

DEPARTMENT OF CHEMISTRY AND ENVIRONMENTAL SCIENCE
SPRING 2018 GRAD SEMINAR SERIES

OPEN TO THE PUBLIC

DATE: WEDNESDAY, JANUARY 17, 2018

WHERE: CENTRAL KING BUILDING - 116

TIME: 1:30 PM

GUEST SPEAKER

Dr. Glen P. Jackson

Professor, Ming Hsieh Distinguished Professor of Forensic & Investigative Science
West Virginia University
Morgantown, WV

TOPIC

Hair Reveals what People Conceal: Soft Biometric Traits from the Chemical
Analysis of Human Hair

ABSTRACT

Our research demonstrates the ability to objectively classify the hair of different donors into soft biometric grouping factors such as sex, age group, body mass index (BMI), and physical activity. Classification is accomplished either through the quantitation of amino acids in human hair matrix, or through the precise measurement of naturally occurring stable isotopes of $^{13}\text{C}/^{12}\text{C}$ of each amino acid in the hair matrix. Additional applications of amino-acid-specific analyses include the ability to predict type II diabetes from human hair, and to link blowflies to specific species of carrion (decaying flesh).

Before delving into the details of this specific research thrust, the talk will first cover a brief summary of other mass spectrometry research endeavors in our group, including: 1) the development of innovative MS-based fragmentation methods for the determination of composition, structure, and conformation of biomolecules; and 2) the development of miniature, portable mass spectrometers for first responders and forensic field use.

BIOGRAPHY

Dr. Jackson joined the faculty of WVU in the fall of 2012 as a Ming Hsieh Distinguished Professor of Forensic and Investigative Science. He also holds a joint appointment in the C. Eugene Bennett Department of Chemistry and an adjunct position in the Department of Biology (<https://forensics.wvu.edu/faculty-and-staff/faculty/glen-p-jackson>). Dr. Jackson earned a B.S. (Hons) degree in Chemical and Analytical Science from the University of Wales Swansea (UK), an M.S. degree in Analytical Chemistry from Ohio University, and a Ph.D. in Analytical chemistry from West Virginia University (WVU). He spent 4 years as a researcher at Oak Ridge National Laboratory (ORNL) before joining the chemistry faculty at Ohio University in 2004. He was the Director of the FEPAC-accredited Forensic Chemistry Program at Ohio University from 2009-12, where he received an NSF CAREER Award, a distinguished public speaking award and a transformative faculty award before his return to WVU in 2012.

Seminar Series Coordinators

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