

Dr. Igor Lednev  
Department of Chemistry

Sponsor: Department of Justice  
Dates: November 1, 2009 – October 31, 2011  
Amount: \$ 374,395

**Application of Raman Spectroscopy for an Easy-to-Use, on Field, Rapid  
Nondestructive, confirmatory Identification of Body Fluids**

A novel method based on Raman spectroscopy will be developed for nondestructive, confirmatory identification of body fluids in biological stains discovered at a crime scene. A library of Raman signatures for various body fluids will be built and software for unknown sample analysis will be developed. The method will be optimized for practical applications, including stains on various substrates and contaminated mixtures. The potential for differentiating human and animal species, determining the age of a biological stain, and genetic profiling will be evaluated.