

National Institute of Justice

Award Title: Human Hair Proteomics - Improved Evidence Discrimination	
Award Description: <p>This research investigates a method to obtain potentially probative information from human hair samples by analyzing their profiles of constituent proteins. This project exploits recent advances in protein identification by mass spectrometry coupled with database searching. Previous and ongoing work has shown that mouse strains can be distinguished by their pelage hair proteomes using a small number of sentinel proteins. The hypothesis will be tested that the proteome of human hair shaft can distinguish among humans by comparing the proteomes of hair samples provided by subjects from Caucasian, Korean and African ancestry. The hair will be trypsinized and the protein profiles will be determined by a shotgun approach. From the data, a small subset of sentinel proteins (5-10) will be chosen that are distinctive among the samples analyzed. In the second phase of the work, the samples will be reanalyzed by a targeted approach. For this purpose isotopically labeled sentinel proteins or proteotypic peptides from them will be used as internal standards for relative quantitation. The normalized profiles of proteotypic peptides from sentinel proteins will be compared to find whether individual donor profiles can be reliably distinguished. ca/ncf</p>	
Awardee Name: THE REGENTS OF THE UNIVERSITY OF CALIFORNIA	Award Number: 2011-DN-BX-K543
Solicitation Title: NIJ FY 11 Basic Scientific Research to Support Forensic Science for Criminal Justice Purposes	Fiscal Year: 2011
Amount: \$151,150.00	Earmark: No
Recovery Act: No	State/Territory: CA
County: Yolo	Congressional District: 01
Award Status: Open	