentation Δ Collection of Criminal Evidence@ NC Conference on Sexual Assault, September 14, 1983

Other Qualifications (continued)

Presentation AThe North Carolina Rape Kit Program@ Forensic Symposium on the Analysis of Sexual Assault Evidence, Quantico, Va. July 1983

Publication: ACapnocytophaga orcracae Septicemia@ Peter H. Gilligan, L. R. McCarthy and B. K. Bissette, Journal of Clinical Microbiology 1980

Publication: AProtocol for Assisting Sexual Assault Victims Recommendation to Law Enforcement Medical and Prosecutorial Professionals, NC Council on the Status of Women

Video - SBI Rape Evidence Kit - 1986-1990

STATEMENT OF QUALIFICATIONS

(Use additional sheets if necessary)

Name of Lab: NCSBI Crime Laboratory (Raleigh) **Date:** November 7, 2001

Name: A. Christopher Parker **Job Title:** Forensic Molecular Geneticist II

Discipline(s): Indicate all areas in which you do casework.

Controlled Substances

DNA

Toxicology

Firearms/Toolmarks

Trace Evidence

Questioned Documents

Serology

Latent Prints

Education: List all higher academic institutions attended.

Institution	Dates Attended	Major	Degree Completed
NC State Univ.	1990-1994	Animal Sci/Genetics	BS
NC State Univ.	1994-2000	Animal Sci/Genetics	MS

COURSE WORK FOR DNA:

Biochemistry - 451-NC State Univ.

Genetics - 411, 412- NC State Univ.

Molecular Biology/Genetics 501,502,503,505,506, 560 - NC State Univ.

Statistics - 311, 511-NC State Univ

Population Genetics 504 - NC State Univ.

Other Training: List continuing education, workshops, in-service and other formal training received.
Validation of PowerPlex 1.1 STR system
FBI STR Project Analyst
Bode Technology Group - FMBIO Users Group Meeting
See attached SBI transcript

Courtroom Experience: List the discipline(s) in which you have qualified to testify as an expert witness and indicate over what period of time and approximately how many times you have testified in each.

Forensic DNA Analysis - approximately 35 times since 1999

Professional Affiliations: List any professional organizations of which you are or have been a member. Indicate any offices or other positions held and the date(s) of these activities.

None

Employment History: List all scientific or technical positions held, particularly those related to forensic science. List current position first. Give a brief summary of principal duties and tenure in each position.

Job Title: Molecular Geneticist II Employer: NCSBI Crime Laboratory

Principal Duties: STR DNA Testing of evidentiary material. Testify to findings in court.

Tenure: February 1, 1998 - Present

Job Title: Research Chemist I Employer: NCSBI Crime Laboratory

Principal Duties: Validation of PowerPlex STR typing systems and doing the research necessary for the FBI STR project. Research and development work as needed in the Section.

Tenure: Jan. 2, 1997 - Jan. 31, 1998

Job Title: Graduate Teaching Assistant Employer: NC State Univ.

Principal Duties: Teaching laboratory courses in Anatomy and Physiology and Genetics.

Tenure: 1994-1996

Other Qualifications: List below and scientific publication and/or presentation you have authored or co-authored, research in which you are or have been involved, academic or other teaching positions you have held, and any other information which you consider relevant to your qualification as a forensic scientist. (Use additional sheets if necessary)

None

STATEMENT OF QUALIFICATIONS

(Use additional sheets if necessary)

Name of Lab: NCSBI Crime Laboratory (Raleigh) **Date:** November 8, 2002

Name: David Allen Freeman **Job Title:** Forensic Molecular Geneticist II

Discipline(s): Indicate all areas in which you do casework.

- | | |
|--|---|
| <input type="checkbox"/> Controlled Substances | <input checked="" type="checkbox"/> DNA |
| <input type="checkbox"/> Toxicology | <input type="checkbox"/> Firearms/Toolmarks |
| <input type="checkbox"/> Trace Evidence | <input type="checkbox"/> Questioned Documents |
| <input type="checkbox"/> Serology | <input type="checkbox"/> Latent Prints |

Education: List all higher academic institutions attended.

Institution	Dates Attended	Major	Degree Completed
NC State University	1983-1987	Biochemistry	BS
NC State University	1987-1989	Microbiology	MS
NC State University	1989-1992	Microbiology	Ph.D.

COURSE WORK FOR DNA: (all courses taken at NC State Univ.)

Genetics 411
Biochemistry 451, 490 , 501A & B, 657
Molecular Biology and Genetics 558
Statistics 311

Other Training: List continuing education, workshops, in-service and other formal training received.

See Attached SBI Transcript

Courtroom Experience: List the discipline(s) in which you have qualified to testify as an expert witness and indicate over what period of time and approximately how many times you have testified in each.

Molecular Genetics/DNA 1998-Present 45 Courtroom Testimonies

Professional Affiliations: List any professional organizations of which you are or have been a member. Indicate any offices or other positions held and the date(s) of these activities.

American Society of Microbiology - Previous Member

Employment History: List all scientific or technical positions held, particularly those related to forensic science. List current position first. Give a brief summary of principal duties and tenure in each position.

Job Title: Forensic Molecular Geneticist II Employer: NCSBI Crime Laboratory

Principal Duties: Conduct STR based DNA testing on evidentiary samples submitted by Section analysts and testify to these results in court. Laboratory and Section Safety Officer. DNA Training Officer. DNA Technical Leader.

Tenure: Nov., 1995 to present

Job Title: Senior Scientist Employer: Amsco Scientific

Principal Duties: Validation of medical devices including experimental design, protocol, and report writing, raw data interpretation and supervision of technical support.

Tenure: Nov., 1991 to Nov., 1995

Other Qualifications: List below and scientific publication and/or presentation you have authored or co-authored, research in which you are or have been involved, academic or other teaching positions you have held, and any other information which you consider relevant to your qualification as a forensic scientist. (Use additional sheets if necessary)

Author of One Patent (Rapid Read-Out Biological Indicator)
Presentation at Fall 1995 SAFS Meeting - Validation of CTTA STR Systems
Participation in FBI STR Standardization Program
Validation of STR Loci (CTTA, PowerPlex 1.1 and PowerPlex 2.1 Systems) at NCSBI
Armed Forces DNA Identification Laboratory - training for mtDNA typing
DAB Auditor Training
Participation in Hitachi FMBIO User=s Group Meeting (1997, 1998, 1999, 2001)
NCSBI Crime Laboratory Safety Officer

Completed FBI Course on Mitochondria DNA
Presentation of DNA Technology to Various Groups (ME=s office, Universities, and
Community Colleges)
Presentation at 11th International Symposium on Human Identification (2000)

Publications

Eleni N. Levedakou,¹ Ph.D.; David A. Freeman,¹ Ph.D.; Michael J. Budzynski,¹ B.S.; Buddy E. Early,¹ B.S.; Elizabeth Amriott², B.S.; Kevin C. McElfresh³, Ph.D.; James W. Schumm³, Ph.D.; Suzanna R. Ulery³, M.S.; Dayse Silva⁴, M.S.; Amy Jo Townley⁵, B.S.; Anne Pollard⁵, B.S.; Jennifer Lewis⁵, B.S.; Jennifer Gombos⁵, B.S.; Jeff Sailus⁶, B.S.; Jeff D. Ban⁵, B.S.; Cecelia A. Crouse⁴, Ph.D.; and Mark S. Nelson¹, M.S. (2000) Allele Frequencies for Fourteen STR Loci of the PowerPlexTM 1.1 and 2.1 Multiplex Systems and Penta D Locus in Caucasians, African-Americans, Hispanics and Other Populations of the United States of America and Brazil. *J. Forensic Sci* 2001:46(3):736-761.

Eleni N. Levedakou,¹ Ph.D.; David A. Freeman,¹ Ph.D.; Michael J. Budzynski,¹ B.S.; Buddy E. Early,¹ B.S.; Amy Jo Townley,² B.S.; Anne Pollard,² B.S.; Jennifer Lewis,² B.S.; Jennifer Gombos,² B.S.; Frank Kist,³ B.S.; Mary Hockensmith,³ B.S.; Michelle Terwillinger,³ B.S.; Elizabeth Amriott⁴, B.S.; Kevin C. McElfresh⁵, Ph.D.; James W. Schumm⁵, Ph.D.; Suzanna R. Ulery⁵, M.S.; Felipe Konotop,⁶ B.S.; Tara Hockenberry,⁶ B.S.; Jeff Sailus⁷, B.S.; Cecelia A. Crouse,⁶ Ph.D.; Christine S. Tomsey,³ M.S.; Jeff D. Ban², B.S.; and Mark S. Nelson,¹ M.S. (2000) Characterization and Validation Studies of PowerPlexTM 2.1, a Nine-Locus Short Tandem Repeat (STR) Multiplex System, and Penta D Monoplex. *Journal of Forensic Sciences*, in review.

STATEMENT OF QUALIFICATIONS

(Use additional sheets if necessary)

Name of Lab: NCSBI Crime Laboratory (Raleigh) **Date:** July 18, 2003

Name: Mark T. Boodée **Job Title:** Forensic Molecular Geneticist III

Discipline(s): Indicate all areas in which you do casework.

Controlled Substances

DNA

Toxicology

Firearms/Toolmarks

Trace Evidence

Questioned Documents

Serology

Latent Prints

Education: List all higher academic institutions attended.

Institution	Dates Attended	Major	Degree Completed
University of Virginia	1982-1986	Biology	B.A.
George Washington Univ.	1986-1989	Forensic Science	M.F.S.

COURSE WORK FOR DNA:

Biochemistry 501- Univ. Of Virginia, Biochemistry 561 - NC State University
Genetics 422 - Univ. Of Virginia
Molecular Biology/Genetics 501, 502, 561 - NC State Univ.
Molecular Biology - FBI DNA school and Advanced school - offered thru Univ. Of Virginia (6 semester hours of credit)
Statistics 112 - Univ. Of Virginia,
Population Genetics for Forensic Scientists - NCSU seminar with Bruce Weir

Other Training: List continuing education, workshops, in-service and other formal training received.

See Attached SBI Transcript

Management Trg. - Supervisory Development Program - Office of State Personnel
- Administrative Officers Management Program - NC State Univ. (15 semester hrs.)
- EEO Institute
DNA Auditor Trg. - MAAFS Potomac Group Auditor Training

Courtroom Experience: List the discipline(s) in which you have qualified to testify as an expert witness and indicate over what period of time and approximately how many times you have testified in each.

Forensic DNA Analysis: 1990-present - Approximately 78 times in 44 counties

Professional Affiliations: List any professional organizations of which you are or have been a member. Indicate any offices or other positions held and the date(s) of these activities.

None

Employment History: List all scientific or technical positions held, particularly those related to forensic science. List current position first. Give a brief summary of principal duties and tenure in each position.

Job Title: Forensic Molecular Geneticist Employer: NCSBI Crime Laboratory

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Principal Duties: Team Leader for the DNA Unit, Asst. CODIS State Administrator. Perform DNA typing using STR technology on evidentiary samples submitted by the Body Fluid Unit.

Tenure: 1990-present

Job Title: Molecular Biologist

Employer: Cellmark Diagnostics

Principal Duties: Paternity and forensic analysis of DNA

Tenure: 1989-1990

Job Title: Special Review Manager

Employer: US Environmental Protection Agency

Principal Duties: Federal regulations of pesticides.

Tenure: 1986-1989

Job Title:

Employer:

Principal Duties:

Tenure:

Other Qualifications: List below and scientific publication and/or presentation you have authored or co-authored, research in which you are or have been involved, academic or other teaching positions you have held, and any other information which you consider relevant to your qualification as a forensic scientist. (Use additional sheets if necessary)

Budzynski, M.J., et al, ^ACalcium Alginate Swabs[@], *Journal of Forensic Sciences*, 37:3 p686

Nelson, M.S., et al, ^AThe Effects of Ethidium Bromide Agarose Type and DNA Concentration on the Mobility of RFLP=s use in Forensic Science[@], *Canadian Journal of Forensic Science* 23:4 p129

Nelson, MS, Benzinger, EA, Budzynski, MJ, Boodee, MT, Matthews, A, Buel, E, Schwartz, MB, von Beroldingen C, Wampler, RL, Coons, TM, Bixby, J, Frank WE, Metzger DA (1996) Validation of probe EFD52 (D17S26) for forensic DNA analysis. *Journal of Forensic Sciences* 41:557-568.

STATEMENT OF QUALIFICATIONS

(Use additional sheets if necessary)

Name of Lab: NCSBI Crime Laboratory (Raleigh) **Date:** July 15, 2003

Name: Michael J. Budzynski **Job Title:** Forensic Molecular Geneticist Supervisor

Discipline(s): Indicate all areas in which you do casework.

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|---|---|
| <input type="checkbox"/> Controlled Substances (marijuana only) | <input checked="" type="checkbox"/> DNA |
| <input type="checkbox"/> Toxicology | <input type="checkbox"/> Firearms/Toolmarks |
| <input type="checkbox"/> Trace Evidence | <input type="checkbox"/> Questioned Documents |
| <input checked="" type="checkbox"/> Serology | <input type="checkbox"/> Latent Prints |

Education: List all higher academic institutions attended.

Institution	Dates Attended	Major	Degree Completed
NC State University	1980-1985	Biochemistry	B.S.
		Zoology	B.S.

COURSE WORK FOR DNA:

Biochemistry 451, 561 - NC State Univ.

Genetics 411 - NC State Univ.

Molecular Biology/Genetics 505A, 505B - NC State Univ.

FBI DNA and Advanced DNA Schools-offered for credit thru the Univ. Of Virginia

Statistics 311 - NC State Univ.

Other Training: List continuing education, workshops, in-service and other formal training received.

See Attached SBI Training Transcript

Courtroom Experience: List the discipline(s) in which you have qualified to testify as an expert witness and indicate over what period of time and approximately how many times you have testified in each.

Forensic Serology - October, 1988 - present - 8 times
Forensic DNA typing - March, 1992 - present - 43 times

Professional Affiliations: List any professional organizations of which you are or have been a member. Indicate any offices or other positions held and the date(s) of these activities.

None

Employment History: List all scientific or technical positions held, particularly those related to forensic science. List current position first. Give a brief summary of principal duties and tenure in each position.

Job Title: Special Agent in Charge Employer: NCSBI Crime Laboratory

Principal Duties: Oversee the daily operations of the Molecular Genetics Section.

Tenure: 1985-present

Job Title: Forensic Molecular Geneticist III Employer: NCSBI Crime Laboratory

Principal Duties: Perform DNA, body fluid and marijuana analysis on evidential material. Assistant supervisor of section in charge of the body fluid unit.

Tenure: 1985-present

Job Title: Lab Technician Employer: Burroughs Wellcome

Principal Duties: Growth of cell cultures. Quantitative study of phosphorylase activity in *G.lamblia*. Synthesizing compounds through enzymatic processes.

Tenure: 6/84-12/84 & 5/85-9/85

Other Qualifications: List below and scientific publication and/or presentation you have authored or co-authored, research in which you are or have been involved, academic or other teaching positions you have held, and any other information which you consider relevant to your qualification as a forensic scientist. (Use additional sheets if necessary)

Tri-authored paper in Carolina Tips; Blood Secrets Revealed.

Performed population and validation study on ESD and Gc IEF which is now being used in the Molecular Genetics Section.

Budzynski, M.J., et al, Calcium Alginate Swabs, *Journal of Forensic Sciences*, 37:3

Nelson, M.S., et al, ¹The Effects of Ethidium Bromide Agarose Type and DNA Concentration on the Mobility of RFLP=s use in Forensic Science², *Canadian Journal of Forensic Science* 23:4 p129

Nelson, MS, Benzinger, EA, Budzynski, MJ, Boodee, MT, Matthews, A, Buel, E, Schwartz, MB, von Beroldingen C, Wampler, RL, Coons, TM, Bixby, J, Frank WE, Metzger DA (1996) Validation of probe EFD52 (D17S26) for forensic DNA analysis. *Journal of Forensic Sciences* 41:557-568.

Eleni N. Levedakou,¹ Ph.D.; David A. Freeman,¹ Ph.D.; Michael J. Budzynski,¹ B.S.; Buddy E. Early,¹ B.S.; Elizabeth Amriott², B.S.; Kevin C. McElfresh³, Ph.D.; James W. Schumm³, Ph.D.; Suzanna R. Ulery³, M.S.; Dayse Silva⁴, M.S.; Amy Jo Townley⁵, B.S.; Anne Pollard⁵, B.S.; Jennifer Lewis⁵, B.S.; Jennifer Gombos⁵, B.S.; Jeff Sailus⁶, B.S.; Jeff D. Ban⁵, B.S.; Cecelia A. Crouse⁴, Ph.D.; and Mark S. Nelson¹, M.S. (2000) Allele Frequencies for Fourteen STR Loci of the PowerPlex™ 1.1 and 2.1 Multiplex Systems and Penta D Locus in Caucasians, African-Americans, Hispanics and Other Populations of the United States of America. *Journal of Forensic Sciences*, in review.

Eleni N. Levedakou,¹ Ph.D.; David A. Freeman,¹ Ph.D.; Michael J. Budzynski,¹ B.S.; Buddy E. Early,¹ B.S.; Amy Jo Townley,² B.S.; Anne Pollard,² B.S.; Jennifer Lewis,² B.S.; Jennifer Gombos,² B.S.; Frank Kist,³ B.S.; Mary Hockensmith,³ B.S.; Michelle Terwillinger,³ B.S.; Elizabeth Amriott⁴, B.S.; Kevin C. McElfresh⁵; Ph.D.; James W. Schumm⁵, Ph.D.; Suzanna R. Ulery⁵, M.S.; Felipe Konotop,⁶ B.S.; Tara Hockenberry,⁶ B.S.; Jeff Sailus⁷, B.S.; Cecelia A. Crouse,⁶ Ph.D.; Christine S. Tomsey,³ M.S.; Jeff D. Ban², B.S.; and Mark S. Nelson,¹ M.S. (2000) Characterization and Validation Studies of PowerPlex™ 2.1, a Nine-Locus Short Tandem Repeat (STR) Multiplex System, and Penta D Monoplex. *Journal of Forensic Sciences*, in review.