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**NEW SPERM MICRO-MANIPULATION AND ISOLATION TECHNIQUE MAY
INCREASE SEXUAL ASSAULT CONVICTIONS**
“Sperm Picking” Technique Can Dramatically Speed Up the DNA Testing Process

WESTMONT, IL. (Oct. 2, 2008) –The McCrone Group, a world leader in materials analysis, today announced a more economical and rapid technique to isolate human sperm from smears collected from sexual assault victims that could significantly improve conviction rates for sexual assault cases. McCrone Associates Research Microscopist Kirsten Kelley-Primozic, who developed the sperm micro-manipulation and isolation technique earlier this year and teaches it at The McCrone Group’s College of Microscopy, will present her findings at “The 19th International Symposium on Human Identification” sponsored by Promega in Hollywood, California on October 13-16 at booth 108.

“The efficiency of the sperm micro-manipulation and isolation technique can dramatically speed up the DNA testing process, helping to convict the right people and prevent repeat offenses,” said Richard Bisbing, Executive Vice President of McCrone Associates.

Finding faster methods to cleanly isolate sperm would help process sexual assault cases with forensic DNA evidence, which numbered more than 430,000 according to a 2003 report by the U.S. National Institute of Justice.

Newer, Faster Method Can Help Expedite Sexual Assault Cases

Current methods for isolating sperm from the victim’s own cells often reduce the number of sperm recovered, limiting the amount of DNA available for typing. Furthermore, these techniques can be laborious and time consuming.

Differential organic extraction, the most common method used in crime laboratories today, typically takes eight hours for eight samples, including three hours of hands-on time. Laser microdissection, another method for isolating sperm, while automated, can take hours just to scan for sperm and equipment costs can be prohibitive.

Since The McCrone Group's sperm isolation technique requires only basic equipment which crime labs already possess (i.e. a microscope) or can inexpensively purchase, it can be quickly adopted.

While under the microscope, scientists use a finely pointed tungsten needle to pick sperm from the slide, which can then be processed for DNA analysis. Instead of the hours it takes employing organic extraction, each sperm can be picked in seconds. Because the sperm is cleanly isolated, sensitive DNA analysis techniques such as mitochondrial or pyrosequencing techniques can be used to then characterize the donor's DNA.

Technique Adapted From Other Fields

Kelley-Primozić adapted the sperm isolation technique from a protocol pioneered by McCrone Associates scientists in 1962. Anna Teetsov of The McCrone Group developed the technique to pick small particles from a variety of matrices such as airborne particles collected on the filters from power plant stacks and foreign particles in histological tissue specimens from hip replacements.

“The transition of the micro-isolation technique into the biological field to separate sperm is completely new,” said Kelley-Primozić. “I believe that this will help to alleviate some of the ‘problem’ cases that seem to plague the forensic world right now, especially in cases where there is a low number of sperm.”

The amount of training that forensics personnel would need is minimal. In fact, Kelley-Primozić teaches the technique as part of the “Body Fluid Identification and Microscopic Methods of Sperm Detection for Forensic DNA/Serology/Biology” course (COM 700) at the College of Microscopy, where many of the world's top forensic laboratories send their personnel for advanced training.

“The sperm micro-isolation technique was easy to learn and the course instructors were extremely knowledgeable,” said Kristin Denning, a forensic scientist at the Alaska State Crime Lab who recently took the COM 700 course. “It’s much easier than organic differential extraction and extremely low cost. Bottom line: it works!”

About The McCrone Group

Founded in 1956 and located in Westmont, IL, The McCrone Group, Inc., is a world leader in materials analysis and is internationally recognized as the premier microscopy resource. The company is comprised of three business units: McCrone Associates, the analytical service division; McCrone Microscopes & Accessories, the instrument sales division; and the College of Microscopy, the education division that provides training to industry and government scientists worldwide. For more information about The McCrone Group, please visit www.mccrone.com.

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