

# CARFS Phase II Dynamic Research Roadmap

The ONLY Forensic Science Industry-University Cooperative Research Center

Industry and government requirements drive functional enhancements.

Technology Integration

**Strength areas**

- Industry Advisory Board access to novel emerging technology
- Principle Investigator access to additional funding (I-Corps, SBIR, STTR, PFI, INTERN, etc.)
- Network of major federal and national forensic labs

**Areas to enhance**

- Transitioning projects
- Understanding capabilities of university experts
- Startup Industry Advisory Board members
- Encourage phased projects
- Training and implementation

**Barriers**

- Research outcome visibility
- IT/software access
- Data compliance
- Transitioning projects
- Companies to take tech further

Greater capabilities demand technology development.

Technology Base

**Strength areas**

- Talent pipeline
- Access to instrumentation and samples
- Principle Investigator / Industry Advisory Board collaboration
- Development opportunities
- Rapid response to emerging research needs

**Areas to enhance**

- Internship opportunities
- Security clearance attainment
- Asset sharing (instrumentation)
- Understanding error rates
- Link industry base at sites

**Barriers**

- Sharing internship opportunities
- Integrating students into projects
- Longer project cycles
- Transfer of data, equipment, samples

Technology Upscaling

Expanded portfolio benefits all members.

Technology advances from new research.

Knowledge Base

**Strength areas**

- Forensic Chemistry (trace, contraband, biosensors)
- Forensic Biology (microbial, entomology, genomics)
- Forensic Toxicology (metabolomics, biomarkers)
- Forensic Medicine (MDI, anthropology, taphonomy)

**Areas to enhance**

- Digital Evidence (mobile devices, authentication)
- Nuclear Forensics (source signatures)
- Environmental Forensics (trafficking, attribution)

**Barriers**

- Universities / experts ease of collaborating
- Different budget cycles
- Understanding capabilities and needs

Enabling Technologies

Technology supports increased capabilities.

Fundamental Insights

Knowledge informs technology development.



**Success Measures**

- Members
- Participating sites
- Research funds
- Faculty supported
- Students supported and employed
- Publications and posters
- Disclosures and patents
- Proposals submitted
- Follow-on funding
- Networking results

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**Center Director/Site Director—Dr. Kenneth G. Furton**  
Executive Director, Global Forensic and Justice Center;  
Chief Scientific Officer and Provost Emeritus, FIU  
Phone: 305-348-0022  
Email: furtonk@fiu.edu

**Center Associate Director/Site Director—Dr. Aaron M. Tarone**  
Associate Professor, Department of Entomology,  
Texas A&M University  
Phone: 979-862-1311  
Email: tamlucaia@tamu.edu

**Site Director—Dr. Sarah Kerrigan**  
Institute for Forensic Research, Training, and Innovation (IFRTI); Professor of Forensic Science, Sam Houston State University  
Phone: 713-817-2229  
Email: sarah.kerrigan@shsu.edu

**IAB Chair—Dr. Marc A. LeBeau**  
Senior Scientist, Forensic Toxicologist, FBI Laboratory  
Phone: 703-632-7408  
Email: malebeau@fbi.gov

**Liaison—Gerry LaPorte**  
Director of Research Innovation, Global Forensic and Justice Center, FIU  
Phone: 703-209-2744  
Email: glaporte@fiu.edu