



NEWS RELEASE

FOR IMMEDIATE RELEASE

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ST. CHARLES COUNTY POLICE CRIME LAB ADVANCING DNA ANALYSIS CONTRIBUTIONS WITH NEW SOFTWARE

ST. CHARLES COUNTY, MO – The St. Charles County Police Department Criminalistics Laboratory is in the process of adding another resource to its toolkit in solving crimes in the area, specifically enhancing the reliability and validity of complex DNA samples.

A new DNA analysis software, called ArmedXpert™, will allow the Crime Lab to more efficiently and effectively identify DNA profiles that involve multiple contributors. While the Lab's accredited DNA analysis staff can do this now, the software assesses the DNA components much faster and even more accurately than by human review.

"This software conducts a deconvolution process; it takes information from complex DNA mixtures and parses it out to organize the sample into identifiable profiles at a much higher speed than we can currently," says Bryan Hampton, Crime Lab Director. "It allows us to extract more information from the data, and garner more usable profiles from complex samples that have multiple contributors, or subjects."

Hampton says this technology will play an important role in cases such as burglaries, stolen vehicles and even homicides.

"When there is a mixture of DNA in a sample, it is a tedious process to analyze and accurately glean a usable profile to identify which DNA belongs to which individual," Hampton says. "We have the capability to do that already, but the complexity and length of time of the process is greatly reduced with this software—from hours down to minutes."

With a workload of more than 2,500 cases each year, this software allows the Crime Lab to process more forensic evidence, more efficiently. Any link from evidence to existing data, or addition of new data, helps cut down the time it takes to charge and prosecute suspects, and fairly and expeditiously aid the judicial process.

Regionally, DNA profiles, fingerprints and ballistic evidence uploaded by the department to investigative databases have provided links between cases. In 2022 alone, 162 DNA profiles uploaded by the Lab to the Combined DNA Index System (CODIS) database "hit" to prior offenders, arrestees, and crime scene samples from across the country. This valuable information has an impact on current cases, but also has helped the Lab solve cold cases, such as the 1993 kidnapping and murder of Angie Housman, the 1984 murder of Eleonora Knoernschild, and the 1990-1991 "package killer" murders of five women.

"This new software will potentially allow the Lab to upload more DNA profiles into CODIS that otherwise may not be eligible," Hampton says. "With that, there could be more database hits and we could make more contributions to solving crime regionally as well as nationally."

(MORE)

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The St. Charles County Crime Lab is accredited by the American National Standards Institute (ANSI) National Accreditation Board (ANAB) and has been continuously since 2007. The Lab is staffed by six full-time scientists, a part-time firearm examiner and a part-time evidence clerk with nearly 120 years of combined forensic science experience.

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About St. Charles County:

St. Charles County, Missouri, founded in 1812, is one of the fastest growing counties in Missouri. With a population of 405,262, it is the state's third largest county. It is home to 21 scenic county parks of which three are in reserve, encompassing 4,349 acres.

With one of the largest economies in the state, St. Charles County is home to multinational companies including General Motors, Citi, MasterCard Worldwide and Boeing. It is ranked among the top 25 counties in the nation in high-tech job growth by the Progressive Policy Institute and consistently has the lowest unemployment rate in the Metropolitan St. Louis area.

St. Charles County Government has more than 1,170 employees in more than 30 departments and offices who work to make the county an excellent place to live, work and shop. For more information, please visit sccmo.org.