

Midwest Forensics Resource Center

Quarterly Update

April 15, 2012

The Midwest Forensics Resource Center at Ames Laboratory is funded through the National Institute of Justice, under interagency agreement number 2009-DI-BX-K206. The Ames Laboratory is operated for the U.S. Department of Energy by Iowa State University, under contract number DE-AC02-07CH11358.

To view past issues of the MFRC Newsletter, please visit www.ameslab.gov/mfrc and log into Partners Web. If you need help accessing the Partners site, please contact the MFRC office at 515-296-MFRC or email mfrc@ameslab.gov.

Inside this issue:

News	1
Casework Assistance	1
Training	2
R&D Programs	3
Technical Innovations in Management & Infrastructure (TIMI)	3
Contacts	3

News

Thank You and Farewell:

Cindy Eckhart will be leaving the MFRC April 30th to accept a position in the Ames Laboratory's Materials Sciences and Engineering Program. We would like to take this opportunity to say both "Thank You" and "Farewell" to Cindy; and to wish her well in her new endeavor.

Introduction:

We would also like to take this opportunity to recognize Melinda Schlosser. Melinda will assume the responsibility for MFRC Training communications and logistics beginning May 1st. After that date, please direct any questions you may have regarding MFRC Training to Melinda via e-mail to mschlosser@ameslab.gov, or via telephone to 515-296-6372.



SWGSTAIN:

The spring SWGSTAIN meeting, sponsored by the MFRC, was held on April 15-20, 2012 in Salt Lake City, UT.



Columbus, OH — site of the 2012 MFRC/Midwest Crime Lab Directors Annual Meeting to be held at the Crowne Plaza Hotel on May 15-17.

MFRC Annual Meeting:

The MFRC Annual Meeting is scheduled for May 17, 2012 at the Crowne Plaza Hotel in Columbus, OH. This meeting will be held in conjunction with the Midwest Crime Lab Directors Annual Meeting (May 15-16) at the same location. At our annual meeting, principal investigators from a number of our research and TIMI projects will present the results of their work, followed by discussion on our entire program of work. This is a great time for stakeholders to provide input on what we should be doing in the coming year.

Casework Assistance

The MFRC currently receives a constant level of requests for referrals for services. We welcome these inquiries, as well as any requests for other types of consultation or analyses. In addition to providing referrals to existing services, this program is designed to provide free access to new expertise and instrumentation.

If you would like more information, or to discuss the casework assistance program, please let us know. We would be happy to discuss the pro-

gram, answer any questions you may have, and walk through the process with you. Stan Bajic, the Casework Assistance Coordinator, can be reached at 515-294-2086 or via email at sjbajic@ameslab.gov.



Casework Assistance by the MFRC

Training

Training during the last quarter:

There were no MFRC training classes held during the last quarter.

Upcoming Training:

Best Practices in Forensic Science Management

This class is scheduled in two parts. The first part will take place over five days in June 2012, and the second will take place during three days in September. Classes will be held in Omaha, Nebraska. This management series is intended for those considering the transition from analyst to manager, those who are making the transition, or those who are new to crime laboratory management. It may also be useful for those who have more experience. The class will address the changing duties of an individual making the transition from analyst to supervisor/manager, and the new skills he or she will need. It will describe the role of the manager in a laboratory, the fundamentals of staff management, the management of time and manpower, fiscal and budgetary management, techniques of delegation, and ethics.

The instructors for the class are Dr. Anthony Hendrickson and Laura Mizaur. Dr. Hendrickson is the Dean of the College of Business at Creighton University where he is also Professor of Information Systems Management. Laura Mizaur is a licensed CPA, who teaches courses in Accounting, Management, and Innovation in the College of Business Administration at Creighton University. Dr. Hendrickson developed the class for the MFRC on the basis of laboratory director requests and inputs. These two instructors have taught the class in the past, and have modified it based on student feedback. This class is currently filled.



Dr. Anthony Hendrickson and Laura Mizaur prepare for the 2010 Best Practices in Forensic Science Management class.



Dr. Anthony Hendrickson presents at the 2009 Best Practices in Forensic Science Management class.

MFRC Training Website:

The MFRC Training site contains information on upcoming MFRC training, links to other sources of forensic training, MFRC training materials available for download, and a report on the MFRC's past training activities. The site is available at:

<http://www.ameslab.gov/mfrc/training>.

MFRC Training and Professional

Development Program Summary:

The MFRC recently published a brief history of the MFRC's forensic science training programs. It is available to read or download from the MFRC's web page. This document provides a 10-year picture of the 73 forensic science training classes the MFRC has sponsored. One section of the document is a chronological list of classes and yearly progress while the other contains sample course outlines.

If you are interested the document is available through a link on the MFRC training website. The MFRC training website is: <https://www.mfrc.ameslab.gov/training/>.



2011 Training and Professional Development Program Summary booklet

Education

Todd Zdorkowski visited Dwight Adams, PhD at the University of Central Oklahoma Forensic Science Institute during March. Dr. Adams, Director of the Institute, has built growing undergraduate and graduate programs over the past few years and served, formerly, as head of the FBI's DNA unit. Todd explored possible future joint efforts between the University of Central Oklahoma Forensic Science Institute and the MFRC.

If you have input or suggestions for educational efforts, please contact Todd Zdorkowski at 515-294-5640 or zdorkowski@ameslab.gov.

R & D Programs

At the end of last year, the 2011 Research and Development Program Summary Booklet was published. Twelve different projects are highlighted in the booklet. Projects range from Pattern Evidence to DNA and Chemistry. Besides information on the forensic need each project addresses, the summaries also provide a description of the innovative technology or new tool, its experimental design and methodology, partners and collaborators, as well as accomplishments made, benefits derived, and findings presented. Also included is a brief discussion of plans to continue the research project or to implement the new technology or tool. If you are interested in receiving a copy of the 2011 booklet, please contact Rudi Luyendijk at 515-294-2931 or rluyendi@ameslab.gov.

Since the publication of the booklet, six projects have been completed. They are: Application of a Novel Mixed-Mode Reverse HPLC Column to the Rapid Confirmatory Analysis of Intoxicants and Their Hydrophilic Metabolites by LC-MS/MS (Dwight Stoll, Gustavus Adolphus College); Application of Multivariate Statistical Procedures in Fire Debris Analysis: Investigating Matrix Interference Effects and Weathering of Ignitable Liquids

on Association of Ignitable Liquid Residues to Neat Ignitable Liquids (Ruth Smith and Victoria McGuffin, Michigan State University); and Rapid Arson Sample Analysis Using DART Mass Spectrometry (John McClelland, Iowa State University), Discrimination of Dyed Cotton Fibers Based on UV-Visible Microspectrophotometry and Multivariate Statistical Analysis (John Goodpaster, Indiana University-Purdue University Indianapolis); Shape Measurement Tools in Impression Evidence: A Statistical Approach (Mary Bush, State University of New York at Buffalo); and Comparison of Gas Chromatography-Mass Spectrometry and Liquid Chromatography-Mass Spectrometry for Discrimination of *Salvia divinorum* from Related *Salvia* Species Using Chemometric Procedures (Victoria McGuffin and Ruth Smith, Michigan State University).

Final reports for these finished projects are available on the MFRC website (<http://www.ameslab.gov/mfrc>). Six projects are currently still active. Information on their progress and accomplishments is currently being collected and will be published in the 2012 Research and Development Program Summary Booklet. That booklet is scheduled for completion this fall. In 2012, we did not issue a Call for Proposals.

Technical Innovations in Management & Infrastructure (TIMI)

In collaboration with Iowa State University and the Bureau of Criminal Apprehension Forensic Science Lab (BCA) in St. Paul, MN, we are developing an expert system to improve the intake of evidence at crime labs and to reduce the need for follow-up phone calls. During the past quarter, the PIs developed a prototype of the expert system for drug evidence submission. It has been loaded on one of the Ames Lab servers with a website created to access it. Once final inspections are completed, it will be released to BCA Evidence Technicians and crime lab scientists/examiners for preliminary testing.

The PIs also developed a survey to understand the importance of each item category in continuing the submission process. In the survey, evidence technicians, crime lab scientists, and examiners are asked to rate (on a simple scale) the importance of each piece of information sought in the expert system. The survey is organized by sections and should take 15 minutes or less. The information collected will be used to make adjustments to the prototype. Once adjustments are made, the prototype will be expanded to incorporate all other BCA evidence intake tasks and activities.

Contact the MFRC

Director:	David Baldwin	515-294-2069	dbaldwin@ameslab.gov
Administration:	Melinda Schlosser	515-296-6372	mschlosser@ameslab.gov
Casework Assistance:	Stan Bajic	515-294-2086	sjbajic@ameslab.gov
Training/Education:	Todd Zdorkowski	515-294-5640	zdorkowski@ameslab.gov
R&D/TIMI:	Rudi Luyendijk	515-294-2931	rluyendi@ameslab.gov
Events:	Melinda Schlosser	515-296-6372	mschlosser@ameslab.gov

MFRC

Midwest Forensics Resource Center

Research and Development
Program Summary

November 2011

2011 Research and Development
Program Summary booklet

Midwest Forensics Resource Center
Ames Laboratory/Iowa State University
130 Spedding Hall
Ames, IA 50011-3020

Phone: 515-296-MFRC
Fax: 515-294-4748
E-mail: mfrc@ameslab.gov



IOWA STATE
UNIVERSITY.

MFRC



NIJ