

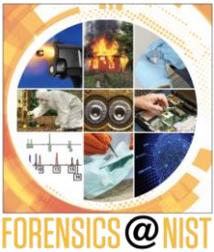
National Institute
of Standards and Technology

DNA Mixture Webinar



Agenda
May 28, 2014

All times EDT		Live Webinar
1:00 – 1:05 p.m.	Introduction	John Paul Jones II, National Institute of Standards and Technology
1:05 – 1:35 p.m.	Issues and Examples of Complex Mixtures	Charlotte Word, Consultant
1:35 – 2:05 p.m.	Evaluation of Quality Issues at the Netherlands Forensic Institute over the Years 2008 – 2012	Ate Kloosterman, Netherlands Forensic Institute
2:05 – 2:45 p.m.	A Basic Overview of Probabilistic Genotyping	Michael Coble, National Institute of Standards and Technology
2:45 – 2:55 p.m.	Break	
2:55 – 3:25 p.m.	Lab Retriever	Susan Berdine, Denver, Colorado, Police Department
3:25 – 3:55 p.m.	STRmix	Todd Bille, Bureau of Alcohol, Tobacco, Firearms, and Explosives
3:55 – 4:25 p.m.	FST	Craig O'Connor, City of New York Office of the Chief Medical Examiner
4:25 – 4:55 p.m.	LRmix/LRmix-Studio	Ate Kloosterman, Netherlands Forensic Institute
4:55 – 5:00 p.m.	Conclusions/Webcast Part 2 Information	Michael Coble, National Institute of Standards and Technology



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Speaker Biographies

Charlotte Word, Consultant

“Issues and Examples of Complex Mixtures”

Dr. Charlotte Word is a consultant in human DNA identification testing. She joined Cellmark Diagnostics (later called Orchid Cellmark) in Germantown, Maryland, in 1990, and over the 15 years she worked there had several titles, including deputy director, senior manager, and forensics and laboratory director. She has performed technical reviews on many thousands of cases from several public and private DNA testing laboratories and has participated in the validation of various DNA test systems. Dr. Word has testified as an expert witness in more than 300 trials and admissibility hearings around the country since 1990. She has published and given many presentations at meetings and workshops in the areas of DNA identification testing. From 1998 to 1999, she was a member of the Post-Conviction Issues Working Group of the National Commission on the Future of DNA Evidence. She has experience with American Society of Crime Laboratory Directors/Laboratory Accreditation Board (ASCLD/LAB), National Forensics Science Technology Center (NFSTC), DNA Quality Assurance Standards, and International Organization for Standardization (ISO) audits. Dr. Word is a member of the editorial board of *Journal of Forensic Sciences* and has been a guest reviewer for *Forensic Science International: Genetics*. For the past few years, she has been assisting with mixture interpretation training through a grant from the National Institute of Justice awarded to Boston University.

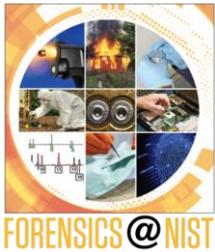
Dr. Word received her bachelor’s degree in biology from the College of William and Mary in Virginia and her Ph.D. in microbiology, with specialties in molecular biology and immunology, from the University of Virginia. She did postdoctoral research as a Damon Runyon-Walter Winchell Cancer Fund Fellow at the University of Texas Southwestern Medical School and was a faculty member at the University of New Mexico School of Medicine prior to joining Cellmark Diagnostics.

Michael Coble, National Institute of Standards and Technology

“A Basic Overview of Probabilistic Genotyping”

Dr. Michael Coble is a forensic biologist in the Applied Genetics Group at the National Institute of Standards and Technology (NIST). Dr. Coble received his bachelor’s degree in biology from Appalachian State University and his master’s degree in forensic science as well as his Ph.D. in genetics from the George Washington University. Prior to working at NIST, Dr. Coble was the chief of the Research Section at the Armed Forces DNA Identification Laboratory (AFDIL). While at AFDIL, he was involved in resolving a number of high-profile historical cases, including the genetic identification of the two missing Romanov children.

In 2009, Dr. Coble received the Washington Academy of Sciences Award for work of merit and distinction in the biological sciences. He is a member of the North Carolina Forensic Science Advisory Board and is an invited guest to the Scientific Working Group on DNA Analysis Methods (SWGAM). He currently serves as a member of the editorial board for *Forensic Science International: Genetics*. *ScienceWatch* listed Dr. Coble among the top 20 high-impact authors in legal medicine and forensic science from 2001 to 2011. His current research at NIST focuses on DNA mixture interpretation and research with lineage markers.



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Speaker Biographies (continued)

Susan Berdine, Denver, Colorado, Police Department

“Lab Retriever”

Ms. Susan Berdine is the forensic biology/DNA technical lead of the Denver, Colorado, Police Department Crime Laboratory. Ms. Berdine began working on Denver’s DNA cold-case project in 2004, and her efforts helped to make it one of the most successful DNA cold-case programs in the United States. She has presented about Denver’s DNA cold-case program at basic and advanced cold case trainings in Florida, the National Combined DNS Index System (CODIS) Conference, the International Symposium on Human Identification, law enforcement summits in Tennessee and New Jersey, and the Rocky Mountain Chapter Federal Bureau of Investigation (FBI) National Academy Association. Ms. Berdine has been involved in Denver’s familial DNA research and analysis of candidate familial matches since its inception in 2008. Ms. Berdine also oversees the DNA unit’s grant portfolio of almost \$1 million annually, which includes DNA backlog reduction, solving cold cases with DNA, and DNA efficiency improvement projects. She was the crime laboratory’s DNA CODIS manager from 2005 to 2008, during Denver’s DNA cold-case project and DNA property-crimes project. Combined, these two programs resulted in more than 830 DNA profiles submitted to CODIS and more than 330 CODIS matches. As the DNA technical lead, Ms. Berdine oversaw her laboratory’s transition from manual methods to high-throughput robotic DNA processes as well as a 3.5-fold increase in DNA staff in the past seven years. Ms. Berdine has a bachelor’s degree in biochemistry and molecular biology from the Pennsylvania State University and a master’s degree in forensic science from the University of Illinois at Chicago. She is also a DNA auditor with the NFSTC and a trained ISO 17025 assessor.

Todd Bille, Bureau of Alcohol, Tobacco, Firearms, and Explosives

“STRmix”

Mr. Todd Bille began his forensic career at the Indiana State Police (ISP) Laboratory in Indianapolis in 1991 and performed the first DNA analysis on casework for the ISP Laboratory in 1994. He later was selected to be the DNA technical leader and a supervisor. In 2001, he moved to The Bode Technology Group as the assistant laboratory director and later the vice president of special projects. While at The Bode Technology Group, Mr. Bille led the research investigating improved DNA extraction from skeletal remains methods used for the victims of the September 11 attacks and mass graves in Mexico and other parts of the world. He also performed research on various topics related to “touch DNA.” In 2006, Mr. Bille was hired by the Bureau of Alcohol, Tobacco, Firearms, and Explosives (ATF) Laboratory as the DNA technical leader to start the DNA Unit. Since then, the research performed at the ATF Laboratory has focused on the improvement of the collection, extraction, concentration, and analysis of “touch DNA” samples from incendiary devices, firearms, and explosive devices. Mr. Bille received his bachelor’s degree in biochemistry from Purdue University in 1990 and his master’s degree from Indiana University Purdue University at Indianapolis in 1998.