

The PMI Times

Department of Pathology, Microbiology & Immunology
University of South Carolina ~ School of Medicine
The Communication Source for PMI Faculty, Staff & Students
Department Chair: Dr. Mitzi Nagarkatti, PhD
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September - December 2021

P Honors & Awards

M Prakash Nagarkatti, PhD, has won the prestigious award of "Distinguished Toxicology Scholar Award". He will be honored at the 2022 Awards ceremony at the in-person Society of Toxicology (SOT) Annual meeting, March 27, 2022, San Diego, CA.

I Muthanna Sultan, PhD, (Nagarkatti lab) was recognized by Office of the Vice President for Research as a 2022 Breakthrough Graduate Scholar. Muthanna was one of 15 graduate students recognized for the outstanding research contributions he has made to his field while a student at UofSC. It is wonderful to have our students recognized for the amazing work they do!

Muthanna Sultan (Nagarkatti lab) successfully defended his dissertation titled "The endocannabinoid, anandamide modulates the immune functions through regulation of microRNA and microbiome to suppress acute respiratory distress syndrome" on October 5, 2021. He graduated and received his Ph.D. in Biomedical Sciences on December 13, 2021. Muthanna has joined Dr. Mitzi Nagarkatti's lab as a postdoctoral fellow.

Muthanna Sultan, PhD, (Nagarkatti lab) was honored with the International Graduate student Achievement Award 2021. This honor was awarded by International Student Service-University of South Carolina in recognition of his contribution that has enriched our campus and expanded the international focus at the University of South Carolina.

Ms. Khadija Kakar, one of the Fulbright students (Nagarkatti lab) has been selected from UofSC to attend a ceremony and reception in Washington, DC for Bono, U2 lead singer and co-founder of ONE and (RED) who is going to be awarded the Fulbright Prize for International Understanding on March 31, 2022. Khadija hails from Pakistan and has been doing charitable work using her personal funds for >8years to fight against poverty affecting literacy and plans to build an organization towards this goal.

Dr. Ioulia Chatzistamou served as a member of the Biomedical Sciences Certificate Task Force (Aug-Sept 2021).

Dr. Nadia Al-Sammarraie, Postdoctoral Fellow in Dr. Ray's laboratory, received the Young Investigator Educational Enhancement (YIEE) award of the American Society for Neurochemistry (ASN) and made two presentations in the 2021 Annual Virtual Meeting of the ASN.

Dr. Carole Oskeritzian was recognized as MVP (Most Valuable Professor) by Kayla Manning, M.S., together with the Gamecocks Women's Volleyball Team, for her dedication to UofSC and UofSC student-athletes during the Faculty & Staff Appreciation night on October 8.

Chandani Mitchell (Busbee lab) received a SPARC Award from the Office of the Vice President for Research. Chandani's project is titled "Role of AhR in IL-22 secretion by Rorc-expressing cells during indole-3-carbinol treatment of colitis".

News & Updates

Dr. Angela Murphy served as a reviewer for NIH/NCI Transition to Independence (K99/R00) awards on October 20-21, 2021.

A warm welcome to Deepak Bhere a new tenure-track faculty member to PMI.

Dr. Swapan Ray served as a member of the Advisory Council for the Lexington School District Two (Lex2) Innovation Center and attended its Fall Advisory Council Meeting on October 22, 2021.

With UofSC Women in Science and Medicine (WISaM) Co-Chair Kinsey Meggett and sub-committee members, Dr. Oskeritzian organized and facilitated a virtual seminar featuring Kari-Claudia Allen, MD, entitled “Women of Color in Medicine”, an event held on September 24 that was attended by over 110 participants.

Dr. John W. Fuseler, Imaging Expert in the Oskeritzian lab since March 2015, retired on December 17 after 16 years at UofSC SOM. A farewell “drop-in” was held to honor him on December 9, gathering many SOM Faculty and Staff. We wish John all the best!

Together with members of the leadership team, Dr. Carole Oskeritzian served as a panelist for the second-round interviews for the position of UofSC SOMC Director of Communications & Marketing.

With UofSC WISaM Co-Chair Kinsey Meggett and sub-committee members, Dr. Carole Oskeritzian organized and facilitated the inaugural Career and Professional Development Student Workshop, held virtually on October 13. Panelists invited to the discussion were Heather Brown, MD, Annette Rauch, PA and Jessica Sido, PhD. Topics included “How to build a career you will still love in 30 years”, “Female providers: not the nurse, not the doctor” and “Starting a start-up: what I wish someone had told me”. Dr. Jessica Sido was an alumna from Dr. Nagarkatti’s lab.

Dr. Carole Oskeritzian was selected to serve as a member of the selection committee for the 2022 SC Governor’s Awards for Excellence in Science. Dr. Oskeritzian will co-chair the selection committee with Dr. Michele Harmon (UofSC Aiken) starting in 2023.

Elizabeth Caulder, PMI business manager, taught the GRANT Certificate Program, Pre-Award Class on October 6, 2021. The GRANT Certificate Program, sponsored by the Office of the Vice President for Research, offers research administrators a foundational grant life-cycle education. The program provides an overview of the grant life cycle, from pre-award to post-award, taught by subject matter experts from across campus.

Dr. Ioulia Chatzistamou was a member of the interview panel that met virtually with the candidates for the position for the Associate Dean of Undergraduate Medical Education for the UofSC School of Medicine Columbia (Sept-Oct 2021).

Dr. Swapan Ray participated as a Scientist Reviewer in the Pediatric Adolescents and Young Adults-Sarcomas (PAYA-S) Review Panel of the Peer Reviewed Cancer Research Program (PRCRP) of the Congressionally Directed Medical Research Programs (CDMRP), US Department of Defense, November 9 and 10, 2021.

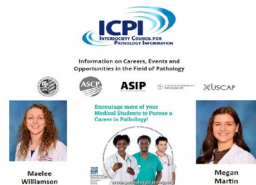
Dr. Catroppo served as Co-Block Director for the inaugural UofSC SOM integrated organ system-based M2 curriculum General Principles block as well as for the Musculoskeletal System block for the Fall 2021 semester.

Dr. Catroppo attended the University of South Carolina Center for Teaching Excellence (CTE) workshop “PowerPoint Tools and Techniques: Helping Faculty Create Effective Presentations” on September 9, 2021.

Dr. Catroppo attended the University of South Carolina Center for Teaching Excellence (CTE) workshop “Dealing with Student Absences” on December 1, 2021.



On September 9, 2021, the Medical Student Interest Group for Pathology offered a noon talk by interest group faculty advisor Dr. James Catroppo on “The Doctor’s Doctor: The Role Of The Pathologist In Healthcare” in the M2 Classroom. M2 students Ms. Maelee Williamson and Ms. Megan Martin organized the event and were introduced as class officers for the interest group for the 2021-2022 Academic Year. Given COVID restrictions on food in the classroom, \$10 Starbucks gift cards – purchased with grant funds awarded to our pathology interest group through the Margaret Grimes Medical Student Interest Group Grant Program under the auspices of the Intersociety Council for Pathology Information (ICPI) – were distributed to all attendees in lieu of boxed lunches.



On October 11, 2021, the Medical Student Interest Group for Pathology offered a noon talk by Dr. Robert Startz on “A Career as A Pathologist” in the M2 Classroom. Given COVID restrictions on food in the classroom, \$10 Starbucks gift cards were distributed to all attendees in lieu of boxed lunches.

Robert Startz, MD, was an invited guest speaker where he presented two virtual lectures on "Diseases of Famous People" to first year students at North Dakota State University in Fargo, November 2-4, 2021.



PMI Department was finally able to hold the in-person PMI Annual Recognition & Appreciation Celebration, Friday, October 29, 2021 at Clinton Sease Farms & Corn Maze. All were able to share in congratulating our students and faculty for their many awards and celebrations this past year. It was fun to see all in costumes.

Publications

Cannon AS, Nagarkatti PS, Nagarkatti M. Targeting AhR as a Novel Therapeutic Modality against Inflammatory Diseases. *International Journal of Molecular Sciences*. 2021 Dec 28;23(1):288.

Sougiannis AT, VanderVeen BN, Chatzistamou I, Kubinak J, Nagarkatti M, Fan D, Murphy EA. Emodin reduces tumor burden by diminishing M2-like macrophages in colorectal cancer. *Am J Physiol Gastrointestinal Liver Physiol*. In Press.

McDonald SJ, VanderVeen BN, Velazquez KT, Enos RT, Fairman CM, Cardaci TD, Fan D, Murphy EA. Therapeutic Potential of Emodin for Gastrointestinal Cancers. *Integrative Cancer Therapies*. In Press.

Fairman CM, Lønbro S, Cardaci, TD, VanderVeen BN, Nilsen TS, Murphy EA. Muscle Wasting in Cancer: Opportunities and Challenges for Exercise in Clinical Cancer Trials. *JCSM Rapid Communications*. In Press.

Tobiansky DL, Floresco S, Kachkovski GV, Enos RT, Schmidt KL, Murphy EA, Soma KK. Maternal sucrose consumption alters behavior and steroids in adult rat offspring. *Journal of Endocrinology*. 2021 Nov 5;251(3):161-180.

Sultan M, Wilson K, Abdulla O, Busbee B, Hall A, Carter T, Singh N, Chatterjee S, Nagarkatti P, Nagarkatti M, Endocannabinoid Anandamide Attenuates Acute Respiratory Distress Syndrome through modulation of microbiome in the Gut-Lung Axis. *Cells*. 2021 Nov 25;10(12):3305.

Sultan M, Alghetaa Mohammed A, Abdulla O, Wisniewski P, Singh N, Nagarkatti P, Nagarkatti P. The endocannabinoid Anandamide attenuates Acute Respiratory Distress Syndrome by downregulating miRNA that target inflammatory pathways. *Front Pharmacol*. 2021 Apr 27;12:644281.

Horvath S, Haghani A, Zoller JA, Naderi A, Soltanmohammadi E, Farmaki E, Kaza V, Chatzistamou I, Kiaris H. Methylation studies in *Peromyscus*: aging, altitude adaptation, and monogamy. *GeroScience*. In Press.

Cai G, Du M, Bossé Y, Albrecht H, Qin F, Luo X, Androulakis XM, Cheng C, Nagarkatti M, Nagarkatti P, Christiani DC, Whitfield ML, Amos CI, Xiao F. SARS-CoV-2 Impairs Dendritic Cells and Regulates DC-SIGN Gene Expression in Tissues. *Int J Mol Sci*. 2021 Aug 26;22(17):9228.

Yang P, Luo Y, Kurnaz LB, Bam M, Yang X, Decho AW, Nagarkatti M, Tang C. Biodegradable polycaprolactone metallopolymer-antibiotic bioconjugates containing phenylboronic acid and cobaltocenium for antimicrobial application. *Biomater Sci*. 2021 Oct 26;9(21):7237-7246.

Dopkins N, Neameh WH, Hall A, Lai Y, Rutkovsky A, Gandy AO, Lu K, Nagarkatti PS, Nagarkatti M. Effects of Acute 2,3,7,8-Tetrachlorodibenzo-p-Dioxin Exposure on the Circulating and Cecal Metabolome Profile. *Int J Mol Sci*. 2021 Oct 30;22(21):11801.

Dopkins N, Miranda K, Wilson K, Holloman BL, Nagarkatti P, Nagarkatti M. Effects of Orally Administered Cannabidiol on Neuroinflammation and Intestinal Inflammation in the Attenuation of Experimental Autoimmune Encephalomyelitis. *J Neuroimmune Pharmacol*. In Press.

Mondal A, Saha P, Bose D, Chatterjee S, Seth RK, Xiao S, Porter DE, Brooks BW, Scott GI, Nagarkatti M, Nagarkatti P, Chatterjee S. Environmental Microcystin exposure in underlying NAFLD-induced exacerbation of neuroinflammation, blood-brain barrier dysfunction, and neurodegeneration are NLRP3 and S100B dependent. *Toxicology*. 2021 Sep;461:152901.

Manea AJ, Ray SK. Regulation of autophagy as a therapeutic option in glioblastoma. *Apoptosis*. 2021 26 (11), 574-599.

Al-Sammarraie N, Ray SK. Targeting mTOR signaling to promote autophagy for functional recovery after spinal cord injury. In: *Cellular, Molecular, Physiological, and Behavioral Aspects of Spinal Cord Injury* (eds. Rajendram R, Preedy V, and Martin C), Elsevier Publishing Company, London, UK. *In Press*.

Al-Sammarraie N, Ray SK (2021) CRISPR-Cas9 genome editing in GBM. Retrieved from <https://encyclopedia.pub/15518> .

Presentations

Bhere D. Therapeutic drug development for malignant neurological cancers. National e-Conference on Drug Discovery for CNS disorders, Manipal, KA, India, Dec 6-10, 2021.