

National Institute of Justice

Award Title: Low-template DNA mixture interpretation: Determining the number of contributors	
Award Description: <p>The objective of this research is the development of a novel approach to interpret complex and/or low template quantities of DNA. This enhanced method to characterize complex DNA mixtures will be accompanied by the development of a complex DNA mixture interpretation tool designed to enhance traditional DNA interpretation by utilizing a likelihood ratio which makes no assumptions regarding the number of contributors or by determining the likelihood that a certain number of individuals contributed to the DNA mixture. Despite a number of commercially available tools, to obtain a likelihood ratio, the number of contributors is still qualitatively assessed by the analyst, whereby the common approach is to determine the minimum number of contributors based on the number of peaks observed at individual loci. This technique has its problems and it is the intention of this work to utilize an a posteriori probability to determine the probability that a DNA mixture is from (n) contributors. The applicant proposes to overcome these difficulties by using statistical signal processing methods to accurately infer the number of contributors to a DNA stain. Specifically, they will calculate the a posteriori probability (APP) of the number of contributors to a stain based on the genotyping results. ca/ncf</p>	
Awardee Name: Trustees of Boston University, BUMC	Award Number: 2011-DN-BX-K558
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Amount: \$464,617.00	Earmark: No
Recovery Act: No	State/Territory: MA
County:	Congressional District:
Award Status: Open	