HFSC board of directors approves agreement for Rapid DNA instrument

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FOR IMMEDIATE RELEASE

The Houston Forensic Science Center's board of directors met Tuesday and authorized Dr. Peter Stout, CEO and president, to enter into an agreement to acquire a rapid DNA instrument capable of generating forensic results within a few hours.

The board's approval in its special session of the $246,380 three-year agreement for the ThermoFisher RapidHIT ID system will allow HFSC to provide some DNA results to investigators in six hours or less, an important development that could help the Houston Police Department battle the rise in violent crime. It currently takes about 24 hours to get a DNA result, and that is when a sample is pushed through the lab independently as part of an urgent or "rush" request.

"We have a responsibility to pursue all potential technologies to help stakeholders in their investigations and to improve public safety," Dr. Stout said. "At the same time, we must ensure that such technologies are used in an accredited forensic laboratory by licensed technicians in compliance with Texas law."

This includes proper validation of the instrument so analysts can demonstrate in court that it operates as expected. HFSC expects the instrument to be ready for use in casework by summer 2021.

At the beginning, however, only DNA technicians licensed by the Texas Forensic Science Commission will be authorized to use the instrument. Sometime in the next 18 months HFSC hopes to get some crime scene investigators licensed as DNA technicians as well.

“This will make it easier for us to use the instrument in the middle of the night,” Dr. Stout said. “But getting our CSIs licensed and able to use this instrument is a long process that requires them to study and pass a state-issued exam.”

In the shorter term, the instrument will primarily be used to more quickly confirm and compare known, single-source DNA samples to another DNA profile, such as one found on crime scene evidence.

Later, HFSC hopes to use the rapid instrument to analyze samples that come from sizeable pieces of evidence that likely have large amounts of DNA and are made up of just one person’s DNA, such as a pool of blood.

However, DNA profiles from evidence analyzed in the rapid instrument can only be uploaded to the local DNA database. At this time, the FBI, which oversees the national database and has more stringent rules for the state-level database, does not allow profiles generated by rapid technologies to be uploaded into the database.

Crime laboratories use the DNA database to see if DNA profiles generated from evidence or collected from a known source will “hit” against other profiles in the database, including those taken from previous offenders or unknown profiles collected at other crime scenes.

The information can be useful to investigators seeking to identify potential suspects. The faster they get results, the more useful it can be.

“This really is about the right answer at the right time,” Dr. Stout said. “In this case, the ‘right time’ is easy. But we must also get the ‘right answer,’ Technologies such as rapid DNA can be powerful, but how they are used makes all the difference. ’Right’ means

more than cutting-edge technology. When using it, we must also ensure evidence is protected, results are disclosed and protocol is followed."

HFSC is a local government corporation that provides forensic services to the City of Houston and other local agencies. HFSC is overseen by a Board of Directors appointed by the Mayor of Houston and confirmed by the Houston City Council. Its management structure is designed to be responsive to a 2009 recommendation by the National Academy of Sciences that called for crime laboratories to be independent of law enforcement and prosecutorial branches of government.

HFSC operates in seven forensic disciplines.

CONTACT INFORMATION:

Ramit Plushnick-Masti

Director of Communications/PIO

media@houstonforensicscience.org

www.houstonforensicscience.org

713-703-4898 (cell)

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