

CSW/ACS

FORENSIC CHEMISTRY IN ACTION

OCTOBER 21, 2006

THE GEORGE WASHINGTON UNIVERSITY

1957 E ST. BUILDING

Room 213, Hartman Auditorium

PROGRAM

- 08:30** DOORS OPEN FOR REGISTERED PARTICIPANTS
- 08:30-09:15** CHECK IN -- ROLLS, COFFEE AND JUICE, 2nd FL. LOBBY
- 09:15-09:30** WELCOMING REMARKS
- 09:30-10:15** *CRIME SCENE CHEMISTRY*
Walter F. Rowe, PhD, Professor, Department of Forensic Sciences, GWU
- 10:15-11:00** *FORENSIC TOXICOLOGY: THE DETERMINATION AND INTERPRETATION OF DRUG CONCENTRATIONS IN HUMAN SAMPLES*
Nicholas T. Lappas, PhD, Professor, Department of Forensic Sciences, GWU
- 11:00-11:45** *DRUG-FACILITATED SEXUAL ASSAULT: WHEN THE TOXICOLOGY REPORT IS THE SMOKING GUN*
Madeline A. Montgomery, Forensic Chemist, FBI Laboratories, Quantico, VA
- 11:45-13:15** LUNCH
- 13:15-13:30** Welcome Back and Time for Your Lingering Questions
- 13:30-14:15** *PLANES, TRAINS, AND AUTOMOBILES: USING CHEMISTRY IN BOMBING AND EXPLOSIVES INVESTIGATIONS*
Ronald L. Kelly, Explosives Unit, FBI Laboratory, Quantico, Virginia
- 14:15-15:00** *DOPING SCANDALS: ANALYSIS USING THE "FINGERPRINT" OF CHROMATOGRAPHY COUPLED WITH MASS SPECTROMETRY*
Kenneth L. Busch, PhD, Analytical Chemist
President, Washington Professional Chapter, Alpha Chi Sigma Fraternity
- 15:00-15:15** AFTERNOON BREAK - COOKIES, COFFEE AND JUICE
- 15:15-16:00** *SO YOU WANT TO BE A FORENSIC CHEMIST?: THE REAL WORLD OF CAREER PATHS AND EDUCATIONAL REQUIREMENTS*
Jason E. Schaff, PhD, Forensic Chemist, FBI Laboratory, Quantico, VA
- 16:00-16:30** Panel Q & A
- 16:30-16:45** CLOSING REMARKS

Biographical Sketches

Dr. Rowe received his PhD in chemistry from Harvard University. His graduate studies were interrupted by service in the US Army, where he was a forensic chemist and a forensic serologist in the US Army crime laboratory system. Dr. Rowe was also a credentialed US Army criminal investigator. He was one of the team of investigators who processed the scene of the McDonald murders at Ft Bragg, North Carolina (subject of the book *Fatal Vision*). Dr. Rowe has been a member of the graduate faculty of the Department of Forensic Sciences at The George Washington University since 1975. His research interests include the analysis of trace evidence, the application of chemometrics to the field of forensic chemistry and shooting incident reconstruction. Dr. Rowe is the author of over fifty articles and book chapters. He is a member of a number of professional societies, including the American Chemical Society, the American Academy of Forensic Sciences, the Mid-Atlantic Association of Forensic Scientists, the American Association for the Advancement of Science and the Society of Sigma Xi. Dr. Rowe also serves on American Society for Testing and Materials Committee e30, which sets forensic science standards.

Dr. Lappas has been a member of the graduate faculty of the Department of Forensic Sciences at George Washington University since 1975. His research interests include an evaluation of factors which influence the interpretation of analytical toxicology results, the effects of sample storage conditions on drug concentrations and the development of analytical toxicology methods. He is a member of several professional organizations including The American Academy of Forensic Sciences, The International Association of Forensic Toxicologists and The Society of Forensic Toxicologists. His professional activities include acting as an adviser or expert witness in over 500 civil and criminal cases.

Ms. Madeline A. Montgomery received her bachelor's degree in chemistry from GWU in 1996. Since, she has been employed as a forensic chemist for the FBI, and works specifically in the area of toxicology. She analyzes evidence in cases from all over the United States in postmortem toxicology, human performance toxicology, and product tampering investigations.

Mr. Ronald L. Kelly is a 1977 graduate from the University of Maryland, College Park, Maryland, with a B. S. Degree in Chemistry. He joined the FBI Laboratory in 1978 and has specialized in the forensic analysis of evidence from fire and explosion scenes. Mr. Kelly has been involved in many major case investigations, which include the Trade Center Bombing, the Branch Davidian siege at Waco, Texas, the Oklahoma City bombing, the crash of TWA 800, the bombings in Atlanta (1996 Olympics), the embassy bombings in Nairobi, Kenya and Dar es Salam, Tanzania, and the Unabomber case. Mr. Kelly is presently assigned to the Explosives Unit of the FBI Laboratory in Quantico, VA.

Dr. Ken Busch spent twenty years doing research in mass spectrometry in several universities. Since he retired from research, he writes the "Mass Spectrometry Forum" articles in *Spectroscopy* magazine, and teaches "Introduction to Mass Spectrometry" at professional meetings. He attended the 1972 Olympics as a student, the 1996 Olympics as a spectator, and is planning on attending the 2016 Olympics as a table tennis champion. He currently works for the NSF Office of Inspector General as an Investigative Scientist; this presentation is not connected with that position.

Dr. Schaff received his B.S. in chemistry in 1991 from Yale University, and his Ph.D. in analytical chemistry in 1997 from the University of Minnesota. He then undertook a two-year post-doctoral fellowship at the Indiana University Medical School, doing methods development research for the sports drug testing lab there. Since 1999, Dr. Schaff has been employed as a forensic chemist by the FBI Laboratory, where he investigates poisonings, product tampering, drug-facilitated sexual assaults, and other toxicology cases.