



## BIOTECHNOLOGY RESOURCES

### **Marshall University Nutrition and Cancer Center**

[www.marshall.edu/cncc](http://www.marshall.edu/cncc)

Investigators at this National Institutes of Health-funded Center of Biomedical Research Excellence are studying a wide variety of dietary components— including omega-3 fatty acids, capsaicin (responsible for the “hotness” of chili peppers) and alcohol—and their relationships to small cell lung cancer, breast cancer, skin cancer and leukemia/lymphoma.

### **Forensic Science Center**

<http://forensics.marshall.edu>

The Marshall University Forensic Science Center is a national leader in forensics education, training, DNA testing and research. The center’s state-of-the-art DNA laboratories are nationally accredited and its master’s degree program is ranked among the best in the country. Its training laboratories feature cutting-edge forensics DNA equipment—including genetic analyzers and automation robots—to provide practical, hands-on laboratory experience.

The center’s Crime Scene House and its grounds serve as a living laboratory, giving instructors an opportunity to teach crime scene investigation techniques including entry procedures, photography, evidence documentation and collection, latent fingerprint development techniques, blood spatter pattern analysis and grave excavation.

### **Marshall Institute for Interdisciplinary Research**

[www.marshall.edu/miir](http://www.marshall.edu/miir)

Created through the state’s West Virginia Research Trust Fund, the institute provides an innovative business platform that connects and fosters integrative research across multiple disciplines.

Scientists at the institute are developing a focused program of pioneering biotechnology research dedicated to producing patentable scientific breakthroughs and creating new high-tech businesses based on those discoveries. Research is directed with licensable endpoints in mind and corporate partners play important roles in selecting and developing projects that have commercial potential.

### **Robert C. Byrd Biotechnology Science Center**

[www.marshall.edu/campus/virtualtour.asp?id=34](http://www.marshall.edu/campus/virtualtour.asp?id=34)

Designed to facilitate interdisciplinary research between the College of Science and the university’s medical school, this state-of-the-art research and educational facility houses biomedical scientists and their students studying cancer, cardiovascular disease and other conditions prevalent in West Virginia.

The facility features classrooms, teaching and research labs, and the university’s biomedical core facilities—including sophisticated imaging, genomics and flow cytometry labs. The center is also home to the Marshall Institute for Interdisciplinary Research and the state’s first next-generation DNA gene sequencer.

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## **West Virginia IDeA Network of Biomedical Research Excellence**

[www.wv-inbre.net](http://www.wv-inbre.net)

This National Institutes of Health-funded institute is establishing a consortium of the undergraduate institutions in West Virginia—with the goal of enhancing their capacity for educating and training faculty and students in biomedical research.

The principal focus of research at the institute is cardiovascular disease and cancer.

## **Center for Diagnostic Nanosystems**

[www.marshall.edu/cdn](http://www.marshall.edu/cdn)

Researchers at the Center for Diagnostic Nanosystems focus on designing, developing and fabricating state-of-the-art diagnostic devices for cancer, cardiovascular disorders, diabetes, dementia, infant care, and air and water quality.

The center is also dedicated to stimulating unprecedented interdisciplinary collaboration among faculty members and students in the medical, biological, chemical, physical and life sciences, and engineering.

## **McKown Translational Genomic Research Institute**

[http://bms.marshall.edu/core\\_facilities/translational-genomic-research-institute](http://bms.marshall.edu/core_facilities/translational-genomic-research-institute)

The Charles H. McKown, M.D., Translational Genomic Research Institute, located on the top floor of the Edwards Comprehensive Cancer Center, comprises more than 10,000 square feet of research space and features advanced scientific equipment, including a next-generation DNA sequencer.

The institute enables researchers to rapidly translate laboratory research into clinical applications that will improve patient care. The institute is also the home of the West Virginia Cancer Genomics Network.

## **Cell Differentiation and Development Center**

[www.marshall.edu/cddc](http://www.marshall.edu/cddc)

The multidisciplinary research groups within this center focus mainly on the mechanisms that govern cellular differentiation and development.

The center's members are engaged in the fields of aging, diabetes, cardiovascular disease, muscular dystrophies, in vivo and in vitro pharmacological testing, nanomolecular biomotors, transcriptional regulation and protein chemistry.

## **Biomedical Research Core Facilities**

[http://bms.marshall.edu/core\\_facilities](http://bms.marshall.edu/core_facilities)

These centralized laboratories—all located in the Robert C. Byrd Biotechnology Science Center—provide state-of-the-art resources to facilitate biomedical research.

The core facilities include a genomics lab, a microscopy lab and a flow cytometry lab. The services of these labs are available to the university community, as well as to government, business and industry.