

# Training Grant in Bacterial Pathogenesis



The University of Tennessee Health Science Center (UTHSC) Integrated Program in Biomedical Sciences (IPBS) has been selected to participate in a NIH-funded training grant in bacterial pathogenesis. This one-of-a-kind T32 grant is reserved for two NIH-defined underrepresented minority student trainees enrolled in the Microbial Pathogenesis, Immunology and Inflammation (MPII) Track of the IPBS. The MPII Web page can be found at [www.uthsc.edu/grad/IPBS/](http://www.uthsc.edu/grad/IPBS/).

Selection as a trainee for a NIH grant is an important stepping stone in the success of one's career. Grant recipients will be provided with a competitive-level stipend, tuition remission, health insurance and travel expenses to attend a scientific meeting. In addition to the curriculum required of all students conducting research in bacterial pathogenesis, trainees will receive advanced instruction in grant writing and reviewing, as well as participate in world-class scientific meetings typically reserved for postdoctoral fellows and faculty. Trainees will also benefit from level 3 biocontainment training in the newly completed, NIH-supported Regional Biocontainment Laboratory (RBL) on the UTHSC campus in Memphis, Tenn. This facility is one of only 13 RBLs in the United States.



**Regional Biocontainment Laboratory  
UT Health Science Center**

Trainees enrolled in the IPBS MPII Track will choose trainers' laboratories from three world-class institutions – UTHSC, St. Jude Children's Research Hospital or the Veterans Affairs Medical Center. Current trainers, locations and their research interests can be found on the reverse side.



**UT Health Science Center**



**St. Jude Children's Research Hospital**



**Veterans Affairs Medical Center**

Trainees are selected on the basis of their undergraduate and graduate GPAs, GRE scores and letters of reference that attest to their research potential. For additional information on the UTHSC IPBS and training grant in bacterial pathogenesis, please contact:

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THE UNIVERSITY of  
**TENNESSEE**   
HEALTH SCIENCE CENTER

## Current trainers, locations and research interests

The University of Tennessee Health Science Center  
Integrated Program in Biomedical Sciences  
Microbial Pathogenesis, Immunology and Inflammation Track

### **Robert Belland, PhD**

Associate Professor, UT Department of Molecular Sciences  
rbelland@uthsc.edu  
Laboratory location: UT Health Science Center

"Characterization of the interaction between pathogenic chlamydial species and their hosts during acute and persistent disease"

### **Gerald Byrne, PhD**

Professor and Chair, UT Department of Molecular Sciences  
gbyrne@uthsc.edu  
Laboratory location: UT Health Science Center

"Cell and molecular biology of chlamydia pathogenesis"

### **Harry Courtney, PhD**

Professor, UT Department of Medicine  
hcourtney@uthsc.edu  
Laboratory location: Veterans Affairs Medical Center

"Molecular pathogenesis of streptococcal infections"

### **James Dale, MD**

Professor, UT Department of Medicine  
jbdale@uthsc.edu  
Laboratory location: Veterans Affairs Medical Center

"Molecular pathogenesis of group A streptococcal infections; development and design of group A streptococcal vaccines"

### **James Fleckenstein, MD**

Assistant Professor, UT Department of Medicine  
jfleckenstei@uthsc.edu  
Laboratory location: Veterans Affairs Medical Center

"Pathogenesis of enterotoxigenic E. coli (ETEC), focusing on the identification and molecular characterization of novel virulence factors and their application to vaccine development"

### **Suzanne Jackowski, PhD**

Member, Department of Infectious Diseases  
St. Jude Children's Research Hospital  
suzanne.jackowski@stjude.org  
Laboratory location: St. Jude Children's Research Hospital

"Phospholipid metabolism and membrane stress responses; pantothenate kinase as a target for small molecule therapeutics"

### **Richard Lee, PhD**

Member, Department of Chemical Biology and Therapeutics  
St. Jude Children's Research Hospital  
richard.lee@stjude.org  
Laboratory location: St. Jude Children's Research Hospital

"Multi-drug resistant tuberculosis"

### **Jonathan A. McCullers, MD**

Assistant Member, Department of Infectious Diseases  
St. Jude Children's Research Hospital  
jon.mccullers@stjude.org  
Laboratory location: St. Jude Children's Research Hospital

"Mechanisms and virulence factors underlying the interaction between respiratory viruses and bacteria. Current research is focusing on influenza viruses, streptococcus pneumoniae and staphylococcus"

### **Mark Miller, PhD**

Associate Professor, UT Department of Molecular Sciences  
mamiller@uthsc.edu  
Laboratory location: UT Health Science Center

"Development of vectors for delivery of cytokine-assisted vaccines focusing on the use of replication-defective vesicular stomatitis virus as a delivery vector for cytokine-adjuvant(s) in combination with either exogenous or virus-encoded candidate immunogens"

### **Peter Murray, PhD**

Associate Member, Department of Infectious Diseases  
St. Jude Children's Research Hospital  
peter.murray@stjude.org  
Laboratory location: St. Jude Children's Research Hospital

"Regulation of the innate immune response"

### **Charles Rock, PhD**

Member, Department of Infectious Diseases  
St. Jude Children's Research Hospital  
charles.rock@stjude.org  
Laboratory location: St. Jude Children's Research Hospital

"Small molecule therapeutics; prokaryotic lipid metabolism"

### **Elaine Tuomanen, MD**

Member and Chair, Department of Infectious Diseases  
St. Jude Children's Research Hospital  
elaine.tuomanen@stjude.org  
Laboratory location: St. Jude Children's Research Hospital

"Molecular mechanisms of pneumococcal invasion using in vivo and in vitro models of pneumonia, sepsis, and meningitis"

### **Stephen White, DPhil**

Member and Chair, Department of Structural Biology  
St. Jude Children's Research Hospital  
stephen.white@stjude.org  
Laboratory location: St. Jude Children's Research Hospital

"Structural studies by X-ray crystallography on biological macromolecules with emphasis on fatty acid synthesis, protein-DNA and protein-RNA interactions, and structure-assisted drug design"