



## News from the Savannah River National Laboratory

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### Fingerprint Detection Device Receives Patent

AIKEN, S.C. – An innovative tool developed by a researcher at the Savannah River National Laboratory to give law enforcement personnel a method for on-the-scene fingerprint detection has been issued a patent by the U.S. Patent and Trademark Office.

The research and development of the device was funded by the Department of Energy's National Nuclear Security Administration's (NNSA) Office of Nonproliferation Research and Funding.

The BritePrint™ device, invented by SRNL's Eliel Villa-Aleman is a small, lightweight, battery-powered, high intensity light source that saves investigators valuable time in the investigation process. When used in conjunction with traditional dust detection methods, BritePrint reveals otherwise invisible fingerprints, footprints and other latent markings at crime scenes.

"That's what's really gratifying about being an applied research and development laboratory," said Dr. Todd Wright, Director of SRNL. "Being able to put science to work to deliver practical technologies that are truly beneficial to the people who will use them—especially when those users are the law enforcement personnel who do so much to help all of us."

The typical method for detecting prints is a slow, cumbersome operation, in which personnel hold a heavy light source—sometimes for hours at a time—while using tape to lift prints.

The lightweight BritePrint device would typically be worn on a headset for hands-free operation. It uses light-emitting diodes (LEDs) to produce light at a specific wavelength that causes areas brushed with dye to be visibly fluorescent. Wearing light-filtering goggles makes markings in these areas easily detectable by the human eye, allowing an analyst to quickly proceed with on-site detection and subsequent analysis of prints.

Its small design allows it to illuminate hard-to-reach places not readily reached by traditional light sources. Unlike traditional light sources, it has its own power source, so it does not need to be plugged into a wall outlet, allowing it to be used in remote or outdoor environments.

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It can also be used with a video camera for recording critical crime scene evidence.

It is designed to be low-cost, so that small law enforcement agencies can take advantage of the technology.

The BritePrint™ device has been beta tested or used by more than a half-dozen law enforcement offices in the Southeast.

Sequiam Corporation of Orlando, Fla., has licensed BritePrint to manufacture and commercialize the device for use by law enforcement agencies.

The Savannah River National Laboratory is the applied research and development laboratory at the U.S. Department of Energy's Savannah River Site. The laboratory focuses on developing practical solutions in the areas of energy security, environmental science and technology, and homeland security, including technologies and technological support for local and regional law enforcement.

The development of the BritePrint device grew out of an agreement with the National Institute of Justice to apply existing SRNL capabilities to meeting law enforcement needs. When law enforcement personnel indicated the need for a lightweight, easily handled light source, SRNL applied its years of experience in the development of sensors for a wide variety of uses to come up with BritePrint.

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**NOTE:** A photo of the device in use is available from the media contact above.

**PHOTO CAPTION:** The headset-mounted BritePrint™ device enables real-time field detection of fingerprints.

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