

NRSA FELLOWSHIP IN TRAUMA AND INFLAMMATION RESEARCH

NSRA fellowships are available for research training in the areas of **trauma, burn, surgical critical care and inflammation**. Trainees will pursue a two-year research program in the laboratory of an established basic and clinical research scientist, supplemented with training in advanced biostatistics and bioethics courses.

The trainees will be required to carry out an independent research project in the laboratory of an accomplished basic scientist experienced in physiology, pathology, microbiology, immunology, molecular biology, or epidemiology with guidance provided by a clinical mentor in trauma, burns or surgical clinical care. The faculty is drawn from established investigators in the medical school. Current areas of research interest include cardiovascular biology, immunology, trauma, hemorrhage, inflammation, sepsis, gender dimorphism, apoptosis, and traumatic brain injury. This training program is designed to provide research training for clinicians and basic scientists who are interested in pursuing academic careers in trauma and inflammation-related disciplines.

Selection of trainees is based on the demonstrated ability of the candidate and his/her career choice in academic medicine. Applicants must be United States citizens or permanent residents and have completed their M.D., Ph.D. or DVM. The M.D. candidates must have at least two years of post-doctoral experience (Residency training). Those candidates pursuing a Fellowship during their clinical training program must provide evidence that they will be accepted back into that clinical program upon completion of this Fellowship training. Interested applicants are encouraged to submit curriculum vitae, three letters of recommendation and a personal statement detailing their career interests.

The University of Alabama at Birmingham is an equal opportunity employer and applications from qualified under-represented minorities and women are strongly encouraged. The Program Directors, Basic Science and Clinical Science coordinators and selected faculty members will interview the finalist candidates and the Executive Committee will select the trainees.

SUPPORT: Includes stipend, benefits, tuition for courses at School of Medicine, travel funds, and appointment at the School of Medicine as a Post-Doctoral Fellow

CONTACT: Irshad H. Chaudry, Ph.D., Professor and Director, Center for Surgical Research, Volker Hall G094, University of Alabama at Birmingham, 1670 University Boulevard, Birmingham, Alabama 35294-0019; phone (205) 975-2195, Fax (205) 975-9719; E-mail bobbi.smith@ccc.uab.edu

APPLICATION DEADLINE: January 7 of each year for the July position

NIH/NIGMS POST-DOCTORAL TRAINING IN TRAUMA AND INFLAMMATION RESEARCH

UNIVERSITY OF ALABAMA AT BIRMINGHAM

PROGRAM FACULTY

Alan W Eberhardt, Ph.D. Professor, Mechanical & Biomedical Engineering	Computer modeling and surveillance methods to understand fracture etiology on impacts
Anupam Agarwal, M.D. Division Director, Nephrology	Nephrology include acute renal failure, specifically in the intensive care unit setting, toxic nephropathies, fluid and electrolyte disorders, glomerular disorders, progression of renal disease, and diabetic nephropathy.
Candace L Floyd, Ph.D. Assistant Professor, Physical Medicine and Rehabilitation	Understanding of the complex interaction of glial and neuronal cells in the pathophysiology of traumatic CNS injury will lead to novel, effective therapeutic interventions.
Carlton J Young, M.D. Associate Professor, Surgery	Oxidation stress and ischemia reperfusion injury in renal transplantation
Charles O Elson III, M.D. Professor, Medicine	Regulation of mucosal responses, maintenance of normal homeostasis and contribution to chronic intestinal inflammation
Clinton J Grubbs, Ph.D. Professor, Surgery	Evaluation of chemopreventive agents in chemically induced cancer models
Dale A Parks, Ph.D. Professor, Anesthesiology, Physiology & Biophysics	Physiologic, biochemical and cellular mechanisms of reactive and nitrogen metabolism with special reference to ischemia-reperfusion and inflammatory states
Dale J Benos, Ph.D. Professor and Chairman, Physiology & Biophysics	Elucidation of the molecular basis for operation of epithelial and astrocyte ion channels and transporters, and understanding the role of cytokines and HIV envelop protein, gp120, on the astrocyte ion transport function; calreticulin function and elucidation of transcription mechanisms in glucocorticoid- mediated adipocyte differentiation in stromal cells
Daniel C Bullard, Ph.D. Associate Professor, Genetics	Research interests centered on defining the cellular and genetic mechanisms by which adhesion molecules regulate immune and inflammatory responses

David T Curiel, Ph.D.
Professor, Medicine

Current research interest relates to the development of vector systems for the achievement of targeted, cell-specific gene delivery. This central field mandate addressed via the development of adenoviral vector systems, which embody genetic capsid modifications allowing tropism modification. In addition, the parallel study of the biologic dictates of adenovirus entry is currently being endeavored.

Devin Edward Eckhoff, M.D.
Professor and Chief, Transplantation Surgery

Pre-clinical and clinical evaluation of immunosuppressive agents

Edward Abraham, M.D.
Professor and Chairman, Medicine

Research focuses on the genetic, cellular, and transcriptional mechanisms that contribute to the development of acute lung injury

Etty N Benveniste, Ph.D.
Professor and Chairperson, Cell Biology

Cytokine and chemokine regulation of gene expression in central nervous system, especially in astrocytes and glial cells

Gerald McGwin Jr, Ph.D.
Professor and Vice-Chair, Epidemiology

The area of epidemiology; focus on the cause, outcome and recurrence injuries caused by trauma and burns

Irshad H Chaudry, Ph.D.
Professor and Vice-Chairman, Surgery

Maintenance of organ function after trauma-hemorrhage, immunological aspects of hemorrhage as well as sepsis, with particular emphasis on gender dimorphism and modulation of the depressed cardiovascular and immunological responses with novel therapeutic modalities; TBI and its attenuation

J Edwin Blalock, Ph.D.
Professor, Neurobiology

Understanding the mechanism for transcriptional regulation of neurotransmitters and role of hypothalamus pituitary-adrenal axis on immune functions

Jack R Lancaster Jr., Ph.D.
Professor, Anesthesiology

Biophysical chemistry of nitric oxide and its actions in the cardiovascular and immune system

James K Kirklin, M.D.
Professor, Surgery

Cardiothoracic transplantation and basic studies of transplantation immunology

Jay M McDonald, M.D.
Professor and Chairman, Pathology

The intracellular signal transduction pathways that transfer key information from extracellular to intracellular environments leading to coordinated cellular responses

Jean-Francois Pittet, M.D.
Professor, Anesthesiology

Trauma

<p>Jeffrey D Kerby, M.D. Associate Professor, Surgery</p>	<p>Clinical interests center on trauma surgery; current research focuses on hemoglobin-based oxygen carriers and the vascular endothelial response to hemorrhagic shock and resuscitation</p>
<p>John Anthony Thompson, Ph.D. Professor, Surgery</p>	<p>The use of fibroblast growth factor as a therapeutic agent in the promotion of site-specific angiogenesis, for enhancing wound healing and regeneration of peripheral nerves, damaged spinal cords and the musculoskeletal system following traumatic injury</p>
<p>John C Chatham, Ph.D. Professor, Medicine</p>	<p>Understanding the impact of alterations in cardiac energy metabolism and substrate utilization on the cardiomyocyte function</p>
<p>John F Kearney, Ph.D. Professor, Microbiology</p>	<p>Research aimed at discovering fundamental cellular and molecular mechanisms involved in the development the development of T and B lymphocytes</p>
<p>K Randall Young, Jr. M.D. Professor, Medicine</p>	<p>Examination of T lymphocyte activation and apoptosis in the development of obliterative bronchiolitis and effective asthma care with therapeutic regimens</p>
<p>Kathleen H Berecek, Ph.D. Professor, Physiology & Biophysics</p>	<p>Antihypertensive drugs and the effects of interruption of renin-angiotensin receptor interactions in hypertension pathophysiology</p>
<p>Kirby I Bland, M.D. Professor and Chairman, Surgery</p>	<p>Dietary fat reduction and systemic adjuvant therapy in the management of patients with primary invasive breast cancer; Taxol and radiation therapy for marginally resectable stage IIIA non-small cell lung cancer; adjuvant Tamoxifen therapy in old age; colorectal carcinoma cancer clinical trials; cardiovascular and immunological aspects of trauma-hemorrhage</p>
<p>Kurt R Zinn, D.V.M., M.S., Ph.D. Professor, Radiology</p>	<p>Development and evaluation of radiolabeled molecules for <i>in vivo</i> molecular imaging. Using Tc-99m-radiolabeling and gamma camera imaging, receptors are imaged repeatedly over time in animal models of disease. This approach allows the development and evaluation of specific targeted therapy.</p>
<p>Loring W Rue III, M.D. Professor and Chief, Trauma/Burn Surgery</p>	<p>Understanding the role of fibroblast growth factor I in bone remodeling and spinal cord repair</p>
<p>Mali Mathru, M.D. Professor, Anesthesiology</p>	<p>Nitric oxide: reperfusion injury and endothelial cell function following trauma</p>

Mohammad Athar, Ph.D. Professor, Dermatology	Role of proapoptotic proteins in ultraviolet-induced murine immune suppression and cutaneous apoptosis
Robert P Kimberly, M.D. Professor, Medicine and Microbiology	The role of immune system in chronic inflammatory diseases such as lupus erythematosus as well as the receptors for immunoglobulin in phagocyte functions
Sadis Matalon, Ph.D. Professor, Anesthesiology	Understanding the basic mechanisms responsible for: (a) active ion transport across the normal and injured epithelium, (b) killing of pathogen by mammalian lung and (c) oxidant injury to the pulmonary surfactant system <i>in vivo</i> and <i>in vitro</i>
Stephen Barnes, Ph.D. Professor, Pharmacology	(1) The biochemistry, chemistry and molecular biology of the enzymes responsible for the formation of bile acid-amino acid conjugates; and (2) the mechanisms of dietary prevention of chronic diseases such as cancer and atherosclerosis.
Suzanne M Michalek, Ph.D. Professor, Microbiology	The mucosal immune system, the development of mucosal vaccines for the induction of protective immunity and host mechanisms associated with inflammation of periodontal disease
Suzanne Oparil, M.D. Professor, Medicine	Hormones and vasoprotection
William E Grizzle, M.D., Ph.D. Professor, Pathology	Solid tumors focusing on the identification of biomarkers associated with preinvasive and advanced malignant lesions
William J Hubbard, Ph.D. Assistant Professor, Surgery	TBI and its attenuation with various Pharmacological agents
William L Holman, M.D. Professor, Surgery	Support and treatment for resolution of acute heart failure
Xuemei Cao, Ph.D. Pathology Chair Office	Role of hypoxia inducible factor – 1 alpha pathway in bone regeneration