

## Biotechnology In Action

### Our Tradition

The Marshall University Forensic Science Center (MUFSC) was founded on the belief that biotechnology could be used to better the commu-



nity by assisting law enforcement and fueling meaningful economic growth. Since its inception, MUFSC has served as the sole CODIS labo-

ratory for the state of West Virginia and has graduated over 150 students from its FEPAC-accredited Forensic Science graduate program. From these roots, MUFSC has expanded to provide nationally-respected training programs, perform cutting-edge research, and establish itself as one of the nation's leading forensic DNA laboratories.

### Our DNA Laboratories

In addition to acting as West Virginia's CODIS laboratory, MUFSC utilizes the latest in DNA technology to perform other vital services for the community. MUFSC analyzes forensic casework for several state and local agencies



in order to reduce backlogs. MUFSC has also partnered with law enforcement across three states to perform DNA testing on property crimes.

By performing analysis on these crimes, which are often marginalized, MUFSC is helping to reduce recidivism.

MUFSC performs DNA-based parentage testing for private clients and law enforcement. Civil tests allow customers to answer questions

of lineage, resolve inheritance cases, and assist in immigration issues. Our criminal parentage cases routinely aid law enforcement investigating homicide and sexual abuse cases.

Finally, MUFSC's DNA preservation services provide an invaluable service to individuals and the scientific community alike. By preserving the DNA of deceased individuals, we enable families to better identify relatives and preserve the memory of their loved ones. The project will also help our customers solve questions of genealogy and may help form a basis for future testing for genetic disease.

### Our Training Programs

One of MUFSC's central missions is to provide training to law enforcement and forensic professionals on a national scale. To accomplish this goal, MUFSC has partnered with a number of state, local, and national organizations including: the West Virginia State Police, the Federal Bureau of Investigation, the West Virginia Foundation for Rape Information and Services, and Second Creek Technologies. Through these partnerships, MUFSC has provided a wide range of training to over 750 participants from 49 states.

MUFSC's nationally-respected training programs include:

- **Advanced DNA and Laboratory Automation Training through the President's DNA Initiative**
- **FBI Laboratory Specialized Crime Scene Investigation Training**
- **NIJ Expert Systems Testbed Project**
- **Adult and Pediatric Sexual Assault Nurse Examiner Training**
- **Computer Forensics Training**

# The MUFSC Advantage

## Our People

MUFSC is a respected member of the biotechnology community and we work hard to develop useful applications for DNA technology. But, despite the important role technology plays within our organization, MUFSC's most vital asset remains our people.



MUFSC is home to one of only a handful of FEPAC-accredited forensic science programs in the United States. Our program is unique as the only academic program housed alongside a working CODIS laboratory.

Our graduates are the best and the brightest, earning high marks in science at the undergraduate level. Once here, they receive extensive instruction and vital, hands-on training in a wide variety of fields including crime scene investigation and DNA analysis. At the conclusion of the five semester program, students are well prepared to enter the ever-changing field of forensic science.

Our graduates have found success in law enforcement, government agencies, research facilities, and private business. In fact, most of our DNA analysts and computer forensic examiners are graduates of the program. Few laboratories can match MUFSC's academic pedigree.

## Our Dedication to Quality

We pride ourselves on quality. We carry accreditations for:

- Relationship testing from the **AABB**
- ISO/IEC 17025 standards from **Forensic Quality Services—International**
- Our academic program from the **American Academy of Forensic Sciences**

These accreditations ensure our customers know the services we provide are of the very highest quality.

## Our Facilities

As the field of forensic science expands, so too is MUFSC. Having recently begun construction on the fourth phase of a five part, multi-million dollar expansion and renovation, MUFSC stands poised to take advantage of the new opportunities brought by improvements in biotechnology.



Our laboratory is a secure facility with multiple high-tech laboratories used for DNA analysis and computer forensics. We also have three classrooms with the latest audio/visual technology. With the completion of a new Training and Education Annex in the summer of 2009, MUFSC will dramatically improve its ability to deliver training and education to the community. Once complete, the 16,000 square foot facility will feature three additional classrooms, expanded DNA training laboratories, and new forensic chemistry and microscopy labs.

## Our Research

MUFSC is committed to advancing biotechnology through scientific research. MUFSC's bacterial source tracking project uses DNA to identify the source of fecal pollution in West Virginia's rivers and streams. By achieving this goal, we aid the U.S. Department of Agriculture in developing policies to control the sources of pollution and protect the environment.

MUFSC also facilitates research in Chemometric Analysis which deals with the application of advanced multivariate statistical methods to chemical analyses. Its primary objective is to develop a database of smokeless powders with the Technical Working Group for Fire and Explosives. Data provided by the ATF is being used to study the individualization of gasoline from fire debris.