

North Louisiana Crime Lab Joins 98 Other U.S. Forensic Labs in Using STRmix™

Software Has Proven Highly Effective in Interpreting Complex Crime Scene Evidence

WASHINGTON, DC, UNITED STATES, July 15, 2026 /EINPresswire.com/ -- The North Louisiana Crime Laboratory has joined 98 other [forensic](#) laboratories throughout the United States in using [STRmix](#)™ probabilistic genotyping software to resolve mixed [DNA](#) profiles previously regarded as too complex or degraded to interpret crime scene evidence.

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Jessica Esparza, Ph.D.

Since its introduction in 2012, STRmix™ has proven to be a highly effective tool in producing usable, interpretable, and admissible DNA results in more than 700,000 criminal cases worldwide. It has been particularly effective in helping to resolve violent crime and sexual assault cases, as well as cold cases in which evidence was originally

dismissed as inconclusive.

The North Louisiana Crime Laboratory (NLCL) is dedicated to enhancing crime detection, prevention, and investigation, and supporting other activities integral to criminal investigations. Serving the critical needs of the northern 29 parishes in Louisiana, NLCL provides forensic science services in the areas of drug chemistry, DNA analysis, firearms examination, fire debris, and forensic toxicology from its laboratories in Shreveport and Alexandria, as well as its evidence hub in Ouachita.

“Even though we are the 99th U.S. laboratory to begin using this software, we are the first in this country to validate the VeriFiler™ Plus PCR amplification kit with STRmix™, allowing us to utilize more information within the DNA profile to deconvolute complex mixtures,” says Jessica Esparza, Ph.D., DNA Technical Leader at NLCL. “This advancement gives us the ability to interpret complex mixtures that were previously uninterpretable using binary methods.”

Unlike previous methods of DNA analysis, which are more subjective and depend entirely on the application of fixed stochastic thresholds and other biological parameters to manually analyze DNA samples, STRmix™ uses a fully continuous model that makes better use of the information available within a DNA profile. It proposes hundreds of thousands of different profiles, assesses and weighs how closely these resemble the observed DNA mixture, and then assigns a likelihood

ratio (LR) – the widely accepted standard statistical approach for conveying weight of evidence information – should a person of interest's sample be available.

More than 120 forensic laboratories currently use STRmix™ for DNA analysis, including labs in the U.S., Canada, the United Kingdom, Europe, Asia, the Middle East, the Caribbean, and all nine state and territory forensic labs in New Zealand and Australia.

The team behind STRmix™ has also developed three related software applications:

- DBLR™, an application which when used with STRmix™ allows forensic laboratories to undertake extensive kinship analysis, carry out rapid database searches, visualize the value of their DNA mixture evidence, and carry out mixture-to-mixture matches;
- FaSTR™ DNA, expert forensic software which seamlessly integrates with STRmix™ (when in use) to rapidly analyze raw DNA data generated by genetic analyzers and standard profiling kits and assigns a number of contributors (NoC) estimate; and
- STRmix™ NGS, fully continuous mixture interpretation and likelihood ratio generation software for profiles generated using Next Generation Sequencing (NGS).

In combination with STRmix™, FaSTR™ DNA and DBLR™ complete the full workflow from analysis to interpretation and database matching, while STRmix™ NGS broadens the range of profile types that can be interpreted.

For more information about STRmix™, visit <http://www.strmix.com>.

STRmix – A global leader in forensic DNA interpretation, trusted by more than 120 forensic laboratories worldwide.

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