Intelligent Fingerprinting Process
Drug Detection Unit
DRUG DETECTION

- Detection of metabolites from sweat within the fingerprint

- Reveal lifestyle intelligence
  - Drug use

- Allows simultaneous identification of the sample donor
  - Fingerprint
DRAWBACKS OF CURRENT SYSTEM

- Invasive collection process
- Biohazard risks
- Cross contamination
- Requirements for special handling and transport
HOW DOES IT WORK

- Nanoparticles are formed into antibodies
- Antibodies are bound to the nanoparticles
- This mixture is used to target metabolites
  - Fingerprint is imaged
  - Solution is added
  - Then incubated for a few minutes to allow bind
  - Fingerprint is further developed by adding a dye
  - The color reveals the type of drug
Fig 2: Images of fingerprints by visualising the fluorescent markers that have been bound to the metabolites detected in the donor fingerprints by the Intelligent Fingerprinting technique (Scale Bars: A = 5mm, B = 2mm & C = 1mm). The link of the detected metabolites to the pore structure within the fingerprints can clearly be seen, providing unambiguous evidence that the donor of the fingerprint is associated with the detected metabolite.
The images clearly show that the detected metabolites are first released from the individual sweat pores before spreading down the ridges to create the fingerprint image.
POTENTIAL APPLICATIONS

- Roadside Screening
- Mandatory Drug Testing
- Military
- Occupational Drug Testing
- Airline Industry
- Trucking Industry
For further information: Dottie McDonald
Smart Start, Inc.
(512) 415–2030
Or
Smartox.com