Honors & Awards

Dr. Angela Murphy received the 2024 Distinguished Research Service Award from the office of the VPR.

Dr. Christian Unger and Dr. Angela Murphy received an administrative supplement associated with NCI funded U01 project - A Transdisciplinary Approach to Investigating Metabolic Dysregulation in Obese Parent and Child Dyads and Risk of Colorectal Cancer. The award totaling 502K started March 1, 2024, and will end June 30, 2027.

Dr. Taylor Carter, a Postdoctoral Fellow in Nagarkatti lab was one of the winners of the Drug Discovery Toxicology Specialty Section (DDTSS) Postdoctoral Poster Competition at the Society of Toxicology Annual Meeting, Salt Lake City, UT, March 10-14, 2024. Carter TH, Nagarkatti M, Nagarkatti PS. Delta-9-Tetrahydrocannabinol attenuates macrophage differentiation through downregulation of intra-cellular Reactive Oxygen Species.

Chloe Weyer-Nichols, a grad student in the Nagarkatti lab was awarded the Regulatory and Safety Evaluation Specialty Section Graduate Student Excellence Award at the Society of Toxicology Annual Meeting, Salt Lake City, UT, March 10-14, 2024. Weyer C, Aladhami A, Carter T, Nagarkatti P, Nagarkatti M. Single-cell RNA Sequencing Reveals Mechanisms of TCDD-mediated Attenuation of Acute Respiratory Distress Syndrome Through Down-regulating Chemokines and Their Receptors on Myeloid Cells in the Lungs.

Dr. Swapan Ray’s undergraduate research student, Ahalya Muraleedharan, currently an Honors College Senior, has been awarded the “2024 Dwight Camper Outstanding Undergraduate Research Award” (only one award per year in the State of South Carolina) at the Annual Meeting of the South Carolina Academy of Science on March 23, 2024, Charleston, SC.

Dr. Philippe Brandon Busbee received the Patriot Award from the South Carolina Employer Support of the Guard and Reserve (ESGR) on March 20, 2024.

Dr. Carole Oskeritzian served as a grant reviewer (R01s and R21s) for the NIH/NIAID/NHLBI Hypersensitivity, Allergies and Mucosal Immunology (HAMI) - ZRG1 IIDA-F (57) virtual study section on February 8, 2024.

Dr. Carole Oskeritzian was invited to serve as a grant reviewer (R01s and U2Cs) for two NIH/NIAID/NEI/NIEHS Special small Emphasis Panels, ZES1 LWJ-D CA 1 and ZES1 LWJ-D CP, entitled “Chemical Threat Agent-induced Pulmonary and Ocular Pathophysiological Mechanisms (R01 Clinical Trial Not Allowed)” and a new NOFO (ES23-009) establishing a Coordinating Core entitled: Chemical Threat Agent Exposure Resource and Coordination Core (ExRC) (U2C Clinical Trial Not Allowed)”, on February 21-22.

Dr. Angela Murphy served as a reviewer for NIH/NCI Transition to Independence awards on February 15-16, 2024.

Dr. Archana Saxena, a postdoc in Dr. Busbee’s lab, accepted a Research Instructor position at the Warren Alpert Medical School of Brown University working in the research laboratory of Dr. Alexander Raufi. Congratulations Archana!


Dr. Taylor Carter (Nagarkatti lab) won First Place at the 2024 USC Discover Day, Postdoctoral Scholarship Awards, “Delta-9-Tetrahydrocannabinol Attenuates Macrophage Differentiation through Downregulation of Intra-Cellular Reactive Oxygen Species”, USC Discover Day, Columbia SC, April 19, 2024.

Congratulations to Ray Bogdon, (Busbee lab) for winning a Graduate Student Award at the 2024 USC Discover Day, Columbia, SC, April 19, 2024.

Dr. Prakash Nagarkatti provided testimony April 23, 2024, to the House Medical Cannabis Committee, on their research involving Cannabis over the past 25 years. The testimony provided support for the “Compassionate Care Act” aimed at legalizing medical cannabis for SC patients suffering from debilitating diseases, against which there is no effective treatment.

Dr. Angela Murphy delivered a lighting talk of her research program at the Annual Meeting of the NCI funded MeDOC (Metabolic Dysregulation Obesity Cancer) Consortium, Salt Lake City, UT April 24-26, 2024.

Dr. Mitzi Nagarkatti was an invited presenter at the International Drug & Alcohol Research Society Conference, Rio de Janeiro, Brazil, April 29 – May 3, 2024. The presentation title was “Role of anandamide in the attenuation of acute respiratory distress syndrome through induction of epigenetic pathways and regulation of dysbiosis”.

Dr. Prakash Nagarkatti was an invited presenter at the International Drug & Alcohol Research Society Conference, Rio de Janeiro, Brazil, April 29 – May 3, 2024. The presentation title was “Delta-8-tetrahydrocannabinol Attenuates Experimental Multiple Sclerosis Through Modulation of Gut Microbiota”.

Dr. Prakash Nagarkatti chaired the session on Cannabinoids and Endocannabinoids at the International Drug & Alcohol Research Society Conference in Rio de Janeiro, Brazil, April 29-May 3, 2024.


Dr. Deepak Bhere was highlighted in University of South Carolina Breakthrough Research “Targeting Tumors” March 5, 2024. https://sc.edu/uofsc/posts/2024/03/breakthrough_targeting_tumors.php.

Brooke Bullard, graduate student in Angela Murphy’s lab received an F31 Award from the National Center of complementary of Integrative Health. Brooke was featured in USC announcements. https://sc.edu/study/colleges_schools/medicine/research/research_news/brooke_bullard_announcement.php

**News & Updates**

Chandani Mitchell, a Ph.D. graduate student in Dr. Busbee's lab, successfully defended her thesis on February 28, 2024. Congratulations Dr. Mitchell!

Patrice Cunningham, a Ph.D. graduate student in Dr. Velazquez’s lab, successfully defended her thesis on March 20, 2024, “Exploring the Immune System’s Impact on Cancer Cachexia”. Congrats Dr. Cunningham!

Congratulations to Alex Huss (MS student in the Murphy lab) for successfully defending his MS Thesis on ‘The effects of high fat diet induced obesity on lipid deposition in skeletal muscle’. Alex will be attending medical school in the fall.

Stacey Oxendine, IBS PhD Candidate, was a rotation student in the Oskeritzian Lab from 01/03/24 to 03/08/24.
Dr. Swapan Ray is serving as a member of the Liaison Committee on Medical Education (LCME) Faculty Committee, which is by Gerald E. Harmon, MD, Interim Dean, USC SOMC. Dr. Ray is specifically serving in the LCME Standard 4 Committee. This committee will continue its work through the fall 2024. The Committee has met several times and started self-study process in preparation for our LCME accreditation site visit in February 2025.

Dr. Swapan Ray is serving as Academic Editor for these peer-reviewed journals: *Brain Sciences, Cells, Journal of Food Biochemistry,* and *The Scientific World Journal.*

Together with the USC SOMC Women in Science and Medicine (WiSaM) Committee, Interim Dean Harmon, Vice Dean Jeff Perkins, Kasie Roark (IBS PhD Candidate) and Dr. Carole Oskeritzian (WiSaM Committee Chair), launched the Carolina Closet at SOM, in partnership with the Gamecock CommUnity Shop. The Closet provides business casual and professional attire for job interviews and conference season. Hosted in Cocky’s Cupboard in Building 3, Room 345.

Dr. Swapan Ray has reviewed a new eBook proposal ‘Botanical Remedies for Neurological Wellness: Exploring the Therapeutic Potential of Plant Secondary Metabolites’ for the Bentham Science Publisher.

Michael Madden, IBS PhD Candidate, was a rotation student in the Oskeritzian Lab from 03/11/24 to 05/03/24.


The Annual 2024 NIH COBRE for Dietary Supplements and Inflammation - Phase 2 External Advisory Committee Meeting was held in-person March 22, 2024, at the Columbia Metropolitan Convention Center. The attending COBRE EAC committee members were Theresa Whiteside, Cliff Lowell, Roger Markwald and Sandeep Prabhu. Presentations were given from the following PMI faculty: Prakash Nagarkatti, Jason Kubinak, P. Brandon Busbee, Kandy Velázquez, Carole Oskeritzian, Xiaoming Yang, Reilly Enos and Kiesha Wilson. The meeting had 100 attendees.

Congratulations to the following award winners from PMI:

**PDF Awards:**
- Dr. Varsha Kulangara, a Postdoc in the Nagarkatti’s lab, was awarded 2nd Place for Postdoc Presentations at the NIH Center for Dietary Supplements and Inflammation – COBRE External Advisory Committee Meeting, Columbia, SC, March 22, 2024. Kulangara V K, Nagarkatti M, Nagarkatti P. Impact of altered gut microbiome composition and colonic gene expression in a murine model of Macrophage Activation Syndrome.
- Dr. Urmila Halder, a Postdoc in the Nagarkatti’s lab, was awarded 3rd Place for Postdoc Presentations at the NIH Center for Dietary Supplements and Inflammation – COBRE External Advisory Committee Meeting, Columbia, SC, March 22, 2024. Halder U, Kakkar K, Wilson K, Carter T, Weyer C, Mohammed A, Kaul M, Nagarkatti P, Nagarkatti M. Cannabis component attenuates neurodegeneration through downregulation of microglial cell activation, astrocytosis and by reversing gut dysbiosis in GFAP-gp120 Tg Mice.

**Graduate Student Awards:**
- Hamida, a graduate student in the Nagarkatti lab, was awarded 1st Place Graduate Student Poster Award winner at the NIH Center for Dietary Supplements and Inflammation – COBRE External Advisory Committee Meeting, Columbia, SC, March 22, 2024. Hamida, Kulangara V, Marudamuthu A, Palasum M, Nagarkatti P, and Nagarkatti M. miR-199a-3p and miR-100-5p regulate mTOR pathway and inhibit Concanavalin-induced autoimmune hepatitis in mice treated with Δ8-THC.
• Chloe Weyer-Nichols, a graduate student in the Nagarkatti lab was awarded 2nd Place for Graduate Student Presentations at the NIH Center for Dietary Supplements and Inflammation – COBRE External Advisory Committee Meeting, Columbia, SC, March 22, 2024. Weyer C, Aladhami A, Carter T, Nagarkatti P, Nagarkatti M. Single-cell RNA Sequencing Reveals Mechanisms of TCDD-mediated Attenuation of Acute Respiratory Distress Syndrome Through Down-regulating Chemokines and Their Receptors on Myeloid Cells in the Lungs.

Undergraduate & Masters Student Awards:
• Zannatul Mauya, an undergraduate student from Dr. Kiesha Wilson’s lab was awarded 1st Place Student Poster Award winner at the NIH Center for Dietary Supplements and Inflammation – COBRE External Advisory Committee Meeting, Columbia, SC, March 22, 2024. Mauya Z, Jean-Louis A, Carter T, Nagarkatti P, Nagarkatti M, and Wilson K. Evaluating the Effects of Staphylococcal Enterotoxin B (SEB) and Cannabidiol (CBD) on Alveolar Macrophage Functioning in Acute Respiratory Distress Syndrome.
• Taylor Jannusch an undergrad student in the Nagarkatti lab was awarded 2nd place Undergraduate Student Poster winner at NIH Center for Dietary Supplements and Inflammation – COBRE External Advisory Committee Meeting, Columbia, SC, March 22, 2024. Jannusch TT, Nagarkatti M, Nagarkatti PS. Differential effects of aryl hydrocarbon receptor (AhR) ligands on gut microbiota.

The following PMI faculty served as judges for the NIH COBRE for Dietary Supplements and Inflammation - Phase 2 External Advisory Committee Meeting:
• Avery Dingle, MD
• Angela Murphy, PhD
• Deepak Bhere, PhD
• Ioulia Chatzistamou, MD, PhD
• Swapan Ray, PhD

Dr. Carole Oskeritzian, the South Carolina Academy of Science (SCAS) Vice President, served as Co-Organizer of the 96th South Carolina Junior Academy of Science Annual/SCAS Joint Meeting held on March 23, 2024, at the College of Charleston, Charleston, South Carolina.

Dr. Carole Oskeritzian was invited to the SCbio Women Leaders in Life Science breakfast at the South Carolina Hospital Association, Columbia, SC on 03/28/24.

The WiSaM committee chaired by Dr. Carole Oskeritzian hosted a lunch-and-learn conversation with Dr. Carol McMahon, recently retired USC SOMC 2021 Luminary Leader In Medicine and Science, Associate Dean for Diversity and Inclusion and PMI Clinical Associate Professor on April 17 in the B1 classroom. The event was attended by over 40 SOMC and Prisma Health students, staff, and faculty members.

Dr. Carole Oskeritzian served as a judge for Graduate Students poster presentation at the 2023 Discover USC Research Day, held on April 19.

James F. Catropppo, M.D. attended the following faculty development workshops:
- International Association of Medical Science Educators (IAMSE) roundtable discussion “Effect of Curricular Refresh and Renewal on Students” (16 April 2024)
- International Association of Medical Science Educators (IAMSE) roundtable discussion “Effect of Curricular Reform on Faculty” (9 April 2024)
- Association of Biochemistry Educators (ABE) webinar “CBME: A Common Foundation with Infinite Building Blocks” (14 March 2024)
- International Association of Medical Science Educators (IAMSE) roundtable discussion “It Isn’t ‘Self-Directed’ Anymore If You Have To Direct It, Or Is It?” (5 March 2024)
- Association of Biochemistry Educators (ABE) webinar “Back to Basics: The Role of Foundational Sciences in CBME” (22 February 2024)
- Association of Biochemistry Educators (ABE) webinar “Competency-Based Medical Education (CBME) in Pre-Clerkship Education” (25 January 2024)
Class of 2024 students Lauren Blackmon and Radhika Patel achieved successful matches into Pathology Residency programs in the 2024 National Resident Matching Program (NRMP) Match. Lauren at East Carolina University Brody School of Medicine and Radhika at the University of Alabama at Birmingham Heersink School of Medicine. This is now the 4th consecutive year in which graduates of USCSOMC have matched into pathology residency programs:

Class of 2021
Caroline Stanek  University of Alabama at Birmingham Heersink School of Medicine (PGY-3, Chief Resident-Elect in Clinical Pathology)

Class of 2022
Alyssa Lee  University of Alabama at Birmingham Heersink School of Medicine (PGY-2, Resident Leader in Communications)

Class of 2023
Ryan Bragiel  University of Alabama at Birmingham Heersink School of Medicine (PGY-1)
Amber Prete  Virginia Commonwealth University School of Medicine (PGY-1)

The Medical Student Interest Group for Pathology held the following lunch meetings:

27 February 2024  Carol McMahon, M.D., My Career as a Medical Examiner.

Dr. McMahon pictured here with faculty advisor to the interest group, Dr. Catroppo and interest group class officers M2 students Dillon Spires (President), Gannett Loftus (Vice-President), Sydney Thomas (Secretary), and Nelson Gonzalez (Treasurer).

2 April 2024  Virginia Commonwealth University School of Medicine PGY-1 Anatomic and Clinical Pathology Resident Amber Prete returned for the second time this year for a Zoom meeting to give the students an update on her “day in the life of a first-year path resident” with a glimpse into her rotations on the transfusion medicine (AKA “blood banking”), hematopathology, and autopsy services.

23 April 2024  Video presentation “From Medical Student to Practicing Pathologist” by Dr. Michael Prystowsky (Albert Einstein College of Medicine).

Publications


Braunstein PW, Horovitz DJ, Hampton AM, Hollis F, Newman LA, Enos RT, McQuail JA. Daily fluctuations in blood glucose with norma aging are inversely related to hippocampal synaptic mitochondrial proteins. *Aging Brain.* 2024 Apr 5:5:100116.


**Presentations**


Carter TH, Nagarkatti M, Nagarkatti PS. Delta-9-Tetrahydrocannabinol attenuates macrophage differentiation through downregulation of intra-cellular reactive oxygen species. Society of Toxicology, Salt Lake City, UT, March 10-14, 2024. *Award associated with this presentation: winner of the DDTS Postdoctoral Poster Competition.*

Garcia-Sanchez J, Nagarkatti M, Nagarkatti PS. Delta-8-Tetrahydrocannabinol ameliorates colitis through suppression of inflammatory myeloid cells. Society of Toxicology, Salt Lake City, UT, March 10-14, 2024.
Jannusch TT, Singh, NP, Nagarkatti M, Nagarkatti PS. Differential effects of aryl hydrocarbon receptor (AhR) ligands on gut microbiota. Society of Toxicology, Salt Lake City, UT, March 10-14, 2024.


Khadija Kakar, (graduate student Nagarkatti lab) presented at the USC SOM graduate student seminar series, “Mechanisms Underlying Delta-8-THC Mediated Amelioration of Neuroinflammation in Experimental Multiple Sclerosis”, Columbia, SC, on March 20, 2024.

Bullard BM, McDonald SJ, Cardaci TD, VanderVeen BN, Mohammed AD, Kubinak JL, Pierre JF, Chatzistamou I, Fand D, Hofseth LJ, Murphy EA. Panaxynol improves crypt and mucosal architecture, suppresses colitis-enriched microbes, and alters the immune response to mitigate colitis. External Advisory Committee Meeting, COBRE (Center for Dietary Supplements and Inflammation), Columbia, SC, March 22, 2024.


Jannusch TT, Nagarkatti M, Nagarkatti PS. Differential effects of aryl hydrocarbon receptor (AhR) ligands on gut microbiota. External Advisory Committee Meeting, COBRE (Center for Dietary Supplements and Inflammation), Columbia, SC, March 22, 2024. Award associated with this presentation: 2nd place in the undergraduate category.

Cardaci TD, Huss AR, VanderVeen BN, Bullard BM, Joven N, Price R, Murphy EA. Cancer cachexia increases skeletal muscle lipid deposition and decreases lipid droplet-mitochondrial contact. External Advisory Committee Meeting, COBRE (Center for Dietary Supplements and Inflammation), Columbia, SC, March 22, 2024.

VanderVeen BN, Cardaci TD, Bullard BM, Huss AR, Joven N, Fan D, Murphy EA. The impact of obesity on chemotherapy-induced cytotoxicity. External Advisory Committee Meeting, COBRE (Center for Dietary Supplements and Inflammation), Columbia, SC, March 22, 2024.

Muraleedharan A, Ray SK. Bioflavonoids for inhibiting neuroinflammation and promoting autophagy for neuroprotection in AD cell culture model exposed to oligomeric Aβ42 and gut dysbiotic neurotoxin LPS. External Advisory Committee Meeting, COBRE (Center for Dietary Supplements and Inflammation), Columbia, SC, March 22, 2024.

Rayala N, Al-Sammarraie N, Ray SK. Noggin inhibited bone morphogenetic protein 4 (BMP4) and promoted autophagy to prevent apoptosis in motoneurons in cell culture model of acute spinal cord injury (SCI). External Advisory Committee Meeting, COBRE (Center for Dietary Supplements and Inflammation), Columbia, SC, March 22, 2024.


Oskeritzian CA. Molecular Mechanisms of Resveratrol in Skin Inflammation. External Advisory Committee Meeting, COBRE (Center for Dietary Supplements and Inflammation), Columbia, SC, March 22, 2024.


Kakar K, Halder, U, Nagarkatti M, and Nagarkatti P. Protective Effects of Delta-8-THC Against EAE-Induced Enteric Neuropathy and Neuroinflammation through Regulation of miRNA-Mediated Signaling Networks. External Advisory Committee Meeting, COBRE (Center for Dietary Supplements and Inflammation), Columbia, SC, March 22, 2024.


Hamida, Kulangara V, Marudamuthu A, Palrasu M, Nagarkatti P, and Nagarkatti M. miR-199a-3p and miR-100-5p regulate mTOR pathway and inhibit Concanavalin-induced autoimmune hepatitis in mice treated with Δ8-THC. External Advisory Committee Meeting, COBRE (Center for Dietary Supplements and Inflammation), Columbia, SC, March 22, 2024. 1st Place award for Graduate Student Presentations.


Jannusch TT, Nagarkatti M, Nagarkatti PS. Differential effects of aryl hydrocarbon receptor (AhR) ligands on gut microbiota. External Advisory Committee Meeting, COBRE (Center for Dietary Supplements and Inflammation), Columbia, SC, March 22, 2024. 2nd Place award for Undergraduate Student Presentations.

Garcia-Sanchez J, Nagarkatti M, Nagarkatti PS. Delta-8-Tetrahydrocannabinol ameliorates colitis through suppression of inflammatory myeloid cells. External Advisory Committee Meeting, COBRE (Center for Dietary Supplements and Inflammation), Columbia, SC, March 22, 2024.


Ball, R. Mohammed, A. Jolly, A. Kubinak, J.I. Gluten free diet limits outgrowth of pathobionts and ameliorates SI enteropathy in IgA deficient mice. External Advisory Committee Meeting, COBRE (Center for Dietary Supplements and Inflammation), Columbia, SC, March 22, 2024.

Jannusch TT, Singh NP, Carter T, Nagarkatti M, Nagarkatti PS. Investigation of aryl hydrocarbon receptor (AhR) ligands on MDSCs generation and thymic development. SC Academy of Science (SCAS) 95th Annual Meeting, Charleston, SC, March 23, 2024.


Muraleedharan A, Ray SK. Mouse neuronal cell culture model of Alzheimer’s disease in an environment mimicking gut dysbiosis for comparing efficacy of ursolic acid and donepezil in inhibiting neuroinflammation and promoting autophagy for neuroprotection. South Carolina (SC) branch of the American Society for Microbiology (ASM) at Coastal Carolina University, Conway, SC, April 6, 2024.

Rayala N, Ray SK. Rat neuronal cell culture model of acute spinal cord injury in a gut dysbiosis setting for comparing neuroprotective efficacy of the selective inhibitor of NLRP3 inflammasome and methylprednisolone. South Carolina (SC) branch of the American Society for Microbiology (ASM) at Coastal Carolina University, Conway, SC, April 6, 2024.


Rayala N, Ray SK. Melatonin for suppression of PANoptosis and promotion of autophagy for neuroprotection in rat VSC4.1 motoneuron cell culture model of acute spinal cord injury in a milieu of gut dysbiosis. USC Discover Day, Columbia, SC, April 19, 2024.

Unger CA, Hope MC, VanderVeen BN, Socia CE, Rice BC, Cotham WE, Murphy EA, Enos RT. Adipose tissue specific aromatase overexpression improves metabolic dysfunction and adipose tissue inflammation in obese male mice. Annual Meeting – MeDOC (Metabolic Dysregulation Obesity Cancer) Consortium, Salt Lake City, UT April 24-26, 2024.


VanderVeen BN, Bullard BM, Cardaci TD, Joven N, Murphy EA. The impact of diet induced obesity and liver dysfunction on murine tumor development and progression. Annual Meeting – MeDOC (Metabolic Dysregulation Obesity Cancer) Consortium, Salt Lake City, UT April 24-26, 2024.

Cardaci TD, VanderVeen BN, Bullard BM, Velazquez KT, Murphy EA. Obesity Alters the Tumor Microenvironment, Accelerates Tumorigenesis, and Dysregulates Skeletal Muscle Lipid Metabolism in Murine Cancer Cachexia. Annual Meeting – MeDOC (Metabolic Dysregulation Obesity Cancer) Consortium, Salt Lake City, UT April 24-26, 2024.