

## MICROBIOLOGY AND IMMUNOLOGY PROGRAM FACULTY

Faculty name & contact	Research interests	Recruiting?
<b>Naren Banik</b> baniknl@musc.edu	Calpain in spinal cord injury and demyelinating diseases, neuroprotective effects of proteinase inhibitors	Yes PhD
<b>Eric Bartee</b> bartee@musc.edu	Myxomavirus based cancer therapeutics	Yes PhD, MS
<b>Kenneth Chavin</b> chavinkd@musc.edu	Improving survival of transplanted livers and ischemic tissues	Yes PhD
<b>Beichu Guo</b> guobe@musc.edu	Innate immunity in inflammatory diseases and tumor development.	Yes PhD, MS
<b>Azizul Haque</b> haque@musc.edu	Tumor immunology (lymphoma, melanoma and prostate cancer) and autoimmunity	Yes PhD, MS
<b>Wei Jiang</b> jianw@musc.edu	Memory B cell death and reduced vaccine responsiveness in HIV disease	Yes PhD
<b>Zihai Li</b> zihai@musc.edu	Cancer Vaccines, Innate Immunity, Immune Tolerance, Stem Cells	Yes PhD
<b>Bei Liu</b> liube@musc.edu	Cancer immunotherapy, stem cell-based cancer vaccine and innate immunity	Yes PhD, MS
<b>Barb Rohrer</b> rohrer@musc.edu	Immunopathology of macular degeneration	Yes PhD
<b>Stephen Tomlinson</b> tomlinss@musc.edu	The complement system and its role in inflammation and immunity	Yes PhD
<b>M. Julie Westerink</b> westerin@musc.edu	Immune response to pneumococcal vaccination in HIV patients	Yes PhD, MS
<b>Caroline Westwater</b> westwatc@musc.edu	Candida pathogenesis, fungal quorum sensing, fungal oxidative stress resistance, plant-derived antimicrobials	Yes PhD, MS
<b>Jennifer Wu</b> wujjd@musc.edu	Immunotherapy of cancer, inflammation and cancer, tumor microenvironment	Yes PhD
<b>Xue-Zhong Yu</b> yux@musc.edu	Graft vs Host Disease, Stem cell transplantation, T cell development	Yes PhD
<b>Xian (John) Zhang</b> zhangjo@musc.edu	Molecular pathogenesis of Systemic Lupus Erythematosus	Yes MS
<b>Carl Atkinson</b> atkinsoc@musc.edu	Complement inhibitory proteins and their role in cancer, emphysema. and transplantation	Yes MS
<b>Shikhar Mehrota</b> mehrotr@musc.edu	Adoptive immunotherapy of cancer	Yes, MS
<b>Christina Voelkel-Johnson</b> johnsocv@musc.edu	Gene therapy of cancer to promote apoptosis, ceramide and spingolipid metabolism of cancer	Yes MS
<b>Chenthamarakshan Vasu</b> vasu@musc.edu	Immune tolerance, Immunotherapy of autoimmunity, cancer, and transplant rejection	Yes MS
<b>Gary Gilkeson</b> gilkeson@musc.edu	Autoimmune disease: rheumatoid arthritis, lupus	Possibly
<b>Diane Kamen</b> kamend@musc.edu	Autoimmunity and environmental exposures	Possibly
<b>Keith Kirkwood</b> klkirk@musc.edu	Oral health, head & neck cancer, bone remodeling in periodontal disease, inflammation	Possibly
<b>Amanda LaRue</b> laruerc@musc.edu	Hematology/stem cell biology and vascular biology.	Possibly

<b>Faculty name &amp; contact</b>	<b>Research interest</b>	<b>Recruiting?</b>
<b>Eric Meissner</b> meissner@musc.edu	HCV and HIV immunobiology	Possibly MS
<b>Satish Nadig</b> nadign@musc.edu	Treg biology and transplantation tolerance	Possibly
<b>Chrystal Paulos</b> paulos@musc.edu	Immunotherapy of Cancer, adoptive T-cell therapy, Th17 cell biology	Possibly
<b>Titus Reaves</b> reaves@musc.edu	Inflammatory bowel disease	Possibly MS
<b>Mark Rubinstein</b> rubinsmp@musc.edu	Immunotherapy of cancer, adoptive T cell therapy	Possibly
<b>Michael Schmidt</b> schmidt@musc.edu	Nosocomial infection control, biosafety	Possibly MS
<b>Adam Soloff</b> soloff@musc.edu	Immunopathology of and vaccine development against HIV, SIV and influenza virus	Possibly
<b>Natalie Sutkowski</b> sutkows@musc.edu	Tumor viruses EBV & HPV, HERV superantigens, human monoclonal antibodies, cancer immunology	Possibly MS
<b>Jessica Thaxton</b> thaxton@musc.edu	Cancer immunology	Possibly MS
<b>Paula Traktman</b> traktman@musc.edu	Vaccinia virus biology and VRK protein kinases	Possibly
<b>John Wrangle</b> wrangle@musc.edu	Immunotherapy of lung cancer	Possibly MS
<b>Yi (Benny) Yang</b> yangyi@musc.edu	Th17 cells and gut microbiome	Possibly
<b>M. Rita Young</b> youngmr@musc.edu	Immunotherapy of head and neck cancer	Possibly
<b>David Cole</b> coledj@musc.edu	Immunotherapy of cancer, adoptive T cell therapy	No
<b>James Cook</b> cookja@musc.edu	Mechanisms of inflammation, sepsis and septic shock	No
<b>Laura Kasman</b> kasmanl@musc.edu	Gene therapy of cancer, virus-virus interactions	No
<b>Hal May</b> mayh@musc.edu	Bioremediation, microbial fuel cells, biofuel production	No
<b>Tamara Nowling</b> nowling@musc.edu	Regulation of gene expression, sphingolipids and T cell function in in lupus-associated kidney disease	No
<b>James Oates</b> oatesjc@musc.edu	Biomarkers of disease and role of reactive intermediates in lupus nephritis and CVD in lupus	No
<b>Janardan Pandey</b> pandeyj@musc.edu	Immunogenetics of infectious, autoimmune, and malignant diseases	No
<b>Inderjit Singh</b> singhi@musc.edu	Immunology of Neurological disorders such as Multiple Sclerosis, Stroke and Spinal Cord Injury	No
<b>Cynthia Wright</b> wrightcf@musc.edu	Viral gene expression and virus host interactions	No

## STUDENTS' PUBLICATIONS

### Microbiology and Immunology

#### Journal Articles

**Bailey SR**, Nelson MH, Himes RA, Li Z, Mehrotra S, Paulos CM. Th17 cells in cancer: the ultimate identity crisis. *Front Immunol*. 2014 Jun 17;5:276.

**Bowers JS**, Nelson MH, Kundimi S, **Bailey SR**, Huff LW, Schwartz KM, Cole DJ, Rubinstein MP, Paulos CM. Dendritic Cells in Irradiated Mice Trigger the Functional Plasticity and Antitumor Activity of Adoptively Transferred Tc17 Cells via IL12 Signaling. *Clin Cancer Res*. 2015 Jun 1;21(11):2546-57.

Chatterjee S, Thyagarajan K, Kesarwani P, Song JH, Soloshchenko M, Fu J, **Bailey SR**, Vasu C, Kraft AS, Paulos CM, Yu XZ, Mehrotra S. Reducing CD73 expression by IL1 $\beta$ -Programmed Th17 cells improves immunotherapeutic control of tumors. *Cancer Res*. 2014 Nov 1;74(21):6048-59.

Ferradini N, Iannacone R, Capomaccio S, **Metelli A**, Armentano N, Semeraro L, Cellini F, Veronesi F, Rosellini D. Assessment of heat shock protein 70 induction by heat in alfalfa varieties and constitutive overexpression in transgenic plants. *PLoS One*. 2015 May 7;10(5):e0126051.

Fu J, **Heinrichs J**, Yu XZ. Helper T-cell differentiation in graft-versus-host disease after allogeneic hematopoietic stem cell transplantation. *Arch Immunol Ther Exp (Warsz)*. 2014 Aug;62(4):277-301.

Fu J, Wang D, Yu Y, **Heinrichs J**, Wu Y, Schutt S, Kaosaard K, Liu C, Haarberg K, **Bastian D**, McDonald DG, Anasetti C, Yu XZ. T-bet is critical for the development of acute graft-versus-host disease through controlling T cell differentiation and function. *J Immunol*. 2015 Jan 1;194(1):388-97.

**Jones Buie JN**, Oates JC. Role of interferon alpha in endothelial dysfunction: Insights into endothelial nitric oxide synthase related mechanisms. *Am J Med Sci*. 2014 Aug;348(2):168-75.

Li J, **Heinrichs J**, Haarberg K, Semple K, Veerapathran A, Liu C, Anasetti C, Yu XZ. HY-Specific Induced Regulatory T Cells Display High Specificity and Efficacy in the Prevention of Acute Graft-versus-Host Disease. *J Immunol*. 2015 Jul 15;195(2):717-25. doi: 10.4049/jimmunol.1401250. Epub 2015 Jun 5.

Nelson MH, **Diven MA**, Huff LW, Paulos CM. Harnessing the Microbiome to Enhance Cancer Immunotherapy. *J Immunol Res*. 2015;2015:368736.

Nelson MH, Kundimi S, **Bowers JS**, Rogers CE, Huff LW, Schwartz KM, Thyagarajan K, Little EC, Mehrotra S, Cole DJ, Rubinstein MP, Paulos CM. The inducible costimulator augments Tc17 cell responses to self and tumor tissue. *J Immunol*. 2015 Feb 15;194(4):1737-47.

Palanisamy AP, Taber DJ, **Sutter AG**, Nadig SN, Dowden JE, McGillicuddy JW, Baliga PK, Chavin KD. Clinical outcomes and costs associated with in-hospital biliary complications after liver transplantation: a cross-sectional analysis. *J Gastrointest Surg*. 2015 Feb;19(2):282-9.

Rubinstein MP, Su EW, Suriano S, Cloud CA, Andrijauskaite K, Kesarwani P, Schwartz KM, Williams KM, **Johnson CB**, Li M, Scurti GM, Salem ML, Paulos CM, Garrett-Mayer E, Mehrotra S, Cole DJ. Interleukin-12 enhances the function and anti-tumor activity in murine and human CD8(+) T cells. *Cancer Immunol Immunother*. 2015 May;64(5):539-49.

- Sato S, Lennard Richard M, **Brandon D**, **Jones Buie JN**, Oates JC, Gilkeson GS, Zhang XK. A critical role of the transcription factor fli-1 in murine lupus development by regulation of interleukin-6 expression. *Arthritis Rheumatol*. 2014 Dec;66(12):3436-44.
- Sutter AG**, Palanisamy AP, Ellet JD, Schmidt MG, Schnellmann RG, Chavin KD. Intereukin-10 and Kupffer cells protect steatotic mice livers from ischemia-reperfusion injury. *Eur Cytokine Netw*. 2014 Oct-Dec;25(4):69-76.
- Taylor JJ, **Neitzke DJ**, Khouri G, Borckardt JJ, Acierno R, Tuerk PW, Schmidt M, George MSA pilot study to investigate the induction and manipulation of learned helplessness in healthy adults. *Psychiatry Research*. 2014 Nov 30;219(3):631-7.
- Tirodkar TS**, Lu P, Bai A, **Scheffel MJ**, Gencer S, Garrett-Mayer E, Bielawska A, Ogretmen B, Voelkel-Johnson C. Expression of Ceramide Synthase 6 Transcriptionally Activates Acid Ceramidase in a c-Jun N-terminal Kinase (JNK)-dependent Manner. *J Biol Chem*. 2015 May 22;290(21):13157-67.
- Wu Y, **Bastian D**, Schutt S, Nguyen H, Fu J, **Heinrichs J**, Xia C, Yu XZ. Essential Role of Interleukin-12/23p40 in the Development of Graft-versus-Host Disease in Mice. *Biol Blood Marrow Transplant*. 2015 Jul;21(7):1195-204. doi: 10.1016/j.bbmt.2015.03.016. Epub 2015 Apr 4.
- Wu Y, **Heinrichs J**, **Bastian D**, Fu J, Nguyen H, Schutt S, Liu Y, Jin J, Liu C, Li QJ, Xia C, Yu XZ. MicroRNA-17-92 controls T-cell responses in graft-versus-host disease and leukemia relapse in mice. *Blood*. 2015 Jul 2. pii: blood-2015-02-627356. [Epub ahead of print]
- Young MR, Levingston C, **Johnson SD**. Cytokine and Adipokine Levels in Patients with Premalignant Oral Lesions or in Patients with Oral Cancer Who Did or Did Not Receive 1 $\alpha$ ,25-Dihydroxyvitamin D3 Treatment upon Cancer Diagnosis. *Cancers (Basel)*. 2015 Jun 25;7(3):1109-24.
- Zhang J, **Basher F**, Wu JD. NKG2D Ligands in Tumor Immunity: Two Sides of a Coin. *Front Immunol*. 2015 Mar 4;6:97.
- Zhang Y, Wu BX, **Metelli A**, Thaxton JE, Hong F, Rachidi S, Ansa-Addo E, Sun S, Vasu C, Yang Y, Liu B, Li Z. GP96 is a GARP chaperone and controls regulatory T cell functions. *J Clin Invest*. 2015 Feb;125(2):859-69.

## Microbiology and Immunology

### Abstracts

- Bailey, S.R.**, M.H. Nelson, **J.S. Bowers**, C.M. Paulos. The quantity of CD26 on helper T cells correlates with the efficacy of adoptive cancer immunotherapy. 2015. *J Immunol* 192:69.5 (Abstr)
- Lowe, D.**, Wiest, D., Hollis, B., Wagner, C., and Jenkins, D. 25-OH Vitamin D Over 72 Hours in Neonatal Hypoxic Ischemic Encephalopathy. Society of Pediatrics Research 2015, San Diego, CA, April 2015. E-PAS2015:4128.208
- Lowe, D.**, Nie, X., Bentzley, J., Hollis, B., Singh, I., Jenkins, D. Vitamin D Metabolism Altered After HI in the Neonatal Rat. Society of Pediatrics Research 2015, San Diego, CA, April 2015. E-PAS2015:4130.224

*(Microbiology & Immunology Abstracts continued)*

**Narang, A.**, Quio, F., Atkinson, C., Kulik, L., Holers, V.M., Yang, X., and Tomlinson, S. Targeted complement inhibition improves recovery in murine spinal cord injury model. 2015. *J Immunol* 192:67.7 (Abstr)

**Scheffel, M.**, Scurti, G., Simms, P., Garrett-Mayer, E., Nishimura, M.I., Mehrotra, S., and Voelkel-Johnson, C. Induction of cell death following restimulation of the T cell receptor results in activation of the DNA damage response pathway in a JNK and ROS-dependent manner. 2015. *J Immunol* 192:142.15 (Abstr)

## **Microbiology and Immunology Students' Presentations**

**Bailey, S.R.**, M.H. Nelson, **J.S. Bowers**, C.M. Paulos. The quantity of CD26 on helper T cells correlates with the efficacy of adoptive cancer immunotherapy. IMMUNOLOGY 2015, Annual Meeting of the American Association of Immunologists, May 7-12, The American Association of Immunologists, Inc., New Orleans. (Poster and oral presentations)

**Bailey S.R.**, M.H. Nelson, J.S. Bowers, M.A. Diven, C.M. Paulos. Unraveling the mechanisms behind the potent antitumor activity of CD4+CD26high T cells in adoptive cell therapy; MUSC Perry V. Halushka Research Day, Charleston, SC, November, 2014. (Oral Presentation)

**Bowers JS**, Kundimi S, Nelson MH, Huff LW, **Bailey SR**, Rogers CE, Schwartz KM, Cloud CM, Little EC, Mehrotra S, Cole DJ, Rubinstein MP, and Paulos CM. Lymphodepletion-induced IL-12 enhances Tc17 cell plasticity and antitumor activity. National MD/PhD Student Conference, Keystone CO 18-21 July 2014. (Poster Presentation)

**Bowers JS**, Nelson, MH, **Diven MA**, Majchrzak K, **Bailey SR**, Paulos CM. Th17 cells remarkably retain their capacity to eliminate late-stage melanoma. Perry V. Halushka Student Research Day, MUSC Charleston SC, 14 Nov 2014. (Oral Presentation)

**Diven M.A.**, M.H. Nelson, **J.S. Bowers**, K. Majchrzak, **S.R. Bailey**, C.M. Paulos. Determining the effects of IL-10 neutralization and TLR agonists on adoptive T cell transfer therapy; MUSC Perry V. Halushka Research Day, Charleston, SC, Fall 2014 (Oral presentation)

**Hathaway J.** and Haque A. GILT Insertion Regulates PAX-3 Expression in Human Melanoma Cells. Poster presentation, Cancer Immunology Program Retreat, Hollings Cancer Center, Charleston, SC. (2014) (Poster Presentation)

**Johnson, C. Bryce, Brian Riesenber, Daniel Neitzke**, Emily K. Jeng, Warren D. Marcus, David J. Cole, Hing C. Wong, Mark P. Rubinstein. Combinatorial therapy with an IL-15 superagonist (ALT-803) and anti-PD-L1 mAb augment T cell mediated anti-tumor immunity in mice. Society for Immunotherapy of Cancer Annual Meeting, National Harbor, MD, November 6-9, 2014. (Poster Presentation)

**Johnson, C Bryce**, Bennett R May, Mark P Rubinstein, David J Cole; Adoptive Transfer of IL-7 Responsive CD8+ T Cells Reduces the Lymphodepletion Intensity Required for Optimal Tumor Control. Perry V. Halushka Student Research Day, MUSC Charleston SC, 14 Nov 2014. (Oral Presentation)

*(Microbiology & Immunology Students' Presentations continued)*

**Johnson, SD** and MR Young. Immune transformations as premalignant lesions progress to HNSCC. Perry V. Halushka Student Research Day, MUSC Charleston SC, 14 Nov 2014. (Poster Presentation)

**Johnson, SD** and MR Young. Immune transformations during the progression of premalignant lesions to HNSCC. Annual Head and Neck Cancer Research Retreat, MUSC 2015. (Oral presentation)

**Lowe, D.**, Rollins, L., Fraser, J., Nie, X., Bentzley, J., Hollis, B., Singh, I., Jenkins, D. Circulating Immune Modulators Correlate with Vitamin D Concentrations after HI Injury in the Neonatal Rat. Neuroscience 2014, Washington, DC, November 2014. (Poster Presentation)

**Lowe, D.**, Wiest, D., Hollis, B., Wagner, C., and Jenkins, D. 25-OH Vitamin D Over 72 Hours in Neonatal Hypoxic Ischemic Encephalopathy. Society of Pediatrics Research 2015, San Diego, CA, April 2015. (Poster Presentation)

**Lowe, D.**, Nie, X., Bentzley, J., Hollis, B., Singh, I., Jenkins, D. Vitamin D Metabolism Altered After HI in the Neonatal Rat. Society of Pediatrics Research 2015, San Diego, CA, April 2015. (Poster Presentation)

**Metelli, Alessandra**, Thaxton Jessica, **Rachidi, Saleh**, Wu Bill, Zhang Yongliang, Howe Phillip, Liu Bei, Zihai Li. Garp-TGFbeta Axis Promotes a Novel Immune Evasion Pathway and Accelerates Tumor Growth. Cancer Biology Training Consortium CABTRAC October 17-19, 2014, Estes Park, CO (Poster presentation)

**Metelli, Alessandra**, Thaxton Jessica, **Rachidi, Saleh**, Wu Bill, Zhang Yongliang, Howe Phillip, Liu Bei, Zihai Li. Garp-TGFbeta Axis Promotes a Novel Immune Evasion Pathway and Accelerates Tumor Growth. MUSC Perry V. Halushka Student Research Day 2014. (Poster presentation)

**Narang, A.**, Quio, F., Atkinson, C., Kulik, L., Holers, V.M., Yang, X., and Tomlinson, S. Targeted complement inhibition improves recovery in murine spinal cord injury model. MUSC Perry V. Halushka Student Research Day 2014, (Oral presentation)

**Narang, A.**, Quio, F., Atkinson, C., Kulik, L., Holers, V.M., Yang, X., and Tomlinson, S. Targeted complement inhibition improves recovery in murine spinal cord injury model. IMMUNOLOGY 2015, Annual Meeting of the American Association of Immunologists, May 7-12, The American Association of Immunologists, Inc., New Orleans, LA. (Poster presentation)

**Nelson, Michelle**, Sreenath Kundimi, **Jake Bowers**, Carolyn Rogers, Logan Huff, Kristina Schwartz, Thyagarajan Krishnamurthy, Chrystal Paulos; The Inducible Costimulator Augments Tc17 Cell Responses to Self and Tumor Tissue. MUSC Perry V. Halushka Student Research Day 2014 (Oral presentation)

**Neitzke, Daniel**, Chrystal Paulos, David Cole, Mark Rubinstein. Th17 cell engraftment is improved by lymphodepletion but does not depend on IL7. Cancer Immunology and Immunotherapy: Delivering the Promise, Bethesda, MD, October 9-10, 2014 (Poster presentation)

**Scheffel, Matt**, Shikhar Mehrotra, & Christina Voelkel-Johnson. The role of p53 and the DNA Damage Response Pathway in Activation-Induced Cell Death of Adoptively Transferred T cells Used in the Immunotherapy of Metastatic Melanoma. 2014 Hollings Cancer Center Cancer Immunology Retreat, Medical University of South Carolina, Charleston, SC. (Poster presentation)

*(Microbiology & Immunology Students' Presentations continued)*

**Scheffel, M.**, Scurti, G., Simms, P., Garrett-Mayer, E., Nishimura, M.I., Mehrotra, S., and Voelkel-Johnson, C. Induction of cell death following restimulation of the T cell receptor results in activation of the DNA damage response pathway in a JNK and ROS-dependent manner. IMMUNOLOGY 2015, Annual Meeting of the American Association of Immunologists, May 7-12, The American Association of Immunologists, Inc., New Orleans, LA. (Poster presentation)

**Scott, J.**, Cunningham, M., Naga, O., Wirth, J., and Gilkeson, G. Absence of Hormone Responsive Estrogen Receptor Alpha Reduces the Activation of Plasmacytoid Dendritic Cells in Lupus Prone Mice. 2014 Hollings Cancer Center Cancer Immunology Retreat, Medical University of South Carolina, Charleston, SC. (Oral presentation)

**Scott, J.**, Cunningham, M., Naga, O., Wirth, J., and Gilkeson, G. Absence of Hormone Responsive Estrogen Receptor Alpha Reduces the Activation of Plasmacytoid Dendritic Cells in Lupus Prone Mice. Keystone Symposium: Dendritic Cells and Macrophages Reunited (C4), March 8-13, 2015, Montreal, Canada (Poster Presentation)

**Stephenson, Sarah**, Jennifer Mulligan, Tucker Williamson, Andy Kirst, Nick Reaves, Steve Tomlinson, Carl Atkinson. Complement Inhibition Protects Against Cigarette Smoke Induced Emphysema Development and Progression; MUSC Perry V. Halushka Student Research Day 2014 (Poster presentation)

**Wallace, C.**, Haycraft, C., Li, Z. gp96 is essential for skeletal osteoblast homeostasis and bone marrow hematopoiesis. 2014 Perry V. Halushka MUSC Student Research Day, Medical University of South Carolina, Charleston, SC. (Oral Presentation)

**Wallace, C.**, Haycraft, C., Li, Z. gp96 is essential for skeletal osteoblast homeostasis and bone marrow hematopoiesis. 2015 College of Dental Medicine Scholars Day, Medical University of South Carolina, Charleston, SC. (Poster Presentation)

Zhang, Y., **Wallace, C.**, Hong, F., Yu, H., Garrett-Mayer, E., Kirkwood, K., Westwater, C., Liu, B., and Li, Z. Mechanism and Role of CD24 in oral cancer inflammation and progression. 2014 American Association of Dental Research Trainee Day, Charlotte, NC. (Poster Presentation)

Zhang, Y., **Wallace, C.**, Hong, F., Yu, H., Garrett-Mayer, E., Kirkwood, K., Westwater, C., Liu, B., and Li, Z. Mechanism and Role of CD24 in oral cancer inflammation and progression. 2015. Cold Spring Harbor Fundamental Immunology and Therapeutic Potentials, Cold Spring Harbor, NY. (Poster Presentation)

## **Microbiology and Immunology STUDENTS' HONORS AND AWARDS**

### **Bailey, Stephanie**

- NIH/NCI 1F31CA192787-01 Ruth L. Kirschstein F31 Fellowship – (2015-2018)
- American Association of Immunologists – Travel Award, May 2015

### **Beckham, Thomas**

- MUSC Distinguished Graduate Student Awards Finalist (2014-2015)
- Alpha Omega Alpha Medical Honor Society (2014-2015)

*(Microbiology & Immunology Students' Honors and Awards continued)*

**Bowers, Jake**

- NIH/NCI 1F30CA200272-01 Individual MD/PhD Fellowship– (2015-2018)
- MUSC Perry V. Halushka Student Research Day 2014, PhD IV Oral 1st

**Diven, Marshall**

- MUSC Perry V. Halushka Student Research Day 2014, Clinical /Professional/ Masters VII Oral 2<sup>nd</sup> place

**Johnson, C. Bryce**

- MUSC Perry V. Halushka Student Research Day 2014, PhD VI Oral (Willard & Betty Peterson) 1<sup>st</sup> place

**Jones Buie, Joy**

- NIH/NIAMS F31AR064150 Ruth L. Kirschstein National Research Service Award- (2013-2016)
- MUSC Department of Medicine Research Day 2015, Oral Presentation, 1st Place
- MUSC Dean's Incentive Scholarship (2013-2015)

**Metelli, Alessandra**

- Cancer Biology Annual Retreat and Cancer Biology Training, Consortium CABTRAC Annual Meeting Travel Award, October 2014, Estes Park, Colorado
- MUSC Perry V. Halushka Student Research Day 2014, PhD Poster, 1st place

**Narang, Aarti**

- American Association of Immunologists – Travel Award, May 2015
- MUSC Perry V. Halushka Student Research Day 2014, VA Medical Center Award Oral 2<sup>nd</sup> place

**Nelson, Michelle**

- MUSC Perry V. Halushka Student Research Day 2014, PostDoc/Resident/Fellow/Staff Scientist III Oral 2nd place

**Scott, Jennifer**

- MUSC Perry V. Halushka Student Research Day 2014, PhD VI Oral (Willard & Betty Peterson) 2<sup>nd</sup> place

**Stephenson, Sarah**

- MUSC Perry V. Halushka Student Research Day 2014, PhD III Poster 2nd place

**Wallace, Caroline**

- NIH/NIDCR T32 DE017551-08 T-COHR: Training in Craniofacial and Oral Health Research (2013–2016)
- MUSC Perry V. Halushka Student Research Day 2014, PhD Oral (Eric James Award), 2<sup>nd</sup> place
- MUSC College of Dental Medicine Scholars Day 2015, PhD Poster, 3<sup>rd</sup> place

**Tran, Danh**

- MUSC Hollings Cancer Center Abney Foundation Scholarship