

## 2011 Carolyn L. Kuckein Student Research Fellowships

In 1982, the board of directors of Alpha Omega Alpha established five student research fellowship awards to encourage and support student research. Since then, the awards have grown in number and dollar amount. As many as fifty \$5000 awards are made, and \$1000 is available for travel to a national meeting to present the research results. In 2004, the name of the fellowship program was changed to the Alpha Omega Alpha Carolyn L. Kuckein Student Research Fellowship awards in honor of Carolyn L. Kuckein, AΩA's longtime administrator, who died in January 2004.

Evaluations of the fellowship proposals were made by reviewers: C. Bruce Alexander, MD; Thomas T. Andersen, PhD; Robert G. Atnip, MD; Jeremiah Barondess, MD; Syamal K. Bhattacharya, PhD, CLD; John M. Boltri, MD; John C.M. Brust, MD; Paul A. Bunn, Jr., MD; Joseph A. Califano III, MD; Randy Q. Cron, MD, PhD; Gerald V. Denis, PhD; N. Joseph Espot, MD; Ruth-Marie Fincher, MD; Daniel Foster, MD; James G. Gamble, MD; Mary A. Gerend, PhD; Richard B. Gunderman, MD, PhD; Suzanne Leonard Harrison, MD; Joseph A. Hill, MD, PhD; Marc G. Jeschke, MD, PhD, FACS; Rae-Ellen W. Kavey, MD; Anne T. Mancino, MD; Mirjana Maletic-Savatic, MD, PhD; James H. Millonig, PhD; Thoru Pederson, PhD; Suzann Pershing, MD; Sheryl Pfeil, MD; Don W. Powell, MD; Robert Rifkin, MD, FACP; William A. Robinson, MD, PhD; Sarah M. Roddy, MD; William M. Rogoway, MD; Shashi K. Salgar, PhD; David Shibata, MD, FACS; John Tooker, MD, MBA, FACP; Gerald Weissmann, MD.

### **Makeda Agonafer**

Morehouse School of Medicine  
*Physiological and histological effects of Bmal1 overexpression on mammalian skeletal muscle and potential implications for sleep regulation*  
Ketema Nnamdi Paul, PhD, mentor  
Frances J. Dunston, MD, MPH, councilor

### **Humera Ahmed**

New York Medical College  
*Renal Sympathetic Denervation for the Management of Chronic Hypertension (RELIEF) (A prospective, single-center, blinded, sham-procedure placebo-controlled, randomized trial)*  
Vivek Reddy, MD, mentor  
William H. Frishman, MD, councilor

### **Stefanie Ames**

Southern Illinois University School of Medicine  
*Fatigue and Inflammation in Breast and Endometrial Cancer Survivors Compared with Healthy Controls*  
Laura Q. Rogers, MD, MPH, mentor  
Andrew J. Varney, MD, councilor

### **William Ares**

University of Vermont College of Medicine  
*Contribution of Kv channels, matrix metalloprotease activity and EGF receptor tyrosine kinase activity to enhanced parenchymal arteriole constriction following subarachnoid hemorrhage*  
George C. Wellman, PhD, mentor  
Jeffrey Klein, MD, councilor

### **Bennett Battle**

University of Arkansas for Medical Sciences College of Medicine  
*Validation of Trauma Center Activation Criteria for Intubated Pediatric Trauma Patients*  
Robert Todd Maxson, MD, mentor  
C. James Graham, MD, councilor

### **Andrew Birkeland**

Weill Cornell Medical College  
*Radiosensitivity in Fanconi Anemia Patients with Head and Neck Cancers*  
David I. Kutler, MD, mentor  
O. Wayne Isom, MD, councilor

### **Cindy Cai**

Columbia University College of Physicians and Surgeons  
*Comparison of the Transition Zone between Healthy and Abnormal Retina in Patients with Different Mutations of Retinitis Pigmentosa*  
Donald C. Hood, PhD, mentor  
John C. M. Brust, MD, councilor

### **Kathy Jo Carstarphen**

University of Alabama School of Medicine  
*Effects of Patient Education on HIV Knowledge and Safe Sexual Practices in Lima, Peru*  
Juan Echeverria, MD, and Michael J. Mugavero, MD, MHSc, mentors  
Stephanie D. Reilly, MD, councilor

### **Saydi Chahla**

University of Minnesota Medical School  
*A Cross Sectional Study of the Influence of Daily Activity on Osteocalcin Level*  
Lynda E. Polgreen, MD, MS, mentor  
Charles Billington, MD, councilor

### **Jason Chan**

The Warren Alpert Medical School of Brown University  
*Rapid detection of sequence-specific DNA markers using solid-state nanopores*  
Derek Stein, PhD, mentor  
Charlotte M. Boney, MD, councilor

### **David Chen**

Northwestern University, The Feinberg School of Medicine  
*A Novel Approach Using Transdermal Delivery of Nanoparticles for Gene Suppression to Treat Primary and Metastatic Melanoma*  
Amy S. Paller, MD, mentor  
John P. Flaherty, MD, councilor

### **Linda Chen**

Duke University School of Medicine  
*Slit-Robo and Brain Tumor Stem Cell Migration*  
Alfredo Quiñones-Hinojosa, MD, mentor  
Salvatore Pizzo, MD, PhD, councilor

**David Cook**

Uniformed Services University of the Health Sciences F. Edward Hébert School of Medicine  
*Clinical and immunological effects of desensitization on polysensitized mice*  
Edward Mitre, MD, mentor  
Robert E. Goldstein, MD, councilor

**Claire Detweiler**

University of Texas Medical Branch School of Medicine  
*Are bacterial agents of community-acquired gastroenteritis under-diagnosed? Impact of stool antigen tests for Campylobacter and Enterohemorrhagic E. coli*  
Mike Loeffelholz, PhD, ABMM, mentor  
Lisa R. Farmer, MD, councilor

**Hayley Fischer**

The Brody School of Medicine at East Carolina University  
*The Impact of Hydroxyurea Treatment on School Absenteeism in Children with Sickle Cell Disease*  
Beng Fuh, MD, PhD, mentor  
Thomas G. Irons, MD, councilor

**Frederick Flo**

University of Rochester School of Medicine and Dentistry  
*An Investigation of spirituality and functionality in patients with Amyotrophic Lateral Sclerosis (ALS)*  
Paul T. Twydell, DO, mentor  
Heidi B. Schwarz, MD, councilor

**Mark Fox**

University of Iowa Roy J. and Lucille A. Carver College of Medicine  
*Evaluation of results of the Brazilian Ponseti National Program*  
Jose A. Morcuende, MD, PhD, mentor  
Christopher Cooper, MD, councilor

**Neil Issar**

Vanderbilt University School of Medicine  
*Comparison of Ventral Intermediate Nucleus and Caudal Zona Incerta as Targets for the Treatment of Tremor with Deep Brain Stimulation*  
Joseph S. Neimat, MD, MS, mentor  
John A. Zic, MD

**Vasili Karas**

Rush Medical College of Rush University Medical Center  
*Preparation of chondral defects in cartilage repair procedures: Surgeon ability to remove or preserve the calcified cartilage layer (CCL)*  
Vincent M. Wang, PhD, and Brian J. Cole, MD, MBA, mentors  
Richard I. Abrams, MD, councilor

**Elizabeth Keating**

Mayo Medical School  
*Thiamine Deficiency in Sick Infants in Cambodia*  
Philip R. Fischer, MD, mentor  
Carola Arndt, MD, and Judith Kaur, MD, association chairs

**Parth Khade**

Texas A&M Health Science Center College of Medicine  
*Predictors of recurrence in chronic subdural hematoma: Do nutritional status, hepatic synthetic function, serum osmolality, or other factors matter?*  
Leonide Gerard Toussaint III, MD, mentor  
Mark L. Montgomery, MD, councilor

**Catherine Kim**

University of Texas Southwestern Medical Center at Dallas  
Southwestern Medical School

**Mechanisms of Intradialytic Hypertension and the Potential Role of Dialysate Sodium**

Jula K. Inrig, MD, MHS, mentor  
Kevin Klein, MD, councilor

**Andrew Lin**

University of Michigan Medical School  
*Effect of cyclosporine and ustekinumab on extracellular trap formation in psoriasis*  
Allen T. Bruce, MD, PhD, mentor  
Cyril M. Grum, MD, councilor

**Robert Lopez**

State University of New York Downstate Medical Center College of Medicine  
*Dissect the immunomodulatory roles of VPAC<sub>1</sub> receptor in experimental autoimmune encephalomyelitis (EAE), a mouse model for multiple sclerosis*  
James A. Waschek, PhD, mentor  
Arthur H. Wolintz, MD, councilor

**Sarah McCurdy**

The University of Texas School of Medicine at San Antonio  
*Sodium Coupled Glucose Transporter (SGLT) Expression in the Human Diabetic Kidney*  
Luke Norton, PhD, mentor  
Kristen Plastino, MD, councilor

**Jennifer McGrath**

University of Pennsylvania School of Medicine  
*Temporally Controlled Delivery of Multiple Growth Factors in the Preparation of a Vascularized Bony Construct*  
Hyun-Duck Nah, DMD, PhD, mentor  
Jon B. Morris, MD, councilor

**Kathryn McKenney**

University of North Carolina at Chapel Hill School of Medicine  
*Evaluating and Alleviating Depression in Mexican Women: The MESA Project*  
Sandra Clark, MD, mentor  
Amelia Drake, MD, councilor

**Lauren Orenstein**

Emory University School of Medicine  
*Cost-effectiveness and potential impact of maternal influenza immunization in Mali*  
Myron M. Levine, MD, DTPH, mentor  
Thomas C. Pearson, MD, DPhil, councilor

**Priyanka Parekh**

University of Texas Medical School at Houston  
*Can Serotonin-Induced Hyperexcitability of Nociceptor Axons Produce Behavioral Effects Related to Chronic Pain?*  
Edgar T. Walters, PhD, mentor  
Eugene Boisabuin, MD, councilor

**Catherine Pearson**

Virginia Commonwealth University School of Medicine  
*Healthcare in Two Rural Honduran Communities: A Comparison of Healthcare Access and an Assessment of Medical Care Quality Delivered by the VCU Honduras Outreach Medical Brigade Relief Effort (HOMBRE)*  
Gonzalo Bearman, MD, MPH, and Michael Stevens, MD, mentors  
Gordon L. Archer, MD, councilor

**Justin Peterson**

Mercer University School of Medicine  
*Validation of an assessment instrument to detect at-risk alcohol use*  
J. Aaron Johnson, PhD, mentor  
Richard J. Ackermann, MD, councilor

**Sophia Rangwala**

Baylor College of Medicine  
*HDAC inhibitors in cutaneous T-cell lymphomas: biomarkers of response and resistance and potential combination therapies*  
Madeleine Duvic, MD, mentor  
Kristin Angelie Kassaw, MD, councilor

**Barbara Reichert**

The Ohio State University College of Medicine  
*Estrogen and Retinoic Acid Interactions in the Regulation of Adipose Triglyceride Lipase*  
Univ. -Prof. Dr. Rudolf Zechner, mentor  
Sheryl Pfeil, MD, councilor

**Whitney Ross**

East Tennessee State University James H. Quillen College of Medicine  
*Embryonic calcium nutrition: testing a model for developmental calcium deprivation*  
Tom W. Ecay, PhD, mentor  
Martin Eason, MD, JD, councilor

**Jacob Ruzevick**

Johns Hopkins University School of Medicine  
*Modulating phosphorylated Signal Transducer and Activator of Transcription 3 (pSTAT-3) and phosphorylated-Akt (pAKT) expression to improve immunogenicity of GBM with Low Dose Radiation*  
Michael Lim, MD, mentor  
Peter E. Dans, MD, councilor

**Timothy Savage**

Mount Sinai School of Medicine  
*How does the dengue virus evade the immune system and establish an infection? Identification of host factors in human primary monocytes and monocyte-derived dendritic cells that enhance or suppress dengue virus infection*  
Ana Fernandez-Sesma, PhD, mentor  
Lisa Coplit, MD, councilor

**Anish Shah**

University of Illinois College of Medicine  
*Alternative Cardiac Sodium Channel Splicing in circulating White Blood Cells of Heart Failure Patients*  
Samuel C. Dudley, Jr., MD, PhD, mentor  
Charles A. Owens, MD, Christopher M. Miles, MD, and Gary Rifkin, MD, councilors

**Meera Shah**

George Washington University School of Medicine and Health Sciences  
*Reproductive Health Needs of Adolescents with Sickle Cell Disease*  
Lisa Tuchman, MD, mentor  
Alan G. Wasserman, MD, councilor

**Sameer Shakir**

University of Pittsburgh School of Medicine  
*Treatment of Critical Size Calvarial Defects using Inkjet-Based Biopatterning of TGFβ1*  
Gregory M. Cooper, PhD, mentor  
Carl R. Fuhrman, MD, councilor

**Chad Teven**

University of Chicago Division of the Biological Sciences The Pritzker School of Medicine  
*The Use of a Novel, Three-Dimensional Biocompatible Scaffold to Deliver Osteoprogenitor Cells to a Critical-Sized Calvarial Defect*  
Russell R. Reid, MD, PhD, mentor  
Adam Cifu, MD, councilor

**Yana Thaker**

Medical College of Wisconsin  
*CXCR4 desensitization and cell-adhesion in colonic carcinoma cells occurs through a B-arrestin-independent signaling pathway*  
Michael Dwinell, PhD, mentor  
James L. Sebastian, MD, councilor

**Catherine Tomasulo**

University of Medicine and Dentistry of New Jersey—Robert Wood Johnson Medical School  
*Changes in Heart Failure Markers After Myocardial Gene Transfer Using Cardiac Surgery*  
Charles R. Bridges, MD, ScD, mentor  
Geza Kiss, MD, and Michael E. Goldberg, MD, councilors

**Catherine Tsai**

University of California, San Francisco, School of Medicine  
*Maternal/Fetal Immune Responses in Preterm Labor*  
Tippi MacKenzie, MD, mentor  
Sue Carlisle, MD, councilor

**Edmund Tsui**

Dartmouth Medical School  
*Retinal blood flow in response to an intravitreal injection of ranibizumab for central retinal vein occlusion*  
Chris Hudson, PhD, mentor  
Susan Harper, MD, councilor

**Sumeet Vaikunth**

University of Tennessee Health Science Center College of Medicine  
*Mitochondria-targeted cardioprotection in isoproterenol-induced acute hyperadrenergic state*  
Syamal K. Bhattacharya, PhD, CLD, mentor  
Owen Phillips, MD, councilor

**Ingrid Wahjudi**

Loma Linda University School of Medicine  
*Do Antiandrogens Protect Against Pneumoperitoneum-Induced Renal Ischemia during Laparoscopic Surgery?*  
D. Duane Baldwin, MD, mentor  
Sarah M. Roddy, MD, councilor

**Claribel Wee**

Chicago Medical School at Rosalind Franklin University of Medicine & Science  
*Identification of novel regulators of SMN2 exon 7 splicing in spinal muscular atrophy*  
Michelle L. Hastings, PhD, mentor  
Cathy J. Lazarus, MD, FACP, councilor

**Luke Wiggins**

University of South Alabama College of Medicine  
*Role of Matrix Metalloproteinases in Coronary Collateral Growth*  
Petra Rocic, PhD, mentor  
T. J. Hundley, MD, FACP, councilor

**Edward Wu**

University of California, Irvine, School of Medicine  
*pH-dependent Mechanisms of Electromechanical Cartilage Reshaping*  
Brian J. F. Wong, MD, PhD, FACS, mentor  
Michael L. Berman, MD, and Ranjan Gupta, MD, councilors

**Andrew Zhang**

Case Western Reserve University School of Medicine  
*Developing a new class of cancer chemotherapeutics*  
Chris Dealwis, PhD, mentor  
Jeffrey L. Ponsky, MD, councilor