

**DNA CAPACITY ENHANCEMENT AND  
BACKLOG REDUCTION PROGRAM ABSTRACT  
FY2017**

**ABSTRACT**

The Sedgwick County Regional Forensic Science Center (RFSC) is an independent local government agency which serves all Sedgwick County, Kansas Law Enforcement agencies. In 2016, Sedgwick County increased the number of full time positions in the DNA section with the addition of one scientist. Currently, all five full time Biology/DNA Section positions are filled with qualified case-working scientists.

A multidisciplinary task force convened in Kansas to determine the number of untested kits statewide and the study revealed that over half of the untested kits reside in Sedgwick County. The heightened awareness and increase in reported sexual assaults have resulted in a dramatic increase in submissions. Like other states, expanded kit testing is anticipated in Kansas which would result in the submission of substantially more sexual assault kits for biological testing. Should 100% testing be required, the RFSC would be faced with a capacity crisis.

To address the caseload challenge, the Center is requesting resources to enhance the quantification/sexual assault screening process and to replace equipment that is no longer supported or 20+ years old. Specifically, an additional real-time PCR workstation would be purchased, along with validation chemistry to enable validation and potential development of expedited screening for male DNA on sexual assault samples. There is also a clear need for acquisition of replacement thermal cyclers since current casework models have been discontinued. Thermal cycling reactions are the basis for DNA typing and analysis; therefore, discontinued models and verification probes must be replaced before parts and service are obsolete. Finally, the request includes resources aimed to replace aging equipment and hardware. Temperature control units used for incubations were acquired in the 1990s, as were household grade refrigeration/freezer units used for reagent and evidence storage. Scientist workstations are 32 bit systems and recent analysis and probabilistic genotyping software call for 64 bit systems. Therefore, the request includes resources for the replacement of standard lab and computer equipment that could enhance work flow and allow analysts to carry out all facets of data analysis on one computer.

This program is an acquisition program to allow the RFSC to purchase technology for PCR-based screening of sexual assault evidence and to replace instrumentation that is no longer supported. The purchase acquisition will follow standard Sedgwick County [KS] purchasing policies. Funding of this equipment acquisition program will allow the RFSC to maintain the current level of forensic services.