



The PMI Times

Department of Pathology, Microbiology & Immunology
University of South Carolina ~ School of Medicine
The Communication Source for PMI Faculty, Staff & Students
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Editors: Dr. Mitzi Nagarkatti, PhD, Dr. Angela Murphy, PhD, & Nicki Holt

2018 September - December

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M Honors & Awards

I Congratulations to Dr. Prakash Nagarkatti, PhD, UofSC Vice President for Research, who was named Fellow of the National Academy of Inventors (NAI). He is the first faculty member from the University of South Carolina to receive this distinction. The NAI is a prestigious organization that is devoted to highlighting outstanding inventions that have improved the quality of life and led to economic development. The NAI Fellows includes Nobel laureates, members of the National Academies of Sciences, Engineering and Medicine as well as Presidents and senior leaders of universities and research institutes. In honor of this achievement, Capstone was crowned with a garnet glow in honor of Dr. Prakash Nagarkatti. We congratulate him on his election to the rank of Fellow of the NAI!

Congratulations to Jackie Bader for receiving a 6 year F99/K00 (Predoctoral to Postdoctoral Fellow Transition Award) from the National Cancer Institute in the amount of \$306K. This award will provide funding for Jackie for 2 years of predoctoral training (~70K) and for 4 years of postdoctoral training (~237K) in a cancer research lab. Jackie will be mentored by Drs. Angela Murphy and Mitzi Nagarkatti during the F99 award period. Jackie's work will focus on metabolic programming in macrophages to reduce colorectal cancer. This is the first F99/K00 award at the School of Medicine.

Congratulations to AcePre LLC, a biotechnology start-up company founded by Dr. Daping Fan (CBA) for receiving an STTR Phase I (R41) grant from the National Center for Complementary and Integrative Health entitled "Emodin as a complementary dietary therapy to reduce toxicity of 5 fluorouracil". This is a 1 year award in the amount of ~\$300K. Dr. Angela Murphy serves as the Principal Investigator of the project.

Congratulations to Alex Sougiannis, winner of a poster award, at the 2018 American Society for Investigative Pathology (ASIP) Annual Meeting PISA, Ann Arbor, Michigan, on October 20-22nd. Alex presented his work on 'Impact of 5 Fluorouracil Chemotherapy on Gut Inflammation, Functional Parameters, and Gut Microbiota'.

Congratulations to Jackie Bader for receiving a 2018 Sorensen Graduate Fellowship for Cancer Research. This highly competitive fellowship is sponsored by the Center for Colon Cancer Research and recognizes students at USC whose research is in an area related to cancer.

Dr. John Fuseler from the Oskeritzian Lab received a travel award to present his work entitled "Newly uncovered angiogenic remodeling in asymptomatic eczema requires mast cells and sphingosine kinase 1" at the 53rd Annual South Eastern Regional Lipid Conference, Cashiers, NC, November 7-9, 2018. Co-authors were Nabihah Kumte, Piper Wedman, Ahmed Aladhmi, Alena Chumanevich, and Carole Oskeritzian.

Congratulations to Esraah Alharris, doctoral student in Dr. Mitzi Nagarkatti's lab. Esraah graduated with a Ph.D. in Integrated Biomedical Sciences on December 17, 2018.

Dr. Narendra Singh received American Association of Immunologists (AAI) Travel award to attend 5th European Congress of Immunology held in Amsterdam, The Netherlands from September 2-5, 2018.

News & Updates

Dr. Angela Murphy served as a reviewer for the National Cancer Institute's Transition to Independence Awards (K99/R00 and K22 applications) on October 24-25, 2018.

Dr. Carole Oskeritzian served as a grant reviewer for the NIH/NIAID ZRG1 IMM-R(10) Innovative Immunology study section held on November 2, Potomac, MD.

Dr. Angela Murphy served as a reviewer for the National Cancer Institute Special Emphasis Panel on Metabolic Reprogramming to Improve Immunotherapy on October 4, 2018.

Dr. Mitzi Nagarkatti reviewed grants as a regular member in the NIH Systemic Injury by Environmental Exposure (SIEE) Study Section Meeting Oct 18-19, 2018 in Seattle, WA.

Dr. Swapan Ray served as a member of the Peer Reviewed Cancer Research Program (PRCRP) Brain Cancer peer review panel of the Department of Defense Congressionally Directed Medical Research Program (CDMRP). The peer review meeting was held in Baltimore, MD, from November 28-30, 2018.

Dr. Robert F. Startz, M.D. presented 4 lectures at the Lourie Center for "Diseases of Famous People". The lectures were held on October 2, 9, 16, & 23. These were part of adult education sponsored by Midlands Tech.

Dr. Narendra Singh was invited to review abstracts in the area of Immunology for Annual Biomedical Research Conference for Minority Students (ABRCMS) Meeting, 2018 (November 14-17), held in Indianapolis.

Dr. Narendra Singh was invited to judge Posters in the area of Immunology for Annual Biomedical Research Conference for Minority Students (ABRCMS) Meeting, 2018 (November 14-17), held in Indianapolis.

Dr. Carole Oskeritzian served as Honors Thesis Mentor and Alena Chumanevich served as Second Reader to Nabihah I. Kumte who successfully defended her thesis on December 4. Nabihah graduated from USC in December in the middle of her Senior year. A Magellan Scholar, she spent over two and a half years in the Oskeritzian Lab working on the development of a noninvasive method for early detection of colon cancer, work also supported by a pilot project (Oskeritzian, PI) from Dr. Berger's CCCR. Nabihah has already been accepted at USC SOM-Greenville where she will start as an M1 student in fall 2019. We wish her well! Her graduation story was featured in UofSC.

https://www.sc.edu/study/colleges_schools/public_health/about/news/2018/december_grad_kumte.php#.XAKl6NtKipq

Dr. Prakash Nagarkatti, PhD, USC VP of Research, presented at the Inaugural Update on Medical Cannabis conference held in September at the Medical University of South Carolina.

Dr. James F. Catroppo. "Ultrasound-Pathology Correlations in Medical Education". Invited presentation to faculty from Northwestern University Feinberg School of Medicine visiting the University of South Carolina School of Medicine Ultrasound Institute. 5 October 2018.

Dr. Carole Oskeritzian and Ms. Alena Chumanevich have filed a US patent application No.: 62/751,765, entitled "Culture system and media for skin explants providing enhanced viability and enabling molecular studies".

Dr. Prakash Nagarkatti, PhD, USC VP of Research, was featured in Post and Courier, Charleston, SC. The article was written by Stephanie Bama, "Could the popularity of a new CBD cocktail portend a new trend for Charleston", Nov 26, 2018.

Dr. James F. Catroppo. "What Do Pathologists Do?", Careers in Pathology Invited Speaker at Medical Student Interest Group (MSIG) for Pathology lunch meeting. University of South Carolina School of Medicine. 4 October 2018.

Dr. Anthony (“Jake”) Emanuel, a PGY-2 resident in the Medical University of South Carolina (MUSC) pathology residency program, gave a lunch talk on the life of a pathology resident to our Medical Student Interest Group (MSIG) for Pathology on 25 October 2018, hosted by our group presidents for the 2018-2019 academic year, M2 students Hannah Moreland and Courtney Price, and thanks to grant funds provided by the Intersociety Council for Pathology Information (ICPI), which were awarded to our program for the 5th consecutive year, based upon the prospectus essay written and submitted by Ms. Moreland and Ms. Price.



Dr. Robert Startz gave a lunch talk on the business aspects of pathology (service pathology, compensation, satisfaction with the career, etc.) to the USCSOM Medical Student Interest Group (MSIG) for Pathology on 20 November 2018.

The PMI Department hosted a pot-luck Halloween Party on October 31, 2019. Everyone brought delicious dishes to share. Importantly, many wore adventurous costumes!

Our PMI Department joined together for our Recognition and Appreciation Celebration Luncheon December 5, 2018. Our celebration was held at the Top of Carolina Restaurant, with an exceptional view of Columbia on the 18th floor of the Capstone House.



The restaurant rotates 360° each hour to allow us to view Columbia’s gorgeous fall colors and scenery. The luncheon was most enjoyable, with delicious food. We enjoyed some holiday games to learn of many singing talents and fun-facts about our faculty, staff, and students! All enjoyed a delightful time, talking, strengthening our friendships, laughing and enjoying a lunch together.



Publications

Cranford TL, Velázquez KT, Enos RT, Sougiannis AT, Bader JE, Carson MS, Bellone RR, Chatzistamou I, Nagarkatti M, Murphy EA. Effects of high fat diet-induced obesity on mammary tumorigenesis in the PyMT/MMTV murine model. *Cancer Biol Ther*. 2018 Nov 2:1-10.

Zhang Q, Berger FG, Love B, Banister CE, Murphy EA, Hofseth LJ. Maternal stress and early-onset colorectal cancer. *Med Hypotheses*. 2018 Dec;121:152-159.

VanderVeen BN, Fix DK, Montalvo RN, Counts BR, Smuder AJ, Murphy EA, Koh HJ, Carson JA. The regulation of skeletal muscle fatigability and mitochondrial function by chronically elevated interleukin-6. *Exp Physiol*. 2018 Dec 21. (In Press)

Bader JE, Enos RT, Velazquez KT, Carson MS, Sougiannis A, McGuinness OP, Robinson CM, Murphy EA. Clodronate-Liposome treatment results in neutrophilia, anemia, and is not effective in limiting obesity-linked metabolic impairments. *Am J Physiol Endocrinol Metab*. 2018 Dec 21. (In Press)

Singh NP, Miranda K, Singh UP, Nagarkatti P, Nagarkatti M. 2018. Diethylstilbestrol (DES) induces autophagy in thymocytes by regulating Beclin-1 expression through epigenetic modulation. *Toxicology*. 2018 Dec 1;410:49-58. doi: 10.1016/j.tox.2018.08.012. Epub 2018 Aug 25.

Kadhim S, Singh NP, Zumbun EE, Cui T, Chatterjee S, Hofseth L, Abood A, Nagarkatti P, Nagarkatti M. 2018. Resveratrol-Mediated Attenuation of Staphylococcus aureus Enterotoxin B-Induced Acute Liver Injury Is Associated With Regulation of microRNA and Induction of Myeloid-Derived Suppressor Cells. *Front Microbiol*. 2018 Dec 17;9:2910. doi: 10.3389/fmicb.2018.02910. eCollection 2018.

Alharris E, Alghetaa H, Seth R, Chatterjee S, Singh NP, Nagarkatti M, Nagarkatti P. 2018. Resveratrol Attenuates Allergic Asthma and Associated Inflammation in the Lungs Through Regulation of miRNA-34a That Targets FoxP3 in Mice. *Front Immunol*. 2018 Dec 20;9:2992. doi: 10.3389/fimmu.2018.02992. eCollection 2018.

Kiaris H, Chatzistamou I. Inhibition of tumor growth by agonists of growth hormone- releasing hormone. *Proc Natl Acad Sci* 2018 Nov 20;115(47):11876-11878.

Taylor MA, Das BC, Ray SK. Targeting autophagy for combating chemoresistance and radioresistance in glioblastoma. *Apoptosis*. 2018 23:563-575.

Yelton CJ, Ray SK. Histone deacetylase enzymes and selective histone deacetylase inhibitors for enhancing antitumor effects and immunity in glioblastoma. *Neuroimmunol Neuroinflammation*. 2018 5:46.

Elliott DM, Singh NP, Nagarkatti M, Nagarkatti PS. 2018. Cannabidiol Attenuates Experimental Autoimmune Encephalomyelitis Model of Multiple Sclerosis Through Induction of Myeloid-Derived Suppressor Cells. *Front Immunol*. 2018 Aug 3;9:1782. doi: 10.3389/fimmu.2018.01782. eCollection 2018.

Abron JD, Singh NP, Price RL, Nagarkatti M, Nagarkatti PS, Singh UP. 2018. Genistein induces macrophage polarization and systemic cytokine to ameliorate experimental colitis. *PLoS One*. 2018 Jul 19;13(7):e0199631. doi: 10.1371/journal.pone.0199631. eCollection 2018.

Presentations

Velázquez KT, Fan D, Johnson R, Nagarkatti M, Murphy EA. The effects of Ojeok-san on cancer-induced visceral nociception. 2018 Annual Scientific Meeting on Pelvic Pain, Chicago IL, October 18-21.

Sougiannis AT, VanderVeen BN, Enos RT, Velázquez KT, Bader JE, Carson MS, Chatzistamou I, Walla M, Pena MM, Kubinak JL, Nagarkatti M, Carson JA, Murphy EA. Impact of 5 Fluorouracil Chemotherapy on Gut Inflammation, Functional Parameters, and Gut Microbiota. 2018 ASIP Annual Meeting PISA, Ann Arbor, Michigan, October 20-22.

Fuseler JW, Kumte NI, Wedman PA, Aladhami A, Chumanevich AP, Oskeritzian CA. Newly uncovered angiogenic remodeling in asymptomatic eczema requires mast cells and sphingosine kinase 1. 53rd Annual South Eastern Regional Lipid Conference, Cashiers, NC, November 7-9, 2018.

Tanis RM, Wedman PA, Chumanevich AP, Aladhami A, Fuseler JW, Oskeritzian CA. Lack of skin mast cell activation and sphingosine-1-phosphate elevation in male mice may explain gender disparity observed in pre-symptomatic atopic dermatitis. 53rd Annual South Eastern Regional Lipid Conference, Cashiers, NC, November 7-9, 2018.

Zhane Chandler was invited to present Poster at Annual Biomedical Research Conference for Minority Students (ABRCMS) held in Indianapolis from November 14-17, 2018. Zhane was a SC-ADAR summer research student in the lab of Dr. Narendra Singh and Dr. Mitzi Nagarkatti. Title of her Poster was "The effect of Resveratrol on the regulation of genes in gut (small intestine) epithelial cells of mice with EAE."

Hartman R, Farmaki E, Kaza V, Chatzistamou I, Kiaris H. The chemokine CCL8 promotes the onset of involution-associated breast cancer. 2018 South Carolina ACP Associate and Student Abstract Competition, Charleston, SC, October 26, 2018.