

HOPE COLLEGE CHEMISTRY SEMINAR

CSI: Virginia

Dr. Katie Hall, Hope '00
Virginia State Police

Friday, January 13, 2012
4:00 pm, Schaap 1000

Abstract

The presentation will highlight topics in both casework and research in forensic DNA analysis. Current methodology utilized in forensic DNA casework, including nuclear, y-chromosome, and mitochondrial DNA techniques will be described, and future advances in forensic DNA analysis will be discussed, including the development of a new technique for visualization and recovery of touch DNA evidence. In addition, the development of "Lab on a Chip" technology will be presented, focusing on the analysis of sexual assault evidence using acoustic differential extraction. Many CSI myths will be dispelled and the audience introduced to the realities of forensic science.

Biography

Katie Horsman-Hall graduated from Hope in 2000 with a BS in chemistry. She completed an MS in forensic science at the University of Illinois at Chicago and a PhD in bioanalytical chemistry at the University of Virginia in James Landers's laboratory. Her work included developing microanalytical methods ("Lab on a Chip") for forensic DNA analysis. She is currently employed in the mitochondrial DNA unit at the Virginia Department of Forensic Science where she does both casework and research. Katie's casework involves nuclear and mitochondrial DNA typing for unidentified remains and missing persons cases. As a research scientist, she develops, evaluates, and validates new technologies in forensic DNA analysis. She lives in Richmond, VA, with her husband, Steve.