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Forensic Document Analyst
Ink Dating Specialist

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Forensic Analyst & Consultant

Marco A. Scarpetta, Ph.D.
DNA Analyst and Consultant

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Laurence R. Simson, M.D.
Forensic Pathologist

Jay A. Siegel, Ph.D.
Analytical Chemist

Jason S. Harner, B.S.
Forensic Chemist

Marco A. Scarpetta, Ph.D.

DNA Analyst & Consultant

June 3, 2008

FORMAL EDUCATION

- **Ph.D. (Biochemistry)** University of Maryland, College Park, MD, 1992
- **M.Sc. (Biochemistry)** University of Maryland, College Park, MD, 1989
- **B.S. (Biochemistry)** Pennsylvania State University, State College, PA, 1986

EXPERIENCE

- **Laboratory Director (12/01-Present)**, Orchid GeneScreen East Lansing (formerly LifeCodes East Lansing)
 - Paternity Case Review
 - Expert Witness
 - Client Services
 - Train Associate Directors in above duties
- **Consultant (3/03-Present)**, Orchid Cellmark
Scarpetta Forensic Consulting (SFC) was rolled into the forensic division of Orchid; I am in essence an offsite case reviewer for Orchid Cellmark. Duties as described for SFC.
- **President (6/00-3/03)**, Scarpetta Forensic Consulting, Inc.
Privately owned venture to provide the legal community with unbiased, impartial opinions as to the content and relevance of forensic DNA reports
- **Associate Laboratory Director (6/98-12/01)**, LifeCodes East Lansing (formerly National Legal Laboratories, Inc.)
 - Paternity Case Review
 - Expert Witness
 - Client Services
 - Train Assistant Director in above duties

- **Assistant Laboratory Director (6/97-6/98)**, National Legal Laboratories, Inc.
 - Paternity Case Review
 - Research and Development of New Methods
 - Expert Witness
 - Client Services

- **Senior Forensic Serologist (1/95-6/97)**, Detroit Police Crime Laboratory.
 - Technical Manager of the DNA Unit
 - Forensic casework and expert testimony
 - Implementation of novel DNA typing techniques for use in casework and subsequent training of laboratory personnel in these methods
 - Peer review of casework reports
 - Initiation of research projects and publication of results
 - Preparation of purchase requisitions for equipment and supplies
 - Maintaining chain of custody and integrity of evidence
 - Preparation, review and administration of Quality Assurance/Quality Control Program in preparation for ASCLD Accreditation

- **Postdoctoral Research Fellow (1/92-12/94)**, for Dr. Michael Uhler.
 Dept. of Biochemistry, University of Michigan, Ann Arbor, MI. Research project involved the characterization of the isoforms of protein kinase inhibitor (PKI), a small protein effector of cAMP-dependent protein kinase (PKA). PKI was expressed in tissue culture to examine its role in modulating the activity of PKA *in vivo*. Also, the genomic structures and localization of the two PKI isoforms were studied for future use in transgenic mice.

- **Teaching Assistant (9/93 and 9/94)**, for Dr. Michael Uhler.
 Assisted in the planning and instruction of experiments designed to characterize a novel isoform of cGMP-dependent protein kinase, in a course entitled The Physician Research Training Program. This course is designed to train physicians interested in research careers in the scientific method.

- **Graduate Research Assistant (1/90-1/92)**, for Dr. William Brusilow.
 Dept. of Biochemistry, Wayne State University School of Medicine, Detroit, MI. Dissertation project studied the structure-function relationships of subunits of the proton-translocating ATPase of *E. coli*, and later involved an analysis of the energy coupling parameters of hybrid *E. coli-B. megaterium* ATPases.

- **Graduate Research Assistant (6/88-12/89)**, for Dr. William Brusilow.
 Dept. of Chemistry and Biochemistry, University of Maryland, College Park, MD. Thesis work delineated the organization and sequence of the genes of the *B. megaterium* ATPase.

- **Teaching Assistant (7/86-5/88)**
 Dept. of Chemistry and Biochemistry, University of Maryland, College Park, MD. Taught lecture and lab sections of a senior undergraduate biochemistry lab course and taught the recitation and lab sections of introductory freshman chemistry courses.

PROFESSIONAL AFFILIATIONS

- American Association for the Advancement of Science, 1992
- American Association of Blood Banks, 1999-present
- American Association of Forensic Sciences, 2003-present

ADDITIONAL TRAINING

- Forensic Amplitype PM + HLA DQA1 PCR Amplification and Typing Workshop.
- April 10-18, 1995; Perkin-Elmer Training Department, Foster City, CA.
- New Methods Forensic PCR Amplification and Typing Workshop.
- April 19-21, 1995; Perkin-Elmer Training Department, Foster City, CA.
- DNA Typing With STRs Workshop.
- May 22-23, 1995; Promega Corporation, Madison, WI.
- Statistics and Population Genetics for Forensic Science.
- June 16-18, 1996; Department of Statistics, North Carolina State University, Raleigh, NC.

ADDITIONAL QUALIFICATIONS

- Court qualified expert witness in forensics and paternity
- Over 200,000 Paternity Tests reviewed
- Laboratory Assessor with the American Association of Blood Banks
- Certified to act as Laboratory Director in Paternity/Identity Testing and DNA Testing in the State of New York
- Completed validation of D1S80 and various STR loci for casework (FBI funded)
- Validation of the Hitachi FMBIO-100 (and FMBIO-2) Imaging System for use in casework
- Validation of the QIAamp protocol in place of Chelex for genomic DNA isolation
- Consultant in Forensic DNA Analysis
- Forensic DNA databasing experience
- Obtained National Institute of Justice funding for development of DNA typing program (in conjunction with the Michigan State Police)
- Preparation and delivery of seminars to train Assistant Prosecuting Attorneys and Evidence Technicians in DNA typing principles
- Former community representative for the Michigan State University Office of Radiation, Chemical and Biological Safety. Responsible for review of Research Grant Proposals for environmental safety issues.
- Hands-on experience in: molecular cloning techniques, PCR, protein purification, DNA sequencing, phage-mediated transduction, DNase protection assays, *in situ* hybridization, SSCP typing, Southern, Western and Northern blotting, tissue culture techniques and general microbiological techniques.

PROFESSIONAL ASSOCIATIONS

- American Association for the Advancement of Science, 1992
- American Association of Blood Banks, 1999-present
- American Association of Forensic Sciences, 2003-present

AWARDS

- Graduate-Professional Scholarship, Wayne State University, 1990
- Public Health Services Biological Sciences Research Training Grant, 1992

PROFESSIONAL MEETINGS ATTENDED

- TWGDAM Meeting
- October 11, 1995; Scottsdale, AZ
- Sixth International Symposium on Human Identification.
- October 12-14, 1995; Scottsdale, AZ
- Midwestern TWGDAM Meeting
- January 18-19, 1996; Chicago, IL
- Cambridge Healthtech Institute Third Annual DNA Forensics Conference
- June 13-15, 1999; McLean, VA
- American Association of Blood Banks 52nd Annual Meeting
- November 4-6, 1999; San Francisco, CA
- American Association of Blood Banks 53rd Annual Meeting

- November 4-6, 2000; Washington, DC
- 12th International Symposium on Human Identification, Parentage Workshop
- October 9, 2001 Biloxi, MS
- AABB Annual Meeting, October 25-26, 2002 Orlando, FL
- AABB Annual Meeting, October 22-23, 2004, Baltimore, MD
- AABB Annual Meeting, October 14-15, 2005, Seattle, WA
- AABB Annual Meeting, October 20-22, 2006, Miami, FL
- AABB Annual Meeting, October 19-20, 2007, Anaheim, CA

PUBLICATIONS

- Brusilow, W.S.A., **Scarpetta, M.A.**, Hawthorne, C.A., and Clark, W.P. (1989) Organization and Sequence of the Genes Coding for the Proton-Translocating ATPase of *Bacillus megaterium*. **J. Biol. Chem.** 264, 1528-1533.
- **Scarpetta, M.A.**, Hawthorne, C.A., and Brusilow, W.S.A. (1991) Characterization of Partially Uncoupled Hybrid *Escherichia coli*-*Bacillus megaterium* F₁F₀ Proton-Translocating ATPases. **J. Biol. Chem.** 266, 18567-18572.
- **Scarpetta, M.A.** and Uhler, M.D. (1993) Evidence for Two Additional Isoforms of the Endogenous Protein Kinase Inhibitor of cAMP-Dependent Protein Kinase in Mouse. **J. Biol. Chem.** 268, 10927-10931.
- Seasholtz, A.F., Gamm, D., Ballestero, R.P., **Scarpetta, M.A.** and Uhler, M.D. (1995) Differential Expression of mRNAs for Protein Kinase Inhibitor Isoforms in Mouse Brain. **Proc. Natl. Acad. Sci. USA.** 92, 1734-1738.
- **Scarpetta, M.A.**, Uhler, M.D. and Meisler, M.H. (1997) The mouse *Prkacn2* gene encoding protein kinase A inhibitor 2 is located on proximal Chromosome 10. **Mammalian Genome** 7, 921.
- **Marco A. Scarpetta, Ph.D.** (1996) Use of SYBR Green I Stain in Place of Silver Stain for Detection of D1S80 AMP-FLPs on GeneAmp Detection Gels. **Resolutions** 11, 1-2.
- Greenspoon, S.A., **Scarpetta, M.A.**, Drayton, M., and Turek, S.A. (1998) QIAamp Spin Columns as a Method of DNA Isolation for Forensic Analysis. **J. Forensic Sci.** 43 (5), 1024-1030.
- S.A. Greenspoon, P. Lytle, S. Turek, J. Rolands, **M. Scarpetta**, and C. Carr (2000) Validation of the PowerPlex 1.1™ Loci for Use in Forensic Casework. **J. Forensic Sci.** 45 (3), 677-683.
- Duncan, George T., **Scarpetta, Marco A.**, Balamurugan, Kuppareddi, Budowle, Bruce and Tracey, Martin L. (2001) Microvariation of Rare Alleles at the Human D1S80 Locus. (Manuscript in preparation)
- Einum, David D. and **Scarpetta, M.A.** (2004) Genetic analysis of large data sets of North American Black, Caucasian and Hispanic populations at 13 CODIS STR loci. **J. Forensic Sci.** 49 (6), 1381-1385.
- Allor, Katherine, Einum, David and **Scarpetta, Marco** (2004) Identification and characterization of Variant Alleles at CODIS STR Loci. **J. Forensic Sci.** 50 (5), 1128-1133.
- **Scarpetta, M.A.** and Einum, David D. (2007) Assessing exclusionary power of a paternity test involving a pair of alleged grandparents **Transfusion** 47, 335-340.

PRESENTATIONS

- **Scarpetta, M.A.** and Brusilow, W.S.A. (1989) Organization and Sequence of the Genes Coding for the Proton-Translocating ATPase of *Bacillus megaterium*. ASBMB/ASCB Joint Meeting, San Francisco, CA.
- **Scarpetta, M.A.**, Hawthorne, C.A. and Brusilow, W.S.A. (1991) Partially Uncoupled Phenotype in Hybrid *Escherichia coli*-*Bacillus megaterium* F₁F₀ Proton-Translocating ATPases. Gordon Research Conference on Protons and Membrane Reactions, Los Angeles, CA.
- **Scarpetta, M.A.** and Brusilow, W.S.A. (1991) In vivo Hybrid ATPases: Semi-Uncoupled Phenotype of *Escherichia coli* ATPase Mutants Complemented with ATPase Genes from *Bacillus megaterium*. ASM 1991 Annual Meeting, Dallas, TX
- **Scarpetta, M.A.**, Olsen, S.R., Seasholtz, A.F. and Uhler, M.D. (1993) Cloning and Expression of Inhibitor Proteins for cAMP-Dependent Protein Kinase. ASBMB Fall Symposium on Structure and Function of Protein Kinases and Phosphatases, Keystone, CO.
- **Scarpetta, M.A.** and Turek, S.A. (1995) Validation of the AmpliFLP D1S80 PCR Amplification Kit for Casework in the Detroit Police Crime Lab. Sixth International Symposium on Human Identification, Scottsdale, AZ.
- **Scarpetta, M.A.**, Greenspoon, S.A., Drayton, M., and Turek, S.A. (1996) QIAamp Spin Columns as a Method of DNA Isolation for Forensic Analysis. Seventh International Symposium on Human Identification, Scottsdale, AZ.
- S.A. Greenspoon, P. Lytle, S. Turek, J. Rolands, **M. Scarpetta**, and C. Carr (1998) Validation of the PowerPlex™ 1.1 Loci for Use in Forensic Casework. Ninth International Symposium on Human Identification, Orlando, FL.
- **Scarpetta, M.** (2000) Genetic Testing, Genetic Privacy (Invited speaker) Michigan Family Support Council Annual Conference, Boyne City, MI.
- **Scarpetta, M.** (2001) DNA Buccal Swabs (Invited Speaker) Prosecuting Attorneys Coordinating Council Establishment of Support Conference, Thompsonville, MI.
- **Scarpetta, M.** (2001) High Throughput Paternity Testing: Challenges and Issues (Invited Speaker) 12th International Symposium on Human Identification, Parentage Workshop, Biloxi MS.
- **Scarpetta, M.** (2002) Demystifying DNA Evidence (Invited speaker) Cooley Law School, Lansing, MI.
- Gahn, L., Allen, R., and **Scarpetta, M.** (2002) "Exclusion rate comparisons in home collection and laboratory collection private paternity tests." 13th International Symposium on Human Identification.
- **Scarpetta, M.** (2003) Forensic DNA Testing (Invited Speaker) Michigan Appellate Assigned Counsel System, Lansing, MI. A series of three seminars to instruct appellate and defense attorneys in the basics of forensic DNA testing, report interpretation and related topics.
- **Scarpetta, M.** (2004) Paternity Testing 101 (Invited speaker) Prosecuting Attorney's Coordinating Council Establishment of Support Conference, Thompsonville, MI.
- **Scarpetta, M.** (2005) Forensic DNA Testing (Invited speaker) Cooley Law School, Inns of the Court, Lansing, MI.

- **Scarpetta, M.** and Einum, D.D. Derivation of the random grandparent not excluded (RGPNE) statistic (Poster presentation). 16th International Symposium on Human Identification, Grapevine TX, 2005.
- **Scarpetta, M.** and Einum, D.D. “Random grandparent not excluded” (Invited speaker). American Association of Blood Banks Annual Meeting, October 14-15, 2005, Seattle, WA
- **Scarpetta, M.** (2006) Determining Heirs Using DNA Testing (Invited speaker) Michigan Probate Judge’s Association, Boyne, MI.
- **Scarpetta, M.** (2007) Determining Paternity Using DNA Testing (Invited speaker) Prosecuting Attorney’s Coordinating Council Establishment of Support Conference, Thompsonville, MI.
- **Scarpetta, M.** (2007) Relationship Testing in Forensic Casework (Invited instructor) MAFS Conference, Traverse City, MI.