

Case Management Issues from Crime Scene to Court Room

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Laboratory of Forensic
Services



**TRACE
EVIDENCE
SYMPOSIUM**

AUGUST 13-16, 2007
SHERATON SAND KEY
CLEARWATER BEACH, FL

Crime Scene to Court Room

- **Evolution of Trace Evidence**
 - Funding
 - Staff
- **Impact on Case Management**
 - Prioritization
 - Resource Allocation
- **Courtroom Proceedings**



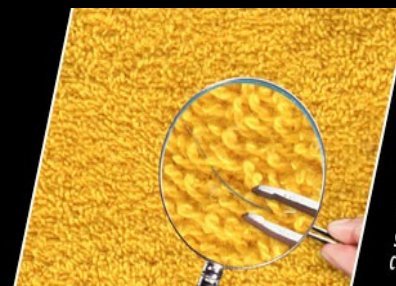
Funding Sources

- **LFLIP (2000)**
 - **Local Forensic Laboratory Improvement Program**
 - **\$25 million to be distributed to 17 local crime laboratories on a competitive basis**
 - **Grant award - Maximum \$3 million**
- **County General Fund**
- **Federal Grants**



Purpose of LFLIP

- Designed for the purpose of improving local crime laboratory services through
 - Remodeling/Renovation
 - New construction
 - Equipment purchase

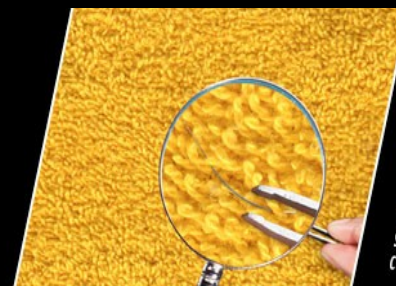


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Equipment

- SEM/EDS (2nd)
- UV/VIS Microspectrophotometer
- FT-Raman Spectrometer
- Liquid Chromatograph/Mass Spectrometer (LC/MS/MS)
- Laser Ablation Inductively Coupled Plasma/Mass Spectrometer

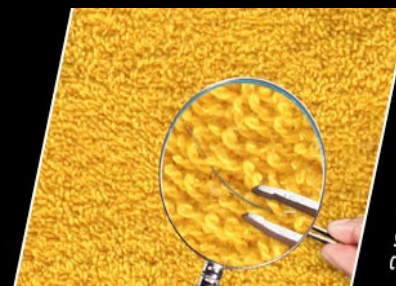


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Ancillary Equipment

- Grim III
- SEM/EDS
- FTIR Microspectrophotometer
- Ion Chromatograph
- Automated Pyrolysis GC/MS
- Full complement of microscopes

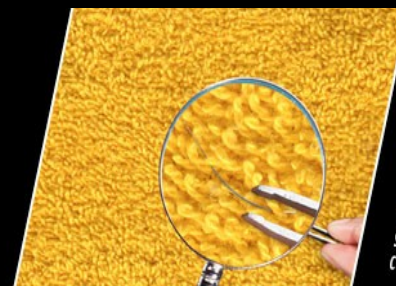


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Staffing

- **Trace Evidence Section**
 - Faye Springer
 - Chip Pollock
 - Trevor Wilson
 - **Senior Student Interns (Research)**
 - Abbegayle Dodds – ICP/MS glass
 - Sara Wiltshire – LC/MS/MS fibers
 - Karen Harrington – ICP/MS glass



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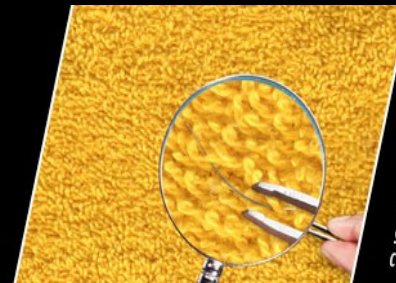
Impact on Case Management

- **Murder scenario**
 - Female victim on highway, ligature strangulation, partially clothed, possible sexual assault
- **Prioritization**
- **Resource Allocation**



Murder Scenario

- **Prioritization**
 - **Crime Scene Call-out**
 - Responding criminalist has responsibility of overseeing the evidence management within the laboratory
 - **Submitted as Investigative Level Case**
 - Perceived Public Threat - Serial crime
 - Death of a Police Officer/Public Official
 - Child death
 - Needs of the investigation
 - Use for subsequent search warrant
 - Political/Media/Public pressure



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Murder Scenario

- **Resource Allocation**
 - **Crime Scene Response**
 - Investment in personnel, time, and equipment
 - **Management Response**
 - **Investigative Level Case**
 - Does the laboratory invest the time and resources on an examination of the evidence that police or prosecution may not use?



Murder Scenario

- **Resource Allocation**
 - **Laboratory Response**
 - **Characterization of the recovered evidence can provide investigative leads**
 - **Case/Investigation matures**
 - **Further examination/analysis to reference materials**
 - **Equipment exists to compare**



Impact on Case Management

- **Carjacking/Robbery Scenario**
 - Vehicle recovered, two male subjects fit description of carjackers, used the vehicle during armed robbery
- **Prioritization**
- **Resource Allocation**



Carjacking/Robbery Scenario

- **Prioritization**

- **Unlikely that the crime laboratory will be called to crime scene**
- **Submitted as Investigative Level Case**
 - **Low priority**



Carjacking/Robbery Scenario

- **Resource Allocation**
 - **Management Response**
 - Does the laboratory invest the time and resources on an examination of the evidence that police or prosecution may not use?
 - **Laboratory Response**
 - Need to make association of suspects with vehicle
 - Examination of carjacked vehicle



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Court Proceedings

- What the courts see is what each side presents at trial
- Criminalist's role
 - Understand the meaning of physical evidence within the context of the case
 - Understand the prosecution theory
 - Anticipate the defense theory



Can we find the forest with all these darn trees?

- Investing in high tech tools, but...
- Our scientists have lost the ability to determine if two items are similar
 - Even to evaluate at the simplest most basic levels
- Crime labs have de-emphasized training
- Crime labs have de-emphasized screening
- Lack of understanding what the right tools to use and what the results tell you



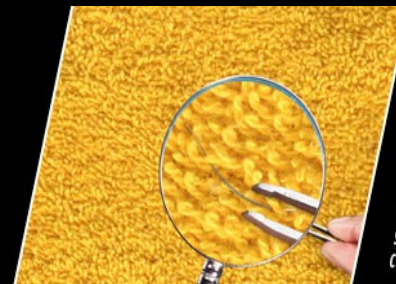
Trace Evidence Resource Center

- A program element of LFLIP proposal
 - Locate a regional center at Sacramento District Attorney's Crime Laboratory
 - Equip the center with state-of-the-art instruments dedicated to trace evidence analyses
 - Offer the use of the equipment to all public forensic laboratories



Why Develop Center?

- Limited growth and development of the trace evidence specialty
 - New method development
 - Standardization of techniques
 - Validation of new and emerging technologies
 - Validation of new equipment



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Why Develop the Center?

- **Emphasis is on DNA**
 - **Use of trace evidence has declined in favor of DNA**
 - **What is left when no biological fluids are shed in the course of the criminal act?**
 - **Other forensic specialties have suffered**
 - **Priority**
 - **Lack sufficient funding for equipment and staff**



The Resource Center

- Provide a repository for
 - Reference materials
 - Manufacturing techniques
 - Manufacturer's information
- Forum for research, development, and validation of methods
 - Visiting scientist program



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Statement of Purpose

- Consolidate and regionalize trace evidence resources
- Address the deficiency in trace evidence analytical services
- Offer a broad array of traditional and state-of-the-art analytical instrumentation



Fee-for-Service Program

- Agency sends evidence, LFS conducts the analysis, supplies data with interpretation, LFS incorporates results and interpretation into a laboratory report
- LFS criminalist may be called upon to testify
- Cost recovery for maintenance, consumables and staff time



Evidence Submission Guidelines

- **Guideline**
 - **We are not doing your laboratory's trace work**
 - Reasonable expectation the evidence has been screened and prepared to run the tests
 - **Individual particles that have been identified as "ready for analysis" or "fits on a slide"**
 - No tape lifts
 - No unprocessed bulk evidence

