

“Rapid” Progress

To say that developments in “Rapid DNA” have been progressing quickly in 2014 is an understatement. From a front page *USA Today* article headline reading “Rapid DNA Test Could Transform Crime Fight” in January, to its first use in a criminal prosecution and, most importantly, approval from the FBI to upload reference profiles from a Rapid DNA instrument to the National DNA Index System (NDIS), the moniker “Rapid” applies more to its rate of implementation than to its DNA analysis time.

FBI Approval

In a significant step forward in the actual application of Rapid DNA technology, IntegenX’s RapidHIT System has become the first Rapid DNA technology enabling the upload of DNA profiles to the National DNA Index System (NDIS). Having met the FBI guidelines to upload to the NDIS system, in an accredited forensic laboratory, the system is now approved to analyze and

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upload known arrestee and convicted offender DNA profiles, as well as casework known samples.

As pointed out by Gray Amick, Ph.D., DNA Technical Leader at Richland County Sheriff’s Department. “Having the ability to upload a profile into the national database from a Rapid DNA system provides laboratories with an excellent option for turning results around quickly.”

With less than five minutes of hands-on time, Rapid DNA systems enable buccal swabs collected from known arrestees and convicted offenders, as well as casework known samples to be analyzed in less than two hours, compared to weeks or months with conventional laboratory techniques, improving efficiency of forensic laboratories. This improved efficiency will allow labora-

tories to spend more time reducing backlog and processing other forensic samples.

First Criminal Prosecution Moves Forward

On September 4, 2013, a break-in occurred at a home belonging to an individual deployed in Afghanistan with the U.S. Air Force. Burglars stole approximately \$30,000 worth of property, including firearms, electronic equipment, computers, televisions, military equipment including a bulletproof vest, clothing, several guitars... and even the cable box. The investigation yielded a suspect who was subsequently arrested for the crime based on witness statements and other evidence. A blood sample taken from the scene provided a DNA profile that matched the suspect who had been arrested and charged with the crime.

While utilizing DNA evidence from property crimes is not new in Palm Bay, Florida, the police there have begun implementing Rapid DNA technology on a stand-alone Rapid DNA device being tested and validated by their Department. Working closely with the State Attorney’s Office for the 18th Judicial Circuit, the Palm Bay Police Department is set use the DNA profiles obtained using a Rapid DNA system—in a criminal prosecution. It is the first-ever application of Rapid DNA technology in a criminal investigation.

Since it received the Rapid DNA unit in November 2012, the Palm Bay Police Department’s Criminal Investigations Division (CID) has been working with the manufacturer, using actual crime scene evidence samples to test and validate the equipment’s accuracy and reliability. In January 2014, the CID began processing samples from active cases.

“What we’ve done is taken actual crime scene evidence, including this burglary case and many others, and processed the samples using the RapidHIT 200,” said Captain Diana Blackledge, who leads the CID and its Rapid DNA program. “We compared all of the results with those from an accredited lab and they all matched. This validates the device as giving reliable and accurate profiles.”

The Palm Bay Police Department is now using the Rapid DNA technology on a weekly basis, in an effort

to generate investigative leads, eliminate potential suspects, and provide evidence to convict offenders in court.

“We have met with the Palm Bay Police Department and have been following their progress with Rapid DNA processing for more than a year. We are prepared to present this case in court using the evidence they have developed from their program,” said Phil Archer, State Attorney for the 18th Judicial Circuit of Florida. “This case is particularly important as it involves a person victimized while serving our country.”

At the beginning of 2014, the Palm Bay Police Department also added a local DNA database to its Rapid DNA program. Palm Bay is now able to cooperate with other local agencies, including Melbourne, West Melbourne, and Cocoa police departments, to collect and share DNA profiles from local suspects and local crimes.

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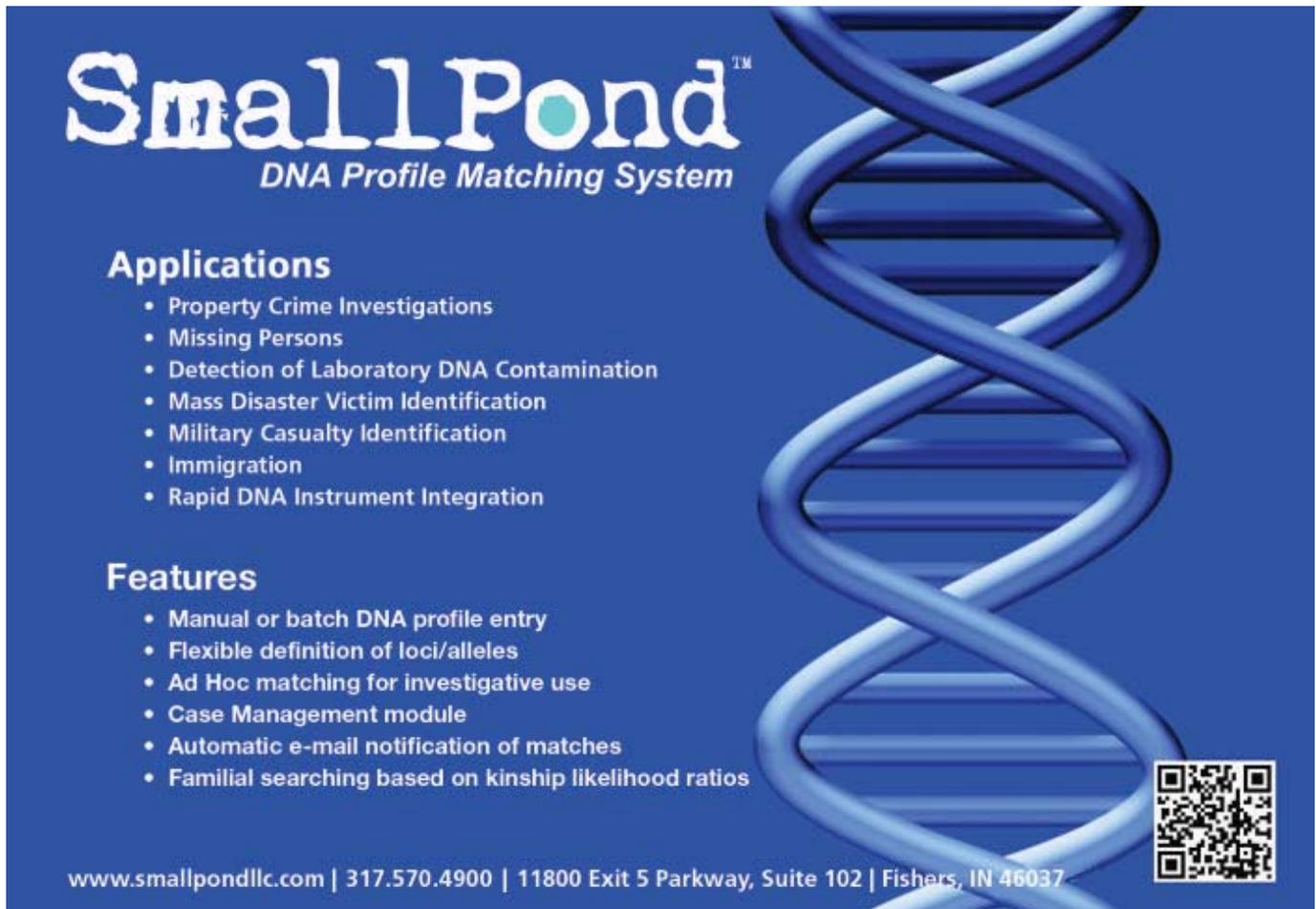
day is essential to protecting the public,” said Palm Bay Chief Doug Muldoon. “The use of this new technology is our paramount responsibility to the community.”

While we must continue to implement Rapid DNA

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in a way which continues to ensure its place as the “gold standard” of forensic evidence, Chief Muldoon is exactly right.

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