

Curriculum Vitae: David R. Foran Ph.D.

PRESENT POSITIONS

Professor and Director, Forensic Science Program
School of Criminal Justice and Department of Integrative Biology
Michigan State University
East Lansing, MI

Director, Forensic Biology Laboratory, Michigan State University
Fellow, American Academy of Forensic Sciences
Board of Directors, Amara Conservation, Ltd.
Editorial Board, Journal of Forensic Sciences
Member—NIST Forensic Science Organization of Scientific Area Committees
Court Qualified—Forensic Serology, DNA Profiling

EDUCATION

Ph.D. Molecular Genetics University of Michigan, Ann Arbor, MI, 1981–1988
B.A. Biology Kalamazoo College, Kalamazoo MI, 1977–1981

PROFESSIONAL EXPERIENCE

1979 Laboratory of Immune Diagnosis, National Cancer Institute, NIH, Bethesda, MD
1980 W. Timberlake Laboratory, Dept. of Biological Sciences, Wayne State Univ., Detroit, MI
1981–82 G. Moore Laboratory, Div. of Biological Sciences, Univ. of Michigan, Ann Arbor, MI.
1983–88 W. Brown Laboratory (Dissertation Advisor), Div. of Biological Sciences, Univ. of Michigan, Ann Arbor, MI
1988–91 Postdoctoral Fellow, Ludwig Institute for Cancer Research (Montreal Branch), Montreal, Quebec
1991–93 Postdoctoral Fellow, Dept. of Molecular Oncology, McGill Univ., Montreal, Quebec
1994–99 Research Associate, Environmental Studies Board and Department of Biology, Univ. of California at Santa Cruz, Santa Cruz, CA
2000–02 Assistant Professor of Forensic Sciences, George Washington Univ., Washington, DC

CURRENT UNIVERSITY INSTRUCTION

Forensic Serology (CJ 824; Lecture and Laboratory)
DNA Profiling (CJ 825; Lecture and Laboratory)
Survey of Forensic Science (CJ 805)
Introduction to Forensic Science (CJ 210)

PUBLICATIONS

Peer-reviewed journal articles

PJ Johnson, **DR Foran** and GP Moore. 1983 Organization and evolution of the actin gene family in sea urchins. *Molecular and Cellular Biology* 3, 1824–1833

DR Foran, PJ Johnson and GP Moore. 1985 Evolution of two actin genes in the sea urchin *Strongylocentrotus franciscanus*. *Journal of Molecular Evolution* 22, 108–116

DR Foran and WM Brown. 1988 Nucleotide sequence of the LuxA and LuxB genes of the bioluminescent marine bacterium *Vibrio fischeri*. *Nucleic Acid Research* 16, 777

DR Foran, JE Hixon and WM Brown. 1988 Comparisons of ape and human sequences that regulate mitochondrial DNA transcription and D-loop DNA synthesis. *Nucleic Acid Research* 17, 5841–5861

DR Foran. 1991 Evidence of luminous bacterial symbionts in the light organs of myctophid and stomiiform fishes. *Journal of Experimental Zoology* 259, 1–8

DR Foran and AC Peterson. 1992 Myelin acquisition in the central nervous system of the mouse revealed by an MBP-LacZ transgene. *Journal of Neuroscience* 12, 4890–4897

MA Sanjayan, KR Crooks, G. Zegers and **DR Foran**. 1996 Genetic variation and the immune response in natural populations of pocket gophers. *Conservation Biology* 10, 1519–1527

DR Foran, KR Crooks and SC Minta. 1997 Species identification from scat: An unambiguous genetic method. *Wildlife Society Bulletin* 25, 835–839

DR Foran, SC Minta and KS Heinemeyer. 1997 DNA-based analysis of hair to identify species, gender and individuals for population research and monitoring. *Wildlife Society Bulletin* 25, 840–847

R Forghani, L Garofalo, **DR Foran**, HF Farhadi, P Lepage, TJ Hudson, I Tretjakoff, P Valera and A Peterson. 2001 A distal upstream enhancer from the Myelin Basic Protein gene regulates expression in myelin-forming Schwann cells. *Journal of Neuroscience* 21, 3780–3787

KK Hildner, ME Soulé, MS Min and **DR Foran**. 2003 The relationship between genetic variability and growth rate among populations of the pocket gopher, *Thomomys bottae*. *Conservation Genetics* 4, 233–240

RE Cline, NM Laurent and **DR Foran**. 2003 The fingernails of Mary Sullivan: Developing reliable methods for selectively isolating endogenous and exogenous DNAs from evidence. *Journal of Forensic Sciences* 48, 328–333

- DR Foran** and J Starrs. 2004 In search of The Boston Strangler: Genetic evidence from Mary Sullivan's exhumation. *Medicine, Science and the Law* 44, 47–54
- EA Graffy and **DR Foran**. 2005 A simplified method for mitochondrial DNA extraction from head hair shafts. *Journal of Forensic Sciences* 50, 1119–1122
- SL Rennick, TW Fenton, and **DR Foran**. 2005 The effects of skeletal preparation techniques on DNA from human and nonhuman bone. *Journal of Forensic Sciences* 50, 1016–1019
- DR Foran**. 2006 The relative degradation of nuclear and mitochondrial DNA: An experimental approach. *Journal of Forensic Sciences* 51, 766–770
- AM Tarone and **DR Foran**. 2006 Environmental components of variation contributing to plasticity in the development rate of a Michigan population of *Lucilia sericata* (Diptera: Calliphoridae). *Journal of Medical Entomology* 43, 1023–1033
- VS Braz, DH Ubelaker and **DR Foran**. 2006 Morphological analysis of differential bone survival. *Anthropologie* 44, 123–127
- AL Barber and **DR Foran**. 2006 The utility of whole genome amplification for typing compromised forensic samples. *Journal of Forensic Sciences* 51, 1344–1349
- RL Gundry, MW Allard, TR Moretti, RL Honeycutt, MR Wilson, KL Monson and **DR Foran**. 2007 Mitochondrial DNA analysis of the domestic dog: Control region variation within and among breeds. *Journal of Forensic Sciences* 52, 562–572
- AM Tarone, KC Jennings and **DR Foran**. 2007 Aging blow flies using gene expression: A feasibility study. *Journal of Forensic Sciences* 52, 1350–1354
- MS Meyers and **DR Foran**. 2008 Spatial and temporal influences on bacterial profiling of forensic soil samples. *Journal of Forensic Sciences* 53, 652–660
- AM Tarone and **DR Foran**. 2008 Generalized additive models and *Lucilia sericata* growth: Assessing confidence intervals and error rates in forensic entomology. *Journal of Forensic Sciences* 53, 942–948
- DR Foran**, ME Gehring and SE Stallworth. 2009 The recovery and analysis of mitochondrial DNA from exploded pipe bombs. *Journal of Forensic Sciences* 54, 90–94
- LM Misner, AC Halvorson, JL Dreier, DH Ubelaker and **DR Foran**. 2009 The correlation between skeletal weathering and DNA quality and quantity. *Journal of Forensic Sciences* 54, 822–828
- KD Eilert and **DR Foran**. 2009 Polymerase resistance to PCR inhibitors in bone. *Journal of Forensic Sciences* 54, 1001–1007

EJ Lenz and **DR Foran**. 2010 Bacterial profiling of soil using genus-specific markers and multidimensional scaling. *Journal of Forensic Sciences* 55, 1437–1442

DR Foran, BE Wills, BM Kiley, CB Jackson and JH Trestrail. 2010 The conviction of Dr. Crippen: New forensic findings in a century old murder. *Journal of Forensic Sciences* 56, 233–240

AM Tarone and **DR Foran**. 2010 Gene expression during blow fly development: Improving the precision of age estimates in forensic entomology. *Journal of Forensic Sciences* 56, s112–122

CM Michaud and **DR Foran**. 2011 Simplified field preservation of tissues for subsequent DNA analysis. *Journal of Forensic Sciences* 56, 846– 852

AM Tarone, CJ Picard, C Spiegelman and **DR Foran**. 2011 Population and temperature effects on *Lucilia sericata* (Diptera: Calliphoridae) body size and minimum development time. *Journal of Medical Entomology* 48, 1062–1068

SG Hoffmann, SE Stallworth and **DR Foran**. 2012 Investigative studies into the recovery of DNA from improvised explosive device containers. *Journal of Forensic Sciences* 57, 602–609

MJ Mutolo, LL Jenny, AR Buszek, TW Fenton and **DR Foran**. 2012 Osteological and molecular identification of Brucellosis in ancient Butrint, Albania. *American Journal of Physical Anthropology* 147, 254–263

SM Thomasma and **DR Foran**. 2013 The influence of swabbing solutions on DNA recovery from touch samples. *Journal of Forensic Sciences* 58, 465–469

LM Hebda, AE Doran and **DR Foran** 2014 Collecting and Analyzing DNA evidence from fingernails: A comparative study. *Journal of Forensic Sciences* 59, 1343–1350

AE Doran and **DR Foran** 2014 Assessment and mitigation of DNA loss utilizing centrifugal filtration devices. *Forensic Science International: Genetics* 13, 187–190

AM Fazi, BM Gobeski and **DR Foran** 2014 Development of two highly sensitive forensic sex determination assays based on human DYZ1 and Alu repetitive DNA elements. *Electrophoresis* 35, 3018–3035

LM Hebda and **DR Foran** 2015 Assessing the utility of soil DNA extraction kits for increasing DNA yields and eliminating PCR inhibitors from buried skeletal remains. *Journal of Forensic Sciences* 50, 1322–1330

DR Foran, AB Fischer and ME Stoloff 2015 A comparison of mitochondrial DNA amplification strategies for species identification. *Journal of Forensic Investigation* 3, 1–7

EM Jesmok, JM Hopkins and **DR Foran** Next-Generation Sequencing of the Bacterial 16S rRNA Gene for Forensic Soil Comparison: A Feasibility Study. *Journal of Forensic Sciences* (In press)

DR Foran and RL Ray Mitochondrial DNA Profiling of Illegal Tortoiseshell Products Derived from Hawksbill Sea Turtles. *Journal of Forensic Sciences* (In press)

Book chapters

EA Graffy and DR Foran 2005 Hair—DNA forensic analysis, in R Byard, C Henderson and T Corey eds. *Encyclopedia of Forensic and Legal Medicine*, Elsevier

L Bejko, TW Fenton and DR Foran 2006 Recent advances in Albanian mortuary archaeology, human osteology and ancient DNA, in L Bejko and R Hodges eds. *New Directions in Albanian Archaeology*. International Centre for Albanian Archaeology Monograph Series No. 1, Tirana, Albania. 309–322.

AL Barber and DR Foran 2008 DNA isolation methods, in A Embar-Seddon and A Pass eds. *Forensic Science (Encyclopedia)*, Salem Press. 373–376.

BM Kiley and DR Foran 2008 DNA extraction from hair, body fluids, and tissues, in A Embar-Seddon and A Pass eds. *Forensic Science (Encyclopedia)*, Salem Press. 369–371.

EJ Lenz and DR Foran 2008 CODIS, in A Embar-Seddon and A Pass eds. *Forensic Science (Encyclopedia)*, Salem Press. 251–254.

MJ Mutolo and DR Foran 2008 Mitochondrial DNA analysis and typing, in A Embar-Seddon and A Pass eds. *Forensic Science (Encyclopedia)*, Salem Press. 739–740.

EF Shattuck and DR Foran 2011 Sea turtles, in C Allin ed. *Encyclopedia of Environmental Issues*, Salem Press. 1097–1098.

DR Foran and RL Ray 2015 Body fluid trace analysis, in A Pass and A O'Reilly eds. *Forensic Science (Encyclopedia)*, Salem Press 160–161.

DR Foran and RL Ray 2015 CODIS, in A Pass and A O'Reilly eds. *Forensic Science (Encyclopedia)*, Salem Press 240–241.

DR Foran and TC Antinick 2015 DNA extraction from hair, bodily fluids, and tissues, in A Pass and A O'Reilly eds. *Forensic Science (Encyclopedia)*, Salem Press 346–348.

DR Foran and KJ Germain 2015 DNA isolation methods, in A Pass and A O'Reilly eds. *Forensic Science (Encyclopedia)*, Salem Press 350–352.

DR Foran and KJ Germain 2015 Journal of Forensic Sciences, in A Pass and A O'Reilly eds. Forensic Science (Encyclopedia), Salem Press 622–623.

DR Foran and TC Antinick 2015 Medicolegal death investigators, in A Pass and A O'Reilly eds. Forensic Science (Encyclopedia), Salem Press 678–679.

DR Foran and AS Badgley 2015 Mitochondrial DNA analysis and typing, in A Pass and A O'Reilly eds. Forensic Science (Encyclopedia), Salem Press 700–702.

DR Foran and AS Badgley 2015 Strengthening Forensic Science in the United States: A Path Forward, in A Pass and A O'Reilly eds. Forensic Science (Encyclopedia), Salem Press 916–922.

Book reviews

DR Foran. 2003 An Introduction to Forensic DNA Analysis, Second Edition. Journal of Forensic Sciences 48, 478–479

DR Foran. 2008 Forensic DNA Analysis, A Laboratory Manual. Journal of Forensic Sciences 53, 1238

DR Foran. 2013 Forensic DNA Biology: A Laboratory Manual. Journal of Forensic Sciences 58, 564

Major reports

DR Foran 2005 Increasing the Predictability and Success Rate of Typing Skeletal Evidence: Using Physical Characteristics of Bone as a Metric for DNA Quality and Quantity (NIJ published report; 108 pages; peer reviewed)

DR Foran 2007 Generating More Precise Post Mortem Interval Estimates With Entomological Evidence: Reliable Patterns of Gene Expression Throughout Calliphorid Larval and Pupal Development (NIJ published report; 189 pages; peer reviewed)

DR Foran 2013 Trace DNA from Fingernails: Increasing the Success Rate of Widely Collected Forensic Evidence (NIJ report 62 pages, peer reviewed)

RW Smith and **DR Foran** 2014 Developing Guidelines for the Application of Multivariate Statistical Analysis to Forensic Evidence (NIJ report, 174 pages, peer reviewed)

TJ Holt, KR Blevins, **DR Foran**, and RW Smith 2014 An Examination of the Conditions Affecting Forensic Scientists' Workplace Productivity and Occupational Stress (NIJ report, 102 pages, peer reviewed)

FUNDING AGENCIES

National Institute of Justice

Federal Bureau of Investigation

Department of Homeland Security (Graduate Fellowships)

Technical Support Working Group

MSU Foundation

RECENT INVITED SYMPOSIA

The Boston Strangler Case: A High Tech Hearing on the Murder of Mary Sullivan. American Bar Association Annual Meeting. Chicago, IL. August 2001.

The DuSable Archaeological Grave Site Symposium—Searching for Jean Baptiste Point du Sable, the Founder of Chicago. Chicago Field Museum. October 2001. Sponsored by The African Scientific Research Institute

Forensic Science and Society. Kettering University Film Series. Apr. 2003. Sponsored by NSF

Oakland County Bar Association Annual Youth Law Conference. Mar. 2004

Increasing the Predictability and Success Rate of Typing Skeletal Evidence. Multiple presentations (June 2003, Mar. 2004, June 2004, June 2005). Washington DC. Sponsored by the National Institute of Justice

The Potential for Interaction between Academic and Crime Laboratories. Sept 2005. Oak Ridge National Laboratory Oak Ridge TN. Sponsored by the Southern Association of Forensic Scientists

Generating More Precise Post Mortem Interval Estimates with Entomological Evidence: Reliable Patterns of Gene Expression Throughout Calliphorid Larval and Pupal Development Multiple presentations (June 2005, June 2006). Washington DC. Sponsored by the National Institute of Justice

The Use of Forensic Science in High School Science Education. June 2007. Lawrence Technological University

Forensic Biology: Learning to Think Outside the Box. October 2008. Michigan Association of Medical Examiners

DNA-Based Identification from IEDs. October 2008. International Association of Bomb Technicians and Investigators Region IV

DNA and the Role of the Forensic Biologist. October 2009. Michigan Association of Medical Examiners

Reflections on Retrospective Forensics. June 2010. Forensic Cultures in Interdisciplinary Perspective. Manchester University, England

The Forensic Sciences at MSU: Education, Research, Service, and the Occasional Whodunit. February 2011 Naples, FL

Veterinary Forensic Biology: The Interplay of Animal DNA and Human Criminal Activity. April 2012. Association of Veterinary Microbiologists

Forensic DNA for Defense Attorneys I: The Basics. September 2013. Indiana Public Defender Council

Forensic DNA for Defense Attorneys II: Advanced Topics. September 2013. Indiana Public Defender Council

RECENT CONFERENCE PRESENTATIONS

Foran and Rowe Is it time to stop microscopic hair comparisons? The American Academy of Forensic Sciences Annual Meeting, Feb. 2001, Seattle

Yoshida and Foran The differential degradation of mitochondrial and nuclear DNA. The Mid-Atlantic Association of Forensic Scientists Annual Meeting, Apr. 2001, Williamsburg, VA

Cline, Laurent and Foran Developing a more efficient method for DNA isolation from fingernail evidence. The Mid-Atlantic Association of Forensic Scientists Annual Meeting, Apr. 2001, Williamsburg, VA

Yoshida and Foran The contest between mitochondrial and nuclear DNA: What is the best target in degraded forensic samples? The American Academy of Forensic Sciences Annual Meeting, Feb. 2002, Atlanta

Laurent and Foran Kinship Determination: How accurate are the 13 core STR loci? The Mid-Atlantic Association of Forensic Scientists Annual Meeting, Apr. 2002, Frederick, MD

Dreier, Ubelaker and Foran The correlation between the outward appearance of bone samples and the mitochondrial DNA within. The Mid-Atlantic Association of Forensic Scientists Annual Meeting, Apr. 2002, Frederick, MD

Misner, Ubelaker and Foran The influence of skeletal weathering and bone type on mtDNA analysis. The American Academy of Forensic Sciences Annual Meeting, Feb. 2005, New Orleans

Rennick, Fenton and Foran The effects of skeletal preparation techniques on DNA from human and nonhuman bone. The American Academy of Forensic Sciences Annual Meeting, Feb. 2005, New Orleans

Tarone and Foran Improving postmortem interval estimates in forensic entomology: Blowfly gene expression and development. The American Academy of Forensic Sciences Annual Meeting, Feb. 2006, Seattle

Barber and Foran The utility of whole genome amplification in forensic DNA analysis. The American Academy of Forensic Sciences Annual Meeting, Feb. 2006, Seattle

Jackson and Foran A more sensitive sex determination assay. The American Academy of Forensic Sciences Annual Meeting, Feb. 2006, Seattle

Meyers and Foran Utility of microbial DNA profiling using terminal restriction fragment length polymorphism. The American Academy of Forensic Sciences Annual Meeting, Feb. 2006, Seattle

Michaud and Foran Simple tissue preservation methods that result in reliable DNA analyses. Poster The American Academy of Forensic Sciences Annual Meeting, Feb. 2006, Seattle

Soltysiak and Foran Alkaline digestion of head and pubic hairs for nuclear and mitochondrial DNA analysis. Poster The American Academy of Forensic Sciences Annual Meeting, Feb. 2006, Seattle

Kremer, Gehring, Stallworth and Foran Genetic identification of improvised explosive device assemblers. The American Academy of Forensic Sciences Annual Meeting, Feb. 2007, San Antonio

Eilert and Foran Polymerase resistance to PCR inhibitors in bone. The American Academy of Forensic Sciences Annual Meeting, Feb. 2007, San Antonio

Yim and Foran Evaluation of field tissue storage methods optimal for preserving DNA. Poster The American Academy of Forensic Sciences Annual Meeting, Feb. 2007, San Antonio

Tarone and Foran The validation of gene expression as a means of predicting the age of the blowfly *Lucilia sericata*. Poster The American Academy of Forensic Sciences Annual Meeting, Feb. 2007, San Antonio

Kremer and Foran Identification of improvised explosive device assemblers using miniSTRs. The American Academy of Forensic Sciences Annual Meeting, Feb. 2008, Washington DC

Hoffmann, Stallworth and Foran Investigative studies into the recovery of DNA from improvised explosive device containers. The American Academy of Forensic Sciences Annual Meeting, Feb. 2008, Washington DC

Jubelirer, Quillen, Shriver and Foran Forensic use of hair pigmentation gene SNPs to predict an individual's hair color. The American Academy of Forensic Sciences Annual Meeting, Feb. 2008, Washington DC

Foran, McClellan, Anderson and Grammer Identifying stains or tissues as human or non-human. The American Academy of Forensic Sciences Annual Meeting, Feb. 2008, Washington DC

Kiley, Jackson and Foran A highly sensitive sex determination assay for low quality DNA. The American Academy of Forensic Sciences Annual Meeting, Feb. 2008, Washington DC

Lenz and Foran Evaluation of bacterial community characterization and terminal restriction fragment length polymorphism analysis for the forensic identification of soil. Poster The American Academy of Forensic Sciences Annual Meeting, Feb. 2008, Washington DC

Aikman and Foran Nucleic acid based methods for assessing the age of bloodstains. Poster The American Academy of Forensic Sciences Annual Meeting, Feb. 2008, Washington DC

Tarone, Foran and Nuzhdin Natural variation in *Lucilia sericata* development: Quantitative genetics in forensic entomology. North American Forensic Entomology Annual Meeting, June 2008, Atlantic City

Anderson, Quillen, Shriver and Foran Using SNPs to predict hair pigmentation in individuals of European ancestry. Poster The American Academy of Forensic Sciences Annual Meeting, Feb. 2009, Denver

Grammer and Foran DNA analysis of improvised explosive devices that employ wireless electronic mechanisms for detonation. The American Academy of Forensic Sciences Annual Meeting, Feb. 2009, Denver

McClellan, Foran, Croft, deJong and Markey The persistence of foreign DNA under fingernails. The American Academy of Forensic Sciences Annual Meeting, Feb. 2009, Denver

Jenny, Beatrice, Fenton, Mutolo and Foran Differential diagnosis of brucellosis from vertebral lesions at Butrint, Albania. American Association of Physical Anthropologists Annual Meeting, Mar. 2009, Chicago

Beatrice, Fenton, Rauzi, Wankmiller, Jenny and Foran Life and death at Butrint, Albania: Paleopathology and mortuary behavior in Late Antiquity. Poster American Association of Physical Anthropologists Annual Meeting, Mar. 2009, Chicago

Mutolo, Fenton, Jenny and Foran Molecular identification of brucellosis in human skeletons from Butrint, Albania. Poster American Association of Physical Anthropologists Annual Meeting, Mar. 2009, Chicago

Thomasma and Foran Optimization of touch DNA collection techniques using alternative swabbing solutions. The American Academy of Forensic Sciences Annual Meeting, Feb. 2010, Seattle

Gicale and Foran Evaluation of evidence recovery methods from improvised explosive devices. The American Academy of Forensic Sciences Annual Meeting, Feb. 2010, Seattle

Schaeper, Jubelirer, Anderson, Shriver and Foran A SNP based assay to predict hair pigmentation. Poster The American Academy of Forensic Sciences Annual Meeting, Feb. 2010, Seattle

Shattuck and Foran Geographic Origins of illegally harvested hawksbill sea turtle products. Poster The American Academy of Forensic Sciences Annual Meeting, Feb. 2011, Chicago

Peters and Foran The optimized use and recovery of DNA from tape lifts. The American Academy of Forensic Sciences Annual Meeting, Feb. 2011, Chicago

Gicale, Ketvirtis and Foran The effect of cyanoacrylate fuming on DNA recovery from post-deflagrated IEDs. The American Academy of Forensic Sciences Annual Meeting, Feb. 2011, Chicago

Orlando and Foran Optimizing DNA typing from fired shell casings. The American Academy of Forensic Sciences Annual Meeting, Feb. 2011, Chicago

Smith, Meyers, Lenz and Foran The utility of microbial profiling for identification of trace soil samples. *Trace Evidence Symposium: Science, Significance and Impact* National Institutes of Justice/FBI, Aug. 2011, Kansas City

Hebda and Foran Trace DNA From Fingernails: Increasing the Success Rate of Widely Collected Forensic Evidence. The American Academy of Forensic Sciences Annual Meeting, Feb. 2012, Atlanta

Elieff, DeJong and Foran Standards of Practice in Forensic Pathology—Initial Outcomes from a Training Program for Medical Examiners and Coroners. The American Academy of Forensic Sciences Annual Meeting, Feb. 2012, Atlanta

Buszek and Foran A Sex Determination Assay for Degraded or Low Quality DNA. The American Academy of Forensic Sciences Annual Meeting, Feb. 2012, Atlanta

Thomasma and Foran Comparison of Methods to Collect Contact DNA From Fabrics. The American Academy of Forensic Sciences Annual Meeting, Feb. 2012, Atlanta

Foran and Hebda Trace DNA From Fingernails: Increasing the Success Rate of Widely Collected Forensic Evidence. Poster National Institute of Justice Annual Meeting, June 2012, Washington DC

Hopkins and Foran Multivariate Statistical Evaluation of Bacterial rRNA16S V4-V6 Sequencing to Identify Soil Evidence. Poster The American Academy of Forensic Sciences Annual Meeting, Feb. 2013, Washington DC

Metchikian, Orlando and Foran Mitochondrial DNA Recovery and Analysis From Spent Cartridge Casings. The American Academy of Forensic Sciences Annual Meeting, Feb. 2013, Washington DC

Doran, Hebda and Foran Determination and Use of Optimized Techniques to Analyze Trace DNA From Fingernails. The American Academy of Forensic Sciences Annual Meeting, Feb. 2013, Washington DC

Hebda and Foran DNA Isolation and Analysis From Skeletal Remains: Novel Methods for Removing PCR Inhibitors. The American Academy of Forensic Sciences Annual Meeting, Feb. 2013, Washington DC

Foran, Fischer and Stoloff A Comparison of Mitochondrial DNA Species Identification Techniques of Questioned Animal Samples. The American Academy of Forensic Sciences Annual Meeting, Feb. 2013, Washington DC

Foran A Decade of Research on the Genetic Identification of the Manufacturers of Improvised Explosive Devices. The American Academy of Forensic Sciences Annual Meeting, Feb. 2013, Washington DC

Foran and Shattuck Determining the Geographic Origin of Illegal Harvested Hawksbill Sea Turtle Products. Society for Conservation Biology 26th International Congress for Conservation Biology Jul. 2013, Baltimore, MD

Doran and Foran Optimizing Transportation and DNA Extraction Methods from Fingernail Evidence. The American Academy of Forensic Sciences Annual Meeting, Feb. 2014, Seattle, WA

Mottar and Foran Optimizing Techniques for DNA Recovery and Extraction from Spent Cartridge Casings. The American Academy of Forensic Sciences Annual Meeting, Feb. 2014, Seattle, WA

Hopkins and Foran Forensic Exploration of Temporal and Spatial Differences of Soils Using Next-Gen Sequencing. The American Academy of Forensic Sciences Annual Meeting, Feb. 2014, Seattle, WA

Foran and Jesmok Collaborative Efforts in Developing Reliable Genetic and Statistical Methods for Microbial Profiling of Soils, NIJ Grantees Meeting Feb. 2015, Orlando, FL

Ray, Mottar and Foran Examination of Factors That Affect the Recovery and Analysis of DNA From Spent Cartridge Casings. Poster The American Academy of Forensic Sciences Annual Meeting, Feb. 2015, Orlando, FL

Mottar, Ray and Foran Maximizing DNA Recovery and Short Tandem Repeat (STR) Data From Spent Cartridge Casings. The American Academy of Forensic Sciences Annual Meeting, Feb. 2015, Orlando, FL

Jesmok, Hopkins and Foran The Influence of Distance, Depth, and Time on Forensic DNA Profiling of Soil Bacteria. The American Academy of Forensic Sciences Annual Meeting, Feb. 2015, Orlando, FL

Jesmok and Foran Bacterial Profiling of Soil Evidentiary Items Using Next Generation Sequencing. The American Academy of Forensic Sciences Annual Meeting, Feb. 2015, Orlando, FL

Antinick and Foran Intra-Bone Variation of Recoverable Nuclear and Mitochondrial DNA in Femora. The American Academy of Forensic Sciences Annual Meeting, Feb. 2015, Orlando, FL

Badgley, Jesmok and Foran Temporal Influences on Bacterial Profiling of Forensic Soil Evidence. The Midwestern Association of Forensic Scientists Annual Meeting, Sept 2015, Mackinac Island, MI

Germain, Ray and Foran Comparison of DNA Analysis Methods for Typing Firearm Loaders Based on DNA from Spent Cartridge Casings. The Midwestern Association of Forensic Scientists Annual Meeting, Sept 2015, Mackinac Island, MI

CURRENT RESEARCH PROJECTS

DNA isolation and identification from spent cartridge casings (NIJ funded)

Developing Guidelines for the Application of Multivariate Statistical Analysis to Forensic Evidence (NIJ funded)

Using next generation sequencing for microbial fingerprinting of evidentiary soil samples (NIJ funded)

Comparing mtDNA loci for species identification effectiveness

Using soil DNA kits for purifying DNA from buried skeletal remains

Intra-bone variability in DNA quantity and quality

Direct PCR of swabbing materials