

National Institute of Justice

Award Title: Rapid and selective extraction of male DNA from rape kits and other forensic evidence using pressure cycling

Award Description:

The goal of this research is to reduce one bottleneck in the processing of samples: the long and complex process of separation and differential extraction of sperm cells in the presence of female DNA. This will be accomplished by the development of a novel and highly selective pressure-based DNA extraction procedure that is designed to burst open and extract DNA from male sperm cells while leaving the excess female cells in rape kits or other mixed forensic stains unaffected.

The pressure processing will be coupled with specific reducing agents such as TCEP and DTT which selectively attack sperm cells without damaging female epithelial cells. Using this technique, researchers believe that they can greatly simplify the long and complex processing of rape kits and other mixed forensic samples by selectively extracting the assailant's sperm cells, while leaving the victim's DNA behind.

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Awardee Name: Florida International University	Award Number: 2011-NE-BX-K550
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