

2018 College of Medicine Research Forum Award Winners

Medical Student Competition

First Place Winner: Eitan Katz (Neurology)

Title: *“Early Complement Activation in Cerebrospinal Fluid of Patients with Subarachnoid Hemorrhage*

Co-Authors: Joseph Geraghty, Matthew Oparowski, Fernando Testai

Second Place Winner: Logan Schwarzman (Urology)

Title: *“The Association of Previous Prostate Biopsy Related Complications and the Type of Complication with Patient Compliance with Rebiopsy Scheme”*

Co-Authors: Michael Abern, Daniel Garvey, Gerald Andriole, Stephen Freedland, Daniel Moreira

***Winner of First Place prize in Cancer Center competition**

Honorable Mentions:

Rishi Neeranjun (Physiology and Biophysics)

Title: *“Comparing the dosimetric impact of dental implants of two different calculation algorithms in oropharyngeal IMRT planning”*

Co-Authors: Chris Lominska, Rajeev Badkul

Robert George (Biochemistry and Molecular Genetics)

Title: *“Cerebral Mapping of Trpm8”*

Co-Authors: Lusine Demirkhanyan, Eleonora Zakharian

Adam Wright-Chisem (Orthopaedics)

Title: *“Single-Level Instrumented Lumbar Interbody Fusion: The Impact of ASCs on Evidence-Based Medicine”*

Co-Authors: Dwight Tyndall, William Zuke

Elan Volchenko (Orthopaedics)

Title: *“Arthroscopic Lysis of Adhesions with Manipulation Under Anesthesia vs. Manipulation Alone For Arthrofibrosis after TKA: a Matched Cohort Study”*

Co-Authors: Garrett Schwarzman, Matthew Robinson, Samuel Chmell

Abhinav Komandur (Medicine)

Title: *“The Worst Loss of All”: Clinical Decision-Making in Advanced ENT Cancers When Systemic Therapy is Not Accessible”*

Co-Authors: Heather Weinreich, Barry Wenig

Jeffrey Rajkumar (Dermatology)

Title: *“Multiple Large Linear Hyperpigmented Plaques on the Abdomen of a Young Female”*

Co-Authors: Kurt Ashack, Michelle Bain

Jarod Shelton (Medicine)

Title: *“Exploring Maternal Death Rate Patterns in Urban and Rural Counties of Illinois”*

Co-Authors: Brooke Dean, Amanda Johnson, Annita Matthew, Alexandra McVicker, Erin Hinckley

Ryan Chiu (Medicine)

Title: *“Do community health workers impact non-urgent, ambulatory healthcare utilization among minority patients with diabetes? A Randomized Controlled Trial”*

Co-Authors: Yinglin Xia, Lisa Sharp, Ben Gerber

Meghana Babu (Medicine)

Title: *“Meta-Analysis of Blood Transcriptome Response to Viral Vaccination Reveals Sex Differences”*

Co-Authors: Benjamin Turturice, David Perkins, Patricia Finn

Jack Zakrzewski (Neurosurgery)

Title: *“Targeted Magnetic Nanoparticles as a Potential Treatment of Prostate Cancer Metastasis: Short Term Systemic Deposition and Toxicity”*

Co-Authors: Tyler Lung, Saavan Patel, Koral Shah, Ankit Metha

Justin Choi (Orthopaedics)

Title: *“Risk Factors for Missed Appointments in an Urban, Academic Orthopedic Clinic”*

Co-Authors: Gautam Malhotra, Jonathan Bode

Adam Wright-Chisem (Orthopaedics)

Title: *“3-Dimensional Virtual Reality for Pain Control in Orthopaedic Patients: A Prospective Randomized Control Study”*

Co-Authors: Milton Little, John Garlich, Amber Howard, Carol Lin, Charles Moon

Graduate Student and MD-PhD Student Competition

First Place Winner: Allison Kirchner (Neurology)

Title: *“DUSP4: An endogenous antiepileptogenic inhibitor of MAP Kinase signaling”*

Co-Authors: Shruti Bagla, Fabien Dchet, Jeffrey Loeb

Second Place Winner: Joseph Geraghty (Neurology)

Title: *“Neuroimmune implications for longterm electrographic and behavioral abnormalities seen after subarachnoid hemorrhage”*

Co-Authors: Alexander Tate, Biswajit Maharathi, Fernando Testai, Jeffrey Loeb

Honorable Mentions:

Ryan Clarke (Biochemistry and Molecular Genetics)

Title: *“A transcription-dependent strandbias in Cas9 activity”*

Co-Authors: Matthew MacDougall, Hannah Pennington, Maureen Regan, Bradley Merrill

Biswajit Maharathi (Bioengineering)

Title: *“Interictal spike connectivity in human epileptic neocortex”*

Co-Authors: James Patton, Jeffrey Loeb

***Winner of CCTS prize competition**

Mark Shaaya (Pharmacology)

Title: *“Engineered Allosteric Regulation of Protein Kinases by Light”*

Co-Authors: Martin Brennan, Vincent Huyot, Viswanathan Natarajan, Andrei Karginov

De Yu Mao (Physiology and Biophysics)

Title: *“Chloride Intracellular Channel (CLIC) proteins function to modulate Rac1 and RhoA in Sphingosine-1-phosphate signaling to regulate endothelial cell behavior”*

Co-Authors: Matthew Kleinjan, Sarah Lutz, Yulia Komorova, Jan Kitajewski

Alexander Terry (Biochemistry and Molecular Genetics)

Title: *“The Role of CD36 in tumor redox homeostasis”*

Co-Author: Nissim Hay

***Winner of Second Place prize in Cancer Center competition**

Alexander Ticho (Physiology and Biophysics)

Title: *“A novel role of S-acylation in regulating ASBT function”*

Co-Authors: Pooja Malhotra, Seema Saksena, Ravinder Gill, Waddah Alrefai

Matthew Kleinjan (Physiology and Biophysics)

Title: *“The role of CLIC1 and CLIC4 in signaling pathways that regulate endothelial cell barrier integrity”*

Co-Authors: De Yu Mao, Yulia Komarova, Jan Kitajewski

Sarah Morris (Anatomy and Cell Biology)

Title: *“Regulation of axonal transport through tau phosphorylation”*

Co-Authors: Karin Bechberger, Svenja Koenig, Sarah Aloe, Gerardo Morfini, Scott Brady

Tiffani Berkel (Psychiatry)

Title: *“G9a-mediated regulation of tolerance to the anxiolytic effects of alcohol”*

Co-Authors: Huaibo Zhang, Tara Teppen, Subhash Pandey

Postdoctoral fellows and residents Competition

First Place Winner: Matt Wood (Microbiology and Immunology)

Title: *“Uncovering the role of HOIL1 in (regulation of) Type 2 inflammation”*

Co-Author: Donna MacDuff

Second Place Winner: Christopher Solis (Physiology and Biophysics)

Title: *“The CapZ β -tentacle interacts with PIP2 to control CapZ dynamics in response to mechanical stiffness”*

Co-Author: Brenda Russell

Honorable Mentions:

Dulari Jayawardena (Medicine)

Title: *“Local Colonic Delivery of Vasoactive Intestinal Peptide (VIP) Nanomedicine Alleviates Colitis in Mice”*

Co-Authors: Arivarasu Anbazhagan Natarajan, Hayat Onyuksel, Pradeep .K Dudeja

Milica Grozdanovic (Biochemistry and Molecular Genetics)

Title: *“A Novel CCR3 Peptide Nanoparticle Biased Antagonist of Eosinophil Recruitment to Sites of Allergic Inflammation”*

Co-Authors: Anantha Harijith, Hyung-Geon Moon, Ben Hitchinson, Hazem Abdelkarim, Gye Young Park

Misuk Bae (Anesthesiology)

Title: *“Novel Endothelial Cell Targeted Peptide Inhibitor of von Willebrand Factor Secretion for Reducing Thrombotic Complications of Cancer and Cancer Treatment”*

Co-Authors: Luiza Rusu, Maricela Castellon, Aleksandra Stojanovic-Terpo, Kyungho Kim, Jaehyung Cho

Alexandre Aissa (Biochemistry and Molecular Genetics)

Title: *“Employing scRNA-seq to target drug-resistant cells in anticancer therapies”*

Co-Authors: Majd Ariss, Abul Islam, Maxim Frolov, Elizaveta Benevolenskaya

Ana Valencia-Olvera (Anatomy and Cell Biology)

Title: *“ABCA1 activation in the CNS as a therapeutic target for APOE4-induced Alzheimers disease risk”*

Co-Authors: Deebika Balu, Jason York, Thomas McNally, Mary Jo LaDu

Research Assistant Professors and Scientific Staff Competition

***Two First Place Winners tied and share honors:**

***Harish Krishnan (Psychiatry)**

Title: *“Using Atac-Seq To Identify Novel Epigenetic Networks In The Amygdala That Play A Role In Acute Alcohol-Induced Anxiolysis”*

Co-Authors: Annie Shieh, Huaibo Zhang, Ying Chen, Tara Teppen, Subhash Pandey

***Jing Li (Pharmacology)**

Title: *“Neutrophil $\alpha M\beta 2$ integrin is required for GPCR signaling by serving as a scaffold protein in lipid rafts”*

Co-Author: Jaehyung Cho

Honorable Mentions:

Sophie Tran (Anesthesiology)

Title: *“Mesenchymal Stem Cell Derived Extracellular Vesicles And Neuroprotection In The Retina.”*

Co-Authors: Steven Roth, Leianne Torres, Mohansrinivas Chennakesavalu, Raj Patel, Nathan Burg

Mohamed Ali (Obstetrics and Gynecology)

Title: *“Implication of estrogen and beta-catenin cross-talk on Uterine Fibroids pathogenesis which is reversed by histone deacetylase inhibitors”*

Co-Authors: Ayman Al-Hendy, Qiwei Yang,

Shubha Priyamvada (Medicine)

Title: *“All-trans retinoic acid (ATRA) Stimulates SLC26A3 Activity in intestinal epithelial cells via a PI3K signaling pathway*

Co-Authors: Arivarasu N. Anbazhagan, Anoop Kumar, Tarunmeet Gujral, Pradeep Dudeja