

2015 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 to more than fifty each year.

The fellowship emphasizes a student-designed and -initiated project with an academic mentor. Recipients of the fellowship tell us that the awards have helped them to learn about the joys of scientific and scholarly discovery, and have increased their critical understanding of scholarship and research in health care and science. Many recipients of the fellowship have followed up their work as student-researchers to become physician-scientists.

Each student receives a \$5000 award, with \$1000 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, AOA's longtime administrator, who died in January 2004.

Evaluations of the fellowship proposals were made by the following reviewers: C. Bruce Alexander, MD; Thomas T. Andersen, PhD; Carola Arndt, MD; Robert G. Atnip, MD; Jeremiah Barondess, MD; Robert Beach, MD; Syamal K. Bhattacharya, PhD, CLD; Paul A. Bunn, MD; Tim Byers, MD, MPH; Ken Byrd, MD; Stephen Y. Chan, MD; Preston Church, MD; Harry Clarke, MD; Lynn M. Cleary, MD; Graciela De Jesus, MD; Daniel Foster, MD; Doug Fredrick, MD; Mark George, MD; Boyd Gillespie, MD; Richard F. Gillum, MD, MS; Charles Griffith II, MD, MSPH; Richard B. Gunderman, MD, PhD; Ranjan Gupta, MD; Eve Higginbotham, MD, SM; Holly Humphrey, MD; Shahram Izadyar, MD; Marc G. Jeschke, MD, PhD, FACS; Burk Jubelt, MD; Thomas Keane, MD; J. Michael Kilby, MD; Jeffrey Klein, MD; David McAneny, MD; Patricia G. McBurney, MD, MSCR; Mark J. Mendelsohn, MD; Lesley Motheral, MD; Douglas S. Paaau, MD; Thoru Pederson, PhD; Suzann Pershing, MD; Sheryl Pfeil, MD; Noah S. Philip, MD; Don W. Powell, MD; Paul B. Pritchard, MD; Steven P. Ringel, MD; Alan G. Robinson, MD; Griffin P. Rodgers, MD, MBA; Shashikumar Salgar, PhD; Richard M. Silver, MD; Wiley Souba, Jr., MD, ScD, MBA; Joseph Stains, PhD; Joseph W. Stubbs, MD, MACP; John Tooker, MD, MBA, MACP; Kenneth L. Tyler, MD; Gabriel T. Virella, MD, PhD; Graham Warren, MD; Alan G. Wasserman, MD; Gerald Weissmann, MD; John A. Zic, MD.

The recipients of the 2015 fellowships are:

Rahul Bhansali

Class of 2018, University of Illinois College of Medicine
Proteomic identification of novel targets of protein kinase DYRK1A in lymphocytes and their potential implications in acute lymphoblastic leukemia

Mentor John Crispino, PhD

Councilors Melvin Lopata, MD; Jessica Ryan Hanks, MD

Candace Borders

Class of 2018, University of California, Irvine, School of Medicine
Effect of Limb Overuse on Repair and Oligodendrocyte Progenitor Cell Activity after White Matter Stroke

Mentor S. Thomas Carmichael, MD, PhD

Councilors Ranjan Gupta, MD; Michael L. Berman, MD

Taylor Brooks

Class of 2018, University of Cincinnati College of Medicine
NK cell crosstalk with myeloid suppressor cells promotes chronic infection

Mentor Stephen Waggoner, PhD

Councilor Robert G. Luke, MD

Philip Chan

Class of 2016, Tufts University School of Medicine
The relationship between administered oxygen levels and arterial partial oxygen pressure to neurocognition in postoperative mechanically ventilated cardiac surgical patients

Mentor Balachundhar Subramaniam, MD

Councilor Amy L. Lee, MD

Jason Chien

Class of 2017, George Washington University School of Medicine and Health Sciences

Glaucoma Diagnostic Capability of Macular Layer Volume and Thickness Using Spectral-Domain Optical Coherence Tomography

Mentor Sung Chul Park, MD

Councilor Alan G. Wasserman, MD

Lee Onn Chieng

Class of 2017, University of Miami Leonard M. Miller School of Medicine

Effect of fibrin matrices-containing growth factor cocktails on FDA approved human fetal neural stem cell engraftment in rat model of penetrating traumatic brain injury (PTBI)

Mentor Ross Bullock, MD, PhD

Councilor Alex J. Mechaber, MD

Noura Choudhury

Class of 2016, University of Chicago Division of the Biological Sciences The Pritzker School of Medicine

Quantitative analysis of T-cell receptor (TCR) diversity as a predictive marker for recurrence risk in muscle-invasive bladder cancer

Mentor Yusuke Nakamura, MD, PhD

Councilor Adam Cifu, MD

Brian Chung

Class of 2018, Loma Linda University School of Medicine

Robot Simulator Skills: Impact of Background Music on Learning Curve of Robot Surgical Skills

Mentor Duane Baldwin, MD

Councilor Danny Wongworawat, MD

Lawrance Chung

Class of 2017, University of California, Los Angeles David Geffen School of Medicine

Anti-EMP2 Antibody for the Treatment of Glioblastoma Multiforme

Mentors Isaac Yang, MD; Madhuri Wadehra, PhD

Councilor Neil H. Parker, MD

Daphney Clermont

Class of 2018, University of Florida College of Medicine

CRISPR/Cas-mediated modification of MEGF10 produces a novel model for the study of MEGF10 myopathy

Mentor Peter B. Kang, MD

Councilor Heather Harrell, MD

Taylor Conrad

Class of 2016, Louisiana State University School of Medicine in Shreveport
Mitochondrial Dysfunction in the Nephrotoxicity of Diglycolic Acid, the Toxic Metabolite of Diethylene Glycol
Mentor Kenneth McMartin, PhD
Councilor Jane Eggerstedt, MD

Michelle Corrado

Class of 2018, Ohio State University College of Medicine
Emergency Medical Services (EMS) transport versus private transport among injured children in the United States
Mentor Huiyun Xiang, MD, MPH, PhD
Councilor Sheryl Pfeil, MD

David Cron

Class of 2018, University of Michigan Medical School
Preoperative opioid use and healthcare utilization in abdominal surgery: a novel target for surgical quality improvement
Mentors Michael J. Englesbe, MD; Chad M. Brummett, MD
Councilor Sanjay Saint, MD, MPH

Prarthana Dalal

Class of 2018, Northwestern University The Feinberg School of Medicine
Characterizing the Role of IQGAP1 in Leukocyte Transmigration
Mentor William A. Muller, MD, PhD
Councilor John P. Flaherty, MD

Jason Davis

Class of 2018, Indiana University School of Medicine
Use of computed tomography (CT) imaging in the assessment of patient nutrition, frailty and risk related to end-stage liver, kidney and intestine failure
Mentor Richard S. Mangus, MD, MS
Councilor Richard B. Gunderman, MD, PhD

Ramita Dewan

Class of 2018, University of Maryland School of Medicine
High throughput genomic analysis of vestibular schwannomas in neurofibromatosis type 2
Mentor Alexander Pemov, PhD
Councilors Yvette Rooks, MD; Donna Parker, MD; Zaineb Makhzoumi, MD, MPH

Kaitlin Fitzpatrick

Class of 2016, University of Massachusetts Medical School
Effectiveness of semi-rigid Savary dilators vs. balloon dilators during esophageal dilation in the treatment of esophageal dysmotility
Mentor David R. Cave, MD, PhD
Councilor David A. Drachman, MD

Prakriti Gaba

Class of 2017, Mayo Medical School
Novel Percutaneous Epicardial Pacing and Defibrillation
Mentor Samuel Asirvatham, MD
Association Chair Carola Arndt, MD

Courtney Gaberino

Class of 2018, Medical College of Wisconsin
Toward Personalized Nasal Surgery Using Computational Fluid Dynamics
Mentors Guillaume J. M. Garcia, PhD; John S. Rhee, MD, MPH
Councilor Michael Lund, MD

Sarah Guess

Class of 2018, Medical University of South Carolina College of Medicine
Early Identification of Heterotopic Ossification following Extremity Blast Injury with a Biomarker Assay
Mentor Vincent D. Pellegrini, Jr., MD
Councilor Christopher G. Pelic, MD

Trudy Hong

Class of 2017 University of Hawaii, John A. Burns School of Medicine
The role of Six2 in frontonasal dysplasia and median facial clefts
Mentors Scott Lozanoff, PhD; Benjamin Fogelgren, PhD
Councilor Jill Omori, MD

Pierce Janssen

Class of 2018, Stony Brook University School of Medicine
An ultrastructural immunogold examination of cerebral vasculature extracellular matrix proteins in a rat model of blast-induced mild traumatic brain injury
Mentors Gregory Elder, MD; Miguel Gama Sosa, PhD
Councilor Jack Fuhrer, MD

Nona Jiang

Class of 2018, University of Virginia School of Medicine
Systemic cytokines and neurocognitive development
Mentors William A. Petri, Jr., MD, PhD; Charles A. Nelson III, PhD
Councilor Mark J. Mendelsohn, MD

Travis Ladner

Class of 2016, Vanderbilt University School of Medicine
Using RNA Interference to Prevent Cerebral Vasospasm after Subarachnoid Hemorrhage: Improving Vessel Relaxation Through Heat Shock Protein 20 Upregulation
Mentor Colleen Brophy, MD
Councilor John A. Zic, MD

Ann Liu

Class of 2016, Wake Forest School of Medicine of Wake Forest Baptist Medical Center
Evaluation of Sexual Dysfunction Following Resection of Intramedullary Spinal Cord Tumors
Mentor Chetan Bettegowda, MD
Councilor K. Patrick Ober, MD

Boshen Liu

Class of 2017, University of Mississippi School of Medicine
Rapid Bone Density Screening of CT Images Using Color Enhanced Detection
Mentor Andrew Smith, MD, PhD
Councilor Omar Abdul-Rahman, MD

Andrew Mamalis

Class of 2016, University of California, Davis, School of Medicine
Red Light Emitting Diode Photomodulation of Skin Fibrosis
Mentor Jared Jagdeo, MD; R. Rivkah Isseroff, MD
Councilor Regina Gandour-Edwards, MD

Justin Markel

Class of 2018, West Virginia University School of Medicine
Trauma induced inflammation: The role of platelets and innate immune signaling
Mentor Matthew D. Neal, MD
Councilor Melanie Fisher, MD, MSc

Emily Martin Scott

Class of 2018, University of Washington School of Medicine
Molecular epidemiology and spatial analysis of respiratory syncytial virus (RSV) and human metapneumovirus (hMPV) transmission in rural Nepal
Mentor Janet Englund, MD
Councilor Douglas S. Paauw, MD

Ashley Mathew

Class of 2018, Albany Medical College
Forcing HIV's Hand Against a Novel Antiviral State Established in Sulforaphane-Treated Macrophages
Mentor Carlos M. C. de Noronha, ScD
Councilor Neil Lempert, MD

Amol Mehta

Class of 2018, Chicago Medical School at Rosalind Franklin University of Medicine & Science
Direct Conversion of Resident Glia to Functional Inhibitory Neurons
Mentor Daniel A. Peterson, PhD
Councilor Michael J. Zdon, MD

Paul Montgomery

Class of 2017, Oregon Health & Science University School of Medicine
Short-Chain Fatty Acids and their effect on the pathogenesis of Ankylosing Spondylitis
Mentor James T. Rosenbaum, MD
Councilor Michele Mass, MD

Tarek Mouhieddine

Class of 2016, American University of Beirut School of Medicine
EBV infected B Lymphocyte Exosomes and Dendritic Cells: Differential Cytokine Profile in Multiple Sclerosis
Mentor Samia J. Khoury, MD
Councilor Ibrahim S. Salti, MD

Victor Ng

Class of 2018, New York University School of Medicine
The epigenetic role of TET2 mutations in myeloid malignancy
Mentor Iannis Aifantis, PhD
Councilor Linda Tewksbury, MD

Shannon Niedermeyer

Class of 2016, University of Tennessee Health Science Center College of Medicine
The Role of M-Related Proteins in New Generation Group A Streptococcal Vaccines
Mentor James B. Dale, MD
Councilor Owen Phillips, MD

Kristina Nikolova

Class of 2018, Drexel University College of Medicine
The Effects of Beta Amyloid Peptide on Glutamate Metabolism during Induced Senescence of Astrocytes
Mentor Claudio Torres, PhD
Councilor Kathleen Ryan, MD

Angela Nolin

Class of 2018, Boston University School of Medicine
Albumin reabsorption in the renal proximal tubule inhibits mitophagy, leading to mitochondrial damage, increased ROS production and tubular cell damage
Mentor Andrea Havasi, MD
Councilor David McAneny, MD

Hardik Parikh

Class of 2016, Rutgers New Jersey Medical School
Rebuilding an Ablated Trabecular Meshworking Using Stem Cells
Mentors Nils A. Loewen, MD, PhD; Neelakshi Bhagat, MD
Councilor Robert A. Schwartz, MD, MPH

Kevin Qin

Class of 2018, The University of Toledo College of Medicine
Role of Raf kinase inhibitory protein in MCF-7 breast cancer cell proliferation and mitotic progression
Mentor Kam C. Yeung, PhD
Councilor Donna Woodson, MD

Saned Raouf

Class of 2017, University of Colorado School of Medicine
Estimating the impact of indoor residual spraying of insecticide using a novel health facility-based malaria surveillance program in Uganda
Mentor Grant Dorsey, MD, PhD
Councilor James Beck, MD

Dioval Remonde

Class of 2017, The Brody School of Medicine at East Carolina University
Characterization of Patient-Derived Xenograft Models to Evaluate Clinical and Therapeutic Responses of Glioblastoma Multiforme
Mentor Jann N. Sarkaria, MD
Councilor Danielle S. Walsh, MD

Charles Riccio

Class of 2016, University of Louisville School of Medicine
The Sensitive Breast: Evaluation of Nerve Density to Different Regions of the Breast and Nipple
Mentor Bradon Wilhemi, MD
Councilor Daniel Danzl, MD

Alexandra Rosenberg

Class of 2016, Duke University School of Medicine
Assessing the Therapeutic Potential of Epothilone D and an Apolipoprotein E mimetic peptide in a Murine Model of Chronic Traumatic Encephalopathy
Mentors Daniel Laskowitz, MD; Hana Dawson, PhD
Councilor Edward Buckley, MD

Brad St. Martin

Class of 2017, University of Kentucky College of Medicine
Quantifying the relationship of distance to care on clinical outcomes for HIV patients
Mentors Moises Huaman Joo, MD, MSc; Alice Thornton, MD
Councilor Charles Griffith III, MD, MSPH

Ranjodh Singh

Class of 2017, Weill Cornell Medical College
Molecularly-Defined Combinatorial Targeted Therapy in a Diffuse Intrinsic Pontine Glioma Mouse Model Using Convection-Enhanced Delivery
Mentor Mark M. Souweidane, MD
Councilor O. Wayne Isom, MD

Saurabh Sinha
Class of 2016, Rutgers Robert Wood Johnson Medical School
*Electroencephalographic Studies of Changes in Dorsal Anterior
Cingulate Cortex Function in Addiction Treated with Repetitive
Transcranial Magnetic Stimulation*

Mentor Sameer A. Sheth, MD, PhD
Counselor Geza Kiss, MD

Jacqueline Tin
Class of 2017, State University of New York Downstate Medical Center
College of Medicine

*The relationship between cerebrovascular reactivity and cognitive dys-
function in adult patients with sickle cell anemia*

Mentors Jason Lazar, MD; Louis Saliccioli, MD
Counselor Douglas R. Lazzaro, MD

Timothy Tiutan
Class of 2016, University of Arizona College of Medicine
*Combined Therapy Targeting Anti-Apoptotic BCL2 and MCL1 Proteins
In High-Risk Diffuse Large B-Cell Lymphoma*

Mentor Jonathan Schatz, MD
Counselor Joseph S. Alpert, MD

Amy Ton
Class of 2018, University of California, San Francisco, School of
Medicine

*Neuronal regulation of heterotopic ossification in FOP using human iPSC
cells*

Mentor Edward Hsiao, MD, PhD
Counselor Lee Atkinson-McEvoy, MD

Brian Tsui
Class of 2017, Case Western Reserve University School of Medicine
PSMA Targeted Photodynamic Therapy for Prostate Cancer
Mentor James Basilion, PhD
Counselor James E. Arnold, MD

Adam Verhoef
Class of 2018, University of Iowa Roy J. and Lucille A. Carver College of
Medicine

Molecular Methods for Diagnosing Asymptomatic Leishmaniasis

Mentors Mary Wilson, PhD; Selma Jeronimo, MD, PhD
Counselor Christopher Cooper, MD

Yu Wang
Class of 2016, Johns Hopkins University School of Medicine
*Healthcare Utilization and Awareness of Eye Disease by Persons with
Diabetes Mellitus in Medicine and Ophthalmology Clinics*

Mentor Neil M. Bressler, MD
Counselor Charles W. Flexner, MD

Kaeli Yuen
Class of 2018, Keck School of Medicine of the University of Southern
California

*Offline Testing of an Automated Clinical Decision Support (CDS) System
for Patients with Multiple Complex Chronic Conditions*

Mentor Mary K. Goldstein, MD
Counselor Eric Hsieh, MD

Andrew Zhang
Class of 2018, University of Minnesota Medical School
*The Role of Cell to Extracellular Matrix Interactions in a
Spatiotemporal 3D Environment for Endothelial Cell Differentiation of
Human Induced Pluripotent Stem Cells*

Mentor Jianyi Jay Zhang, MD, PhD
Counselor Charles Billington, MD

2015 Helen H. Glaser Student Essay Awards

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

First prize: "Shakespeare's Macbeth: An Insight into Politics, Religion, and the King's Touch in Reformation England," by Fleta Bray, Class of 2016 at the University of Miami Leonard M. Miller School of Medicine.

Second prize: "Art in a Time of Chronic Illness: the Effects of Systemic Sclerosis as Seen through the Works of Paul Klee," by Grace Prince, Class of 2015 at the University of Virginia School of Medicine.

Third prize: "In an Instant," by Maya Armstrong, Class of 2018 at the Ohio State University College of Medicine.

Honorable mention: "From Medical Student to Midwife: The Day I Delivered My Daughter on Our Bedroom Floor," by Kevin Lowder, Class of 2016 at Texas Tech University Health Sciences Center Paul L. Foster School of Medicine.

Honorable mention: "Breaking the Oath: Why Physicians Torture," by Taylor Brooks, Class of 2018 at the University of Cincinnati College of Medicine.

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

2015 Pharos Poetry Competition winners

The *Pharos* Poetry Competition awards were made in April. This year's winners are:

First Prize: "Confessions," by Jennifer Hu, Class of 2018 at the University of Rochester School of Medicine and Dentistry.

Second Prize: "Kyrie," by Alyse Marie Carlson, Class of 2016 at the University of Iowa Roy J. and Lucille A. Carver College of Medicine.

Third Prize: "Sestina for a Father," by Ting Gou, Class of 2017 at the University of Michigan Medical School.

Honorable mention: "No Words," by Brittney Jones, Class of 2015 at Howard University College of Medicine.

Honorable mention: "Patient Belongings," by Michael Yee, Class of 2015 at University of Michigan Medical School.

Honorable mention: "A Forensic Pathologist's Villanelle" by Catherine Perez, Class of 2018 at the University of Illinois College of Medicine.

Honorable mention: "The Cough," by Tendo Kironde, Class of 2015 at the Warren Alpert Medical School of Brown University.

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