Dr. Dev Karan recently joined the Department of Pathology, Microbiology and Immunology. Dr. Karan has an R21 grant from NIH and is currently awaiting the funding of a second R21 grant. Dr. Karan’s interests are in therapeutic and preventative complementary and alternative medicine strategies for prostate cancer. Please join us in welcoming Dr. Karan!


Dr. James Catroppo was an invited speaker at the Society for Ultrasound in Medical Education (SUSME) 2nd World Congress, held at the Columbia Metropolitan Convention Center September 27-29, 2013, and attended by over 300 medical educators, representing nations from around the globe. Dr. Catroppo delivered a concurrent session presentation entitled “Ultrasound to Enhance Medical Pathology” on the implications for teaching of ultrasound-pathology correlations which lend contextual coherence for learning transfer in a “case-based knowing” medical school curriculum. Over 50 participants attended the session and round-table discussion which followed. Dr. Catroppo also served as moderator for the Medical Education Methodology abstract session, at which six speakers presented on the theme of enhancing medical student competencies with the development of curricular innovations such as the “flipped classroom”, a clinical ultrasound thread, blended learning, and simulation-enhanced learning.

In February 2014, Dr. Swapan Ray served as an international peer reviewer for the grants awarded by the Leukemia & Lymphoma Research, London, UK.

The Second Annual External Advisory Committee Meeting of the NIH-funded Center of Biomedical Research Excellence (COBRE) on Dietary Supplements and Inflammation was held at The Inn at USC, Columbia, SC on April 10th, 2014. There were >80 participants.

Dr. Carole Oskeritzian served as a judge in the Medicine/Pharmacy Session at the 2014 South Carolina Academy of Science Annual Meeting on April 5 at Trident Technical College, Charleston, SC.

Dr. Udai Singh served as an ad-hoc member on the following National Institutes of Health (NIH) study sections in February:

⇒ Cellular and Molecular Immunology A
⇒ Cellular and Molecular Immunology B

Austin Jackson from the Nagarkatti lab defended his doctoral thesis on November 6th 2013. Congratulations Dr. Jackson!
News & Updates Continued...

- Dr. Carole Oskeritzian was invited to visit and meet faculty and students at the Center of Biomedical Research Excellence (COBRE) in Lipidomics and Pathobiology, the Department of Biochemistry and Molecular Biology, Lipid Signaling in Cancer, the Hollings Cancer Center and the Cardiac Signaling Center of the Medical University of South Carolina (MUSC), Charleston, SC on April 6-7, 2014. In addition, she was the guest speaker of the MUSC COBRE in Lipidomics and Pathobiology. The title of her talk, given on April 7, 2014, was “From Allergy to Cancer: the Mast Cell-Sphingosine-1-Phosphate One-Two Punch Alliance in Inflammation”.

- Dr. Udai Singh is serving on the editorial board of “Journal of Immunology and Immunotechniques”.

- Graduate student, Ms. Lingling Ou, joined Dr. Walden Ai’s laboratory in March 2014. Please join us in welcoming her!

- Graduate student Kayla Kracke in Dr. Jennifer Nyland’s lab successfully completed her comprehensive exam.

- Martine Menard, a Fulbright Fellowship-funded graduate student working with Dr. Narendra Singh was awarded a M.S. degree in April 2014. Congratulations Martine!

- Dr. Angela Murphy was invited to serve as a reviewer for the Chemo and Dietary Prevention Study Section at the NIH in June.

- In April 2014, Dr. Swapan Ray served as a peer reviewer in the USC ASPIRE II Grants Review Panel.

- Dr. Venkatesh Hegde also served as a reviewer for the USC ASPIRE Track 3 & 4 grant proposals.

Publications


- Kumar A, Hu J, LaVoie HA, Walsh KB, DiPette DJ, Singh US. Conformational changes and translocation of tissue-transglutaminase to the plasma membranes: role in cancer cell migration. *BMC Cancer.* 2014 Apr 11;14(1):256. *The publication in BMC Cancer was highly accessed within 20 days as mentioned on the journal website (658 hits)*


Mahoney SE, Davis JM, Murphy EA, McClellan JL, Pena MM. Dietary quercetin reduces chemotherapy-induced fatigue in mice. *Integrative Cancer Therapies* 2014 (In Press).


McClellan JL, Steiner JL, Day SD, Enos RT, Davis JM, Singh UP, Murphy EA. Exercise effects on polyp burden and immune markers in the ApcMin/+ mouse model of intestinal tumorigenesis. *Int J Oncol* 2014 (In Press).

Chakrabarti M, Banik NL, Ray SK. miR-7-1 potentiated estrogen receptor agonists for functional neuroprotection in VSC4.1 motoneurons. *Neuroscience* 2014 Jan 3; 256:322-33.


Rao R, Nagarkatti P, Nagarkatti M. Staphylococcal enterotoxin B (SEB) - induced miR-155 targets SOCS-1 to promote acute inflammatory lung injury. Selected for platform presentation in “Bridging the Immunity Block Symposium” at the Annual Meeting of American Association of Immunologists (AAI) (May 2- 6, 2014), Pittsburgh, PA.


“"The more I learn, the more I realize how much I don’t know.”
-Albert Einstein
Rao R, Nagarkatti P, Nagarkatti M. Δ-9-Tetrahydrocannabinol (THC) rescues mice from Staphylococcal Enterotoxin B (SEB)-induced Acute Lung Injury (ALI) and subsequent mortality by the induction of regulatory T-cells and the down-regulation of the miR-17-92 cluster. Presentation at the Annual meeting of Society on NeuroImmune Pharmacology (SNIP) (March 26-29, 2014), New Orleans, LA.

Sido J, Nagarkatti P, Nagarkatti M. S100A8 secretion by Δ9 tetrahydrocannabinol-induced myeloid derived suppressor cells creates a positive feedback loop enabling continued accumulation and activation of MDSC. Presented at the 20th Annual Meeting of the Society on NeuroImmune Pharmacology, March 26-29, 2014, New Orleans, LA.


Rao R, Nagarkatti P, Nagarkatti M. Δ-9-Tetrahydrocannabinol (THC) rescues mice from Staphylococcal Enterotoxin B (SEB)-induced Acute Lung Injury (ALI) and subsequent mortality by the induction of regulatory T-cells and the down-regulation of the miR-17-92 cluster. Presentation at the 55th Annual meeting of Society of Toxicology (SOT) (March 23-27, 2014), Phoenix, AZ.

Sido J, Nagarkatti P, Nagarkatti M. Δ9 tetrahydrocannabinol (THC) expands and activates highly immunosuppressive MDSCs via S100A8 secretion. Presented at the 55th Annual Meeting of Society of Toxicology (SOT), (March 24-27, 2014), Phoenix, AZ.

Elliot DM, Nagarkatti P and Nagarkatti M. 3,3-Diindolylmethane (DIM) ameliorates SEB-induced acute lung injury: A role for microRNA. Presented at the 55th Annual Meeting of Society of Toxicology (SOT), (March 24-27, 2014), Phoenix, AZ.


Singh NP, Yang X, Singh U, Zhang J, Abbas IK, Nagarkatti M, and Nagarkatti PS. Prenatal exposure to TCDD triggers epigenetic modifications including DNA methylation and microRNA induction that target genes which regulate immune functions. Presented at the 55th Annual Meeting of Society of Toxicology (SOT), (March 24-27, 2014), Phoenix, AZ.

Gandy KAO, Nagarkatti PS, Nagarkatti M. Resveratrol protects against a mouse model of multiple sclerosis via regulation of T cell miRNA expression. Presented at the 55th Annual Meeting of Society of Toxicology (SOT), (March 24-27, 2014), Phoenix, AZ.

Mehrpouya P, Nagarkatti PS, Nagarkatti M. Dual role of microRNA-31 in 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD)-mediated upregulation of CYP1A1 and FoxP3 in activated T cells. Presented at the 55th Annual Meeting of Society of Toxicology (SOT), (March 24-27, 2014), Phoenix, AZ.
Lawton Roberts won the best oral presentation for Biomedical Sciences at Graduate Student Day. Lawton works in Dr. Cory Robinson’s laboratory.

Jessica Sido, graduate student from the Nagarkatti Lab, won the Regulatory and Safety Evaluation Specialty Section Graduate Student Award ($1500) at the Society of Toxicology 2014 Annual Meeting, Phoenix, AZ.

Dr. Angela Murphy is Co-Investigator on a recently funded 5-year NIH R01 grant. Dr. Jim Carson in the Department of Exercise Science is PI on the award. The title of the grant is “Cachexia in ApcMin/+ mice: The role of IL-6”.

On Monday, 28 April 2014 at the “String of Pearls” awards presentation ceremony in the VA Auditorium, Dr. James Catropp was presented with the Teacher of the Year Award for the academic year 2013-2014 by the M2 Class President Harrison Smith and the Interim Dean R. Caughman Taylor, M.D.

Dr. Angela Murphy received an ASPIRE-I Track-I award from the Office of the VP for Research. The title of the grant is ‘Sex-Specific Differences in Obesity-Enhanced Colon Cancer’. Co-Investigators on the grant are Dr. Udai Singh (PMI) and Dr. Cory Robinson (PMI).

Roshni Rao, graduate student from the Nagarkatti lab, was presented with the following awards:
- 2014 American Association of Immunologists (AAI) Laboratory Trainee Award ($500)
- Toxicology and Exploratory Pathology Travel Award ($1000) for Best Abstract, Society of Toxicology, 2014 Annual Meeting, Phoenix, AZ
- Emil Pfitzer Drug Discovery Graduate Student Award ($400), Society of Toxicology, 2014 Annual Meeting, Phoenix, AZ
- Dean C. Barnhart Award ($200), School of Medicine, University of South Carolina, 2014

Dr. Xiaoming Yang was the recipient of an ASPIRE-I award from the Office of the VP for Research for his project entitled “Epigenetic regulation of gene expression by THC in immune cells”.

Dr. Venkatesh Hegde, Research Assistant Professor, is the recipient of a 3-year NIH K01 Career Development Award for ~$500K for studies on Cannabidiol and immunosuppression: Mechanism of induction and role of MDSCs. Dr. Hegde will be mentored by Dr. Mitzi Nagarkatti and Dr. Prakash Nagarkatti.

Dr. Angela Murphy received an R21 award from the National Cancer Institute to study the benefits of dietary quercetin on inflammation in obesity-enhanced colorectal cancer. This is a two year award that began on April 1st. Co-investigators on the award are Dr. Udai Singh (PMI) and Dr. Cory Robinson (PMI).

Dr. Cory Robinson was awarded an ASPIRE grant from the Office of the VP for Research. The title of the grant is “The Involvement of Myeloid-derived Suppressor Cells and Epigenetic Regulation of Interleukin-27 Production in Infant Immunity”.

Taryn Cranford received an F31 grant from the National Cancer Institute. This is a four year award for 125K that begins on June 1st. Taryn’s studies will focus on the role of macrophages on obesity-enhanced breast cancer. Taryn will be mentored by Dr. Angela Murphy and Dr. Mitzi Nagarkatti.