

# BIOTECHNOLOGY PROJECTS OF MARSHALL UNIVERSITY

## INVESTIGATORS

### ENVIRONMENTAL/FORENSICS

#### **Bacterial indicators of water quality & biodegradation/bioremediation**

Dr. Charles Somerville / Biological Sciences

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<http://webpages.marshall.edu/~somervil/>

<http://www.marshall.edu/biotechnology/present/USACE.htm>

#### **Bacterial source tracking fecal pollution in natural waterways**

Dr. Pamela Staton / Forensic Science

304-690-4363 ext. 201

[staton1@marshall.edu](mailto:staton1@marshall.edu)

#### **Bacterial source tracking for environmental and bioterrorism assessment**

Dr. Terry Fenger / Forensic Science Program

304-690-4373 ext. 204

<http://forensics.marshall.edu>

#### **Genotypic bacterial source tracking database development**

Dr. Pamela J. Staton / Forensic Science Program

304-696-7343

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<http://www.marshall.edu/biotechnology/present/pstaton.htm>

#### **Aquatic biomonitoring from communities to genetics**

Dr. Tom Jones

Integrated Science and Technology

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#### **Environmental management systems**

Dr. Anthony Szwilski / College of Information Technology and Engineering

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#### **Evolution and genetics of toxic arthropods**

Dr. Victor Fet / Biology

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[fet@marshall.edu](mailto:fet@marshall.edu)

<http://www.science.marshall.edu/fet/euscorpius/Fet.htm>

#### **Individualization of smokeless powder from improvised explosive devices and gasoline residues from fire debris**

Dr. J. Graham Rankin / Forensic Science Program

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<http://www.marshall.edu/biotechnology/present/AAFS2004/files/frame.htm>

#### **Thimerosal induced neurotoxicity**

Dr. Kelley Kinningham / Pharmacology

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#### **Mechanisms of nephrotoxicity & bioactivation of chemicals to toxic species**

Dr. Gary O. Rankin / Pharmacology

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#### **Hepatic and renal toxicity of drugs and pesticides**

Dr. Monica Valentovic / Pharmacology

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# BIOTECHNOLOGY PROJECTS OF MARSHALL UNIVERSITY

## INVESTIGATORS

### MEDICAL

#### **Genetic basis of hypercholesterolemia**

Dr. Donald A. Primerano / Microbiology &  
Molecular Genetics  
304-696-7338  
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#### **Obesity-associated hypertension**

Dr. Elsa I. Mangiarua / Physiology  
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#### **Obesity-associated hypertension**

Dr. William D. McCumbee / Physiology  
304-696-7366  
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#### **SNPs and cardiovascular disease**

Dr. Elizabeth Murray/Integrated Science and  
Technology  
304-696-2366  
[murraye@marshall.edu](mailto:murraye@marshall.edu)  
<http://www.marshall.edu/senate/achieve/profile.asp?ID=237>

#### **Mechanisms of mechanical signal transduction in skeletal and smooth muscle**

Dr. Eric C. Blough / Biology  
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<http://www.science.marshall.edu/blough/>

#### **Molecular mechanisms of smooth muscle contraction and hypertension**

Dr. Gary Wright/Physiology  
304-696-7368  
[wrightg@marshall.edu](mailto:wrightg@marshall.edu)

#### **Control of posture and walking in animals/legged robots**

Dr. Sasha Zill / Anatomy, Cell and Neurobiology  
304-696-7384  
[zill@marshall.edu](mailto:zill@marshall.edu)  
<http://medix.marshall.edu/~zill/projects.htm>

#### **Omega-3 fatty acids and tumor membrane structure/function**

Dr. Laura J. Jencki / Biology  
304-696-6791  
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<http://science.marshall.edu/jencki/>

#### **Vitamin A (retinoids), protein kinase C, resveratrol, melanocytes, and melanoma**

Dr. Richard M. Niles / Biochemistry and  
Molecular  
Biology  
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<http://musom.marshall.edu/bio/niles.htm>

#### **Progestins and breast cancer**

Dr. Michael Moore  
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<http://musom.marshall.edu/bio/moore.htm>

#### **Transcription factors in cancer**

Dr. Maiyon Park / Biochemistry and Molecular  
Biology  
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#### **Chromatin structure of eukaryotic promoters**

Dr. Philippe Georgel / Biology  
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<http://www.science.marshall.edu/georgel/>

#### **The role of $\beta$ -catenin in pituitary tumor growth and melanoma**

Dr. Beverly C. Delidow / Biochemistry and  
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## INVESTIGATORS

### **SKI and SNO expression in male germ cells and testicular tumors**

Dr. Laura L. Richardson / Anatomy, Cell and Neurobiology  
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### **Molecular basis of mammalian fertilization**

Dr. Guo-Zhang Zhu / Biology  
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### **Epithelial cell polarity**

Dr. Simon Collier / Biology  
304-696-6111  
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### **Non-mast cell histamine in blood vessels**

Dr. Carl Gruetter / Pharmacology  
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### **Genetic basis of biofilm formation and bacterial lung infection in cystic fibrosis**

Dr. Hongwei Yu / Microbiology, Immunology, and Molecular Genetics  
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### **Neural basis for learning and memory**

Dr. Lawrence M. Grover / Physiology  
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### **Production of anti-cancer alkaloids from plant cells in a NASA -designed microgravity bioreactor**

Dr. Jagan Valluri/Biology  
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### **Plant responses to environmental stress conditions**

Dr. Marcia Harrison/Biology  
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<http://www.marshall.edu/cellcentral/>

### **Micro and nano scale imaging studies**

Dr. Michael Norton / Chemistry  
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<http://www.atomcrafters.com/Index.htm>

### **Carbon nanotubes and nanoporous silicon based devices and sensors.**

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