

# 2012 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, AQA's longtime administrator, who died in January 2004.

Evaluations of the fellowship proposals were made by reviewers: Thomas T. Andersen, PhD; Syamal K. Bhattacharya, PhD, CLD; Sylvia Brice, MD; John C. M. Brust, MD; Paul A. Bunn, MD; Tim Byers, MD, MPH; Richard Byyny, MD; Y. Monique Davis-Smith, MD; Gerald V. Denis, PhD; N. Joseph Espot, MD; Ruth-Marie Fincher, MD; Daniel Foster, MD; Eve J. Higginbotham, SM, MD; Joseph A. Hill, MD, PhD; Marc G. Jeschke, MD, PhD, FACS; James Gamble, MD, PhD; Mary L. Gerend, PhD; Richard B. Gunderman, MD, PhD; Mary McAsey, PhD, HCLD; Mirjana Maletic-Savatic, MD, PhD; Gokhan M. Mutlu, MD; Thoru Pederson, PhD; Suzann Pershing, MD; Sheryl Pfeil, MD; Don W. Powell, MD; Steven P. Ringel, MD; William A. Robinson, MD, PhD; Sarah M. Roddy, MD; Shashikumar K. Salgar, PhD; Alan G. Wasserman, MD; Gerald Weissmann, MD.

The recipients of the 2012 fellowships are:

## **Tamara Aghamolla**

University of Maryland School of Medicine  
*Use of High Affinity FcγRIII (CD16) Chimeric Antigen Receptor (CAR)-Engineered T Cells in Recognition and Destruction of HER2 Breast Cancer Tumor in vivo*  
Eduardo Davila, PhD, mentor  
Donna Parker, MD, Gary D. Plotnick, MD, and Yvette Rooks, MD, counselors

## **Dianne Bach**

Keck School of Medicine of the University of Southern California  
*Tear-based Diagnostics for Sjögren's Syndrome*  
Sarah Hamm-Alvarez, PhD, and John Irvine, MD, mentors  
Paul Holtom, MD, counselor

## **Travis Boyd**

University of Louisville School of Medicine  
*Development of anatomical landmarks to avoid injury and postoperative development of painful neuromas to critical superficial nerves as well as facilitate anesthetic blocks during abdominal and pelvic operations: An anatomical study of the lateral femoral cutaneous nerve, ilioinguinal and genitofemoral nerves*  
Bradon V. Wilhelmi, MD, mentor  
Daniel Danzl, MD, counselor

## **Satara Brown**

Medical University of South Carolina College of Medicine  
*Effects of Aging on the Cardiac Conduction System*  
Terrance X. O'Brien, MD, mentor  
Christopher G. Pelic, MD, counselor

## **Puja Chebrolu**

Medical College of Georgia at Georgia Health Sciences University  
*Predictors of Bacteremia in Hepatitis C Positive Hemodialysis Patients*  
N. Stanley Nahman, Jr., MD, mentor  
Clarence Joe, DMD, MD, FACR, counselor

## **Mohsin Chowdhury**

Albert Einstein College of Medicine of Yeshiva University  
*Utilizing Thromboelastograph with Platelet Mapping™ (TEG-PM) to Predict Postoperative Chest Tube Drainage (CTD)*  
Galina Leyvi, MD, mentor  
Charles Nordin, MD, counselor

## **Alex Cruz**

University of South Florida College of Medicine  
*Assessment of Acute and Late Toxicity from Treatment of Prostate Cancer with External Beam Radiotherapy, Low-Dose Rate Brachytherapy, and/or High-Dose Rate Brachytherapy*  
Matthew C. Biagioli, MD, and Sarah Hoffe, MD, mentors  
Patricia Emmanuel, MD, counselor

## **Emilie Doré**

University of Iowa Roy J. and Lucille A. Carver College of Medicine  
*Evaluating Protein Interactions with PRICKLE2 in Mouse Models*  
Alexander G. Bassuk, MD, PhD, mentor  
Christopher Cooper, MD, counselor

## **Gregory Ebersole**

Washington University in St. Louis School of Medicine  
*Responsiveness of Patients' DASH Scores following Ulnar Nerve Transposition for Cubital Tunnel Syndrome*  
Susan MacKinnon, MD, mentor  
Morton E. Smith, MD, counselor

## **Jacob Eitel**

Indiana University School of Medicine  
*O6-methylguanine-DNA methyltransferase (MGMT) as a Regulator of Angiogenesis in Glioblastoma Multiforme (GBM): Potential Implications for Emerging Therapies*  
Karen E. Pollok, PhD, mentor  
Richard B. Gunderman, MD, PhD, counselor

## **Megan Fracol**

Raymond and Ruth Perelman School of Medicine at the University of Pennsylvania  
*Determining whether Her-2 Pulsed DCI Vaccines in DCIS Patients Induce humoral or Cellular Immune Responses that Prevents Breast Cancer Invasion*  
Brian J. Czerniecki, MD, PhD, mentor  
Jon B. Morris, MD, counselor

## **Brian Freniere**

University of Massachusetts Medical School  
*Cutaneous Perfusion Response to Varying Doses of Ionizing Radiation*  
Janice F. Lalikos, MD, mentor  
David A. Drachman, MD, counselor

## **Wendy Fujioka**

University of Medicine and Dentistry of New Jersey—Robert Wood Johnson Medical School  
*Effects of p75 and TrkB Signaling on Cognitive and Motor Function Following Traumatic Brain Injury*  
Janet Adler, PhD, mentor  
Geza Kiss, MD, and Michael E. Goldberg, MD, counselors

## **Tanner Fullmer**

Medical College of Wisconsin  
*Harmonic Manipulation and Timbre Perception in Cochlear Implant Users*  
David R. Friedland, MD, PhD, and Christina Runge, PhD, mentors  
James L. Sebastian, MD, counselor

**Alevtina Gall**

University of Washington School of Medicine  
*Defining the protective role of Helicobacter pylori colonization in the development of esophageal adenocarcinoma*

Nina R. Salama, PhD, mentor  
Douglas S. Paauw, MD

**Clare Griffis**

Uniformed Services University of the Health Sciences F. Edward Hébert School of Medicine  
*Validity of Computed Tomography in Predicting Scaphoid Screw Prominence: A Cadaveric Study*

Patricia L. McKay, MD, mentor  
Robert E. Goldstein, MD, councilor

**Parth Khade**

Texas A&M Health Science Center College of Medicine  
*High Resolution Manometry to Analyze Esophageal Motility and GERD in Bariatric Patients*

Joseph Kuhn, MD, FACS, mentor  
Mark L. Montgomery, MD

**Sattar Khoshkhoo**

University of California, San Francisco, School of Medicine  
*Internal Representations Underlying How Sounds Become Speech in Human Auditory Cortex*

Edward F. Chang, MD, mentor  
Sue Carlisle, MD, councilor

**Ahmed Toufic Kurdi**

American University of Beirut School of Medicine  
*Exosomal microRNAs in multiple sclerosis: Reconciling expression signatures with disease relapse, remission, and response to treatment*

Samia J. Khoury, MD, mentor  
Ibrahim S. Salti, MD, councilor

**Joseph Lamplot**

University of Chicago Division of the Biological Sciences The Pritzker School of Medicine  
*The Role of Recombinant Human IGFBP (rhIGFBP<sub>5</sub>) in Osteoblastic Differentiation of Osteoprogenitor Cells and Osteosarcoma*

Hue H. Luu, MD, mentor  
Adam Cifu, MD, councilor

**David Lawrence**

Case Western Reserve University School of Medicine  
*Isolation and Cloning of Broadly Neutralizing Protective Antibodies that Target Plasmodium vivax Duffy Binding Protein*

Christopher King, MD, mentor  
Jeffrey L. Ponsky, MD, councilor

**Sarah Lee**

Northwestern University The Feinberg School of Medicine  
*Oligonucleotide-nanoparticle conjugates to accelerate diabetic wound closure through ganglioside depletion: Mechanistic analyses*

Amy S. Paller, MD, mentor  
John P. Flaherty, MD, councilor

**Christen Lennon**

Columbia University College of Physicians and Surgeons  
*Detection of disruption in the PI3K/AKT pathway in patients with ileal carcinoids*

Gloria H. Su, PhD, mentor  
John C.M. Brust, MD, councilor

**Ting Li**

The University of Toledo College of Medicine  
*Protein-protein interactions in the isoprenoid biosynthesis pathway of human malaria parasites*

Audrey R. Odum, MD, PhD, mentor  
Donna Woodson, MD, FAAFP, councilor

**James Lin**

University of Medicine and Dentistry of New Jersey—New Jersey Medical School

*The Novel Use of Urinary Exosomes to Detect Biomarkers in Castration Resistant Prostate Cancer*

Daniel P. Petrylak, MD, and Leileata M. Russo, PhD, mentors  
Robert Schwartz, MD, and Clark Lambert, MD, PhD, councilors

**Ryan Lippell**

New York Medical College

*A novel tetanus toxin subfragment as a neurotrophic vector for GM2 gangliosidosis therapy*

Kostantin Dobrenis, PhD, mentor  
William H. Frishman, MD, councilor

**Ian-James Malm**

Johns Hopkins University School of Medicine  
*Combinatorial Immunotherapy for Head and Neck Squamous Cell Carcinoma*

Young J. Kim, MD, PhD, mentor  
Peter E. Dans, MD, councilor

**Spyridon Mastroyannis**

George Washington University School of Medicine and Health Sciences

*Are Mutations in Succinate Dehydrogenase complex II (SDHx) involved in pituitary tumorigenesis?*

Constantine Stratakis, MD, d. (med.) Sci, mentor  
Alan G. Wasserman, MD, councilor

**Emily McIntosh**

Emory University School of Medicine

*Effect of Raltegravir on Bone Homeostasis in WT Female Mice and Osteoblast Cell Line*

Igho Ofotokun, MD, MSc, and N. Neale Weitzmann, PhD, mentors  
Thomas C. Pearson, MD, DPhil, councilor

**Jennifer Ornelas**

University of California, Davis, School of Medicine

*Effects of Phytochemicals on Toll-like Receptor 2 Expression and Function in Sebocytes*

R. Rivkah Isseroff, MD, mentor  
Regina Gandour-Edwards, MD, councilor

**John Pham**

University of Texas Medical School at Houston

*Characterization of focal adhesions in myofibroblasts harboring TGFBR<sub>2</sub> and SMAD<sub>3</sub> mutations*

Dianna Milewicz, MD, PhD, mentor  
Eugene Boisabuin, MD, councilor

**Sujoy Phookan**

Albany Medical College

*Suppression of Gap Junctional Activity Attenuates Pathological Beta Oscillations in the Basal Ganglia of the Parkinsonian Rat*

Damien S. Shin, MSc, PhD, mentor  
Neil Lempert, MD, councilor

**Ashley Pinette**

Howard University College of Medicine

*Hypoxia Inducible Factor (HIF) and its effect on memory in patients that exercise versus control patients*

Richard F. Gillum, MD, MS, mentor  
Edward E. Cornwell III, MD, FACS, FCCM, councilor

**I. Jonathan Pomeranic**

University of Virginia School of Medicine

*The framing effect and social cognition in individuals with autism spectrum disorder*

Andrew James Gerber, MD, PhD, mentor  
Mark J. Mendelsohn, MD, councilor

**Jordan Pyda**

University of Tennessee Health Science Center College of Medicine  
*Increasing Access to Health Care in the Central Plateau of Haiti: The Petite Montagne Dispensary Project*  
Theresa M. Waters, PhD, mentor  
Owen Phillips, MD, councilor

**Ma Khin Pyi Son**

Mayo Medical School  
*Effect of Correcting Refractive Errors on Emmetropization in Infants within the First Year of Age*  
Brian G. Mohny, MD, mentor  
Carola Arndt, MD, and Judith Kaur, MD, association chairs

**Nabijah Rehman**

Wayne State University School of Medicine  
*Enhanced Cytotoxicity Directed at CD33-Expressing Acute Leukemia Cell Lines by Activated T Cells (ATC) Armed with Anti-CD3/Anti-CD33 Bispecific Antibodies*  
Abhinav Deol, MD, mentor  
Michael T. White, MD, councilor

**Chen Shi**

New York University School of Medicine  
*Volumetric analysis to predict an atrophy risk for chronic subdural hematoma*  
Uzma Samadani, MD, PhD, and Henry Rusinek, PhD, mentors  
Steven Abramson, MD, councilor

**Jeremy Song**

University of California, Irvine, School of Medicine  
*Regeneration of functional human myocardium based upon perfusion-decellularized heart scaffolds and patient-derived induced pluripotent stem cells*  
Harald C. Ott, MD, mentor  
Michael L. Berman, MD, and Ranjan Gupta, MD, councilors

**Jeff SoRelle**

University of Texas Southwestern Medical Center at Dallas  
Southwestern Medical School  
*Searching for Genes for Host Defense*  
Bruce Beutler, MD, mentor  
Kevin Klein, MD, councilor

**Marko Spasic**

University of California, Los Angeles David Geffen School of Medicine  
*Gp100 Vault Nanoparticles for the Treatment of Glioblastoma Multiforme*  
Isaac Yang, MD, mentor  
Neil H. Parker, MD, councilor

**Prashanth Swamy**

The Ohio State University College of Medicine  
*Role of NKT cells in Posttransplant Alloantibody Production*  
Ginny L. Bumgardner, MD, PhD, mentor  
Sheryl Pfeil, MD, councilor

**Julian Tokarev**

University of Minnesota Medical School  
*A novel model of focal ischemic stroke in rats using an endovascular angiographic approach to MCA occlusion*  
Afshin A. Divani, PhD, FAHA, mentor  
Charles Billington, MD, councilor

**Voranaddha Vacharithit**

Vanderbilt University School of Medicine  
*Animating Interdisciplinary Concepts in Lung Function and Pathophysiology: A Novel Platform for the Integration of Core Content for Medical Students*  
John H. Newman, MD, and Cathleen C. Pettepher, PhD, mentors  
John A. Zic, MD, councilor

**Amanda Velazquez**

Southern Illinois University School of Medicine  
*Effects of a mobile phone application intervention on medical student weight loss and perceived patient counseling ability*  
Laura Q. Rogers, MD, MPH, mentor  
Andrew J. Varney, MD, councilor

**Nicholas Will**

Loma Linda University School of Medicine  
*The role of microglial Fractalkine signaling in complement-mediated vascular fragility of cerebral amyloid angiopathy*  
Wolf M. Kirsch, MD, FACS, mentor  
Sarah M. Roddy, MD, councilor

**Frank Yuk**

Mount Sinai School of Medicine  
*Synaptic Mechanisms of Age-related Cognitive Decline in Monkey Neocortex*  
John H. Morrison, PhD, mentor  
Carrie Ernst, MD, councilor

## 2012 Helen H. Glaser Student Essay Awards

The thirtieth annual Alpha Omega Alpha Helen H. Glaser Student Essay Awards were made in May. This year's winners are:

Second prize: Lisa Babin of the Class of 2015 at the University of Maryland for her essay, "Dancing: A Fifteen-Year-Old's Descent into Madness."

Honorable mention: Linda Drozdowicz of the Class 2014 at Mayo Medical School for her essay, "Chicken Fried."

Honorable mention: Mark Salhanick of the Class of 2013 at the University of Texas School of Medicine at San Antonio for his essay, "Ethical Considerations for NIH-Funded Highly Transmissible H5N1."

Winning essays will be published in future issues of *The Pharos*.

## Website extra: A Medical Crossword

Earlier this year, AQA member Dr. Peter Koettters proposed a crossword puzzle for members. He wrote us, "I think it might be fun to construct a puzzle designed to be solved by other physicians. In fact, it opens up a whole host of terminology and thematic ideas that are otherwise taboo in the world of puzzlemaking for the general public."

We were intrigued and asked him to send us a sample. A number of editorial board members who are crossword fans tried it out and declared it satisfactory. We present it on our website for your enjoyment: [http://alphaomegaa.org/news\\_cardio\\_workout](http://alphaomegaa.org/news_cardio_workout). Dr. Koettters is a pediatrician in Pasadena, California. His puzzles have been published in the *Los Angeles Times*.