

## Curriculum Vitae

### Jeremy Foote, PhD, DVM, DACVP

Assistant Professor in Microbiology and Animal Resources Program  
Departments Microbiology and Animal Resources  
University of Alabama at Birmingham, School of Medicine  
Birmingham, AL 35294  
Phone: 205-975-0688  
Email: jbf130@uab.edu

### Education

- 2002 B.Sc. Biochemistry and Molecular Biology, Pennsylvania State University, State College, PA.  
2009 Ph.D., Microbiology and Immunology, University of Alabama at Birmingham, School of Medicine, Birmingham, AL. Advisor: Dr. John Kearney  
2013 D.V.M, Auburn University, College of Veterinary Medicine, Auburn, AL.

### Positions

- 2013-2017 Postdoctoral Fellowship in Comparative Pathology (Research Emphasis), Johns Hopkins University, School of Medicine, Baltimore, MD. Director: Dr. Joseph Mankowski  
2014-2017 Postdoctoral Research Fellow in Oncology, Johns Hopkins University, School of Medicine, Bloomberg-Kimmel Institute for Cancer Immunotherapy, Baltimore, MD Advisor: Dr. Leisha Emens  
2017-present Assistant Professor (joint appointments) in Microbiology and Animal Resources Program, Departments of Microbiology and Animal Resources, University of Alabama at Birmingham, Birmingham AL.  
2018-present Director of the Comparative Pathology Laboratory, Animal Resources Program, University of Alabama at Birmingham, Birmingham AL.  
2018-Present Director of the Gnotobiotic and Genetically-Engineered Mouse Core, Animal Resources Program, University of Alabama at Birmingham, Birmingham, AL

### Honors

- 2004 Gail Cassel Achievement Award for Best Scientific Poster  
2006 Gail Cassel Achievement Award for Best Scientific Presentation  
2008 American Association of Immunologists Trainee Abstract Award  
2009 Keystone Symposium pre-Doctoral Travel Grant Award  
2009-2012 AUCVM Dean's List  
2010 Robert and Alice Menzies Scholarship  
2010 Tom Howle Scholarship  
2011 Phi Zeta Award for Best Platform Presentation by a Veterinary Student  
2012 AUCVM Student Research Award  
2012 Membership to Phi Zeta Veterinary Honor Society  
2013 AUCVM Student Research Award  
2013 AUCVM Senior Student Award for Clinical Proficiency in Oncology  
2013 AUCVM Senior Student Award for Clinical Proficiency in Large Animal Internal Medicine  
2016 SKCC Fellow Research Day Poster Session for Clinical/Translational Research, Honorable Mention  
2016 Intersociety Council for Pathology Information Trainee Travel Award

2017 AACR-Bristol Myers Squibb Scholar-in-Training Award  
 2017 Selected attendee of Burroughs Wellcome Fund-Becoming Faculty: a Short Course on Launching a Scientific Career  
 2017 Davis-Thompson Foundation's Student Scholarship Award

## **Research Support**

### **Active Research Support**

1U01CA224151-01 (Chambers), Canine Immuno Neurotherapeutics. NIH-Natl Cancer Institute. 9/30/20117 - 08/31/2020. **(Role: Co-Investigator**, .84 calendar months). We propose a multi-institutional consortium to test an innovative immunotherapeutic approach in dogs that spontaneously and sporadically develop malignant glial brain tumors that resemble in most important aspects, high-grade malignant gliomas in humans. Our approach will inject a clinical grade oncolytic herpes simplex virus that expresses human interleukin-12 into the resected tumor bed and in subsequent studies combine this with a small molecule checkpoint inhibitor. We will conduct longitudinal safety, survival and correlative biology evaluations as a means of assessing the dog as an appropriate and informative model for design and implementation of clinical studies in humans with high-grade malignant brain tumors.

Richard A. Elkus, M.D., Eminent Scholars Program in GI Oncology Research pilot project grant program. (Klug-P1, **Foote-Co-I**) 4.1.18 – 4.1.19

UAB Cancer Center

\$56,000

Role of antibody in suppression of pancreatic cancer development

### **Pending Research Support**

RO1CA229595 (Chang-PI, **Foote-Co-I**) 07/01/2108 – 06/30/2023 0.6 Calendar  
 NIH-NCI \$376,129

Role of Osteopontin in Skin and Photocarcinogenesis

Identify molecular targets regulated by UVB-induced OPN, in preventing initiated keratinocytes from progressing to malignancy. Proposed work will define OPN as a critical limiting factor in driving cSCC development and its molecular mechanisms of function.

Faculty Development Grant Program (**Foote PI**, Klug Co-PI). 5.1.18 – 8.1.18

UAB Office of Provost, Department of Medicine

\$10,000

Characterization of Divergent Roles of B Cells and Antibody in Progression of Pancreatic Ductal Adenocarcinoma using Nanostring PanCancer Immune Profiling

### **Completed Research Support**

**CVM 2010 Animal Health and Disease Research (Intramural Grant)** - Auburn University, Bird RC (Co-PI), **(Role: Co-Investigator)**, Smith BF (Co-PI). May 2010 - May 2012. The goal of this work was to develop a mouse model of the canine immune system to test an experimental dendritic cell-canine mammary tumor cell fusion vaccine.

**Training Veterinarians for Careers in Biomedical (T32 RR007002, 5 T32 OD 11089-38)**-

Johns Hopkins University School of Medicine, Department of Molecular and Comparative Pathobiology. (Joseph Mankowski PI). Funding dates: July, 1, 2014 – July, 1, 2017. **(Role-Postdoctoral Fellow)** This funding provided an opportunity for me to pursue a combined

residency in veterinary anatomic pathology and postdoctoral research at Johns Hopkins University, School of Medicine in the departments of Comparative and Molecular Pathobiology and Oncology. Covered yearly postdoctoral stipend.

**Breast Cancer Research Foundation Grant# 116656** (Leisha Emens PI/Elizabeth Jaffee Co-PI). (**Role-Postdoctoral fellow**). This funding provided support for my postdoctoral research in terms of research costs. The goal of this work was to evaluate intratumoral injection of STING-activating CDN ligand (ADU-S100) combined with immune checkpoint blockade and/or radiation therapy. We were able to demonstrate a synergistic activity of ADU-S100 with antibodies that modulated PD1 and OX40 pathways to promote enhanced priming of tumor-specific T cells (a personalized in situ vaccine). This compound is the clinical lead compound in a multicenter clinical trial NCT02675439 designed to evaluate safety and efficacy of ADU-S100 in patients with advanced/metastatic solid tumors or lymphomas. May 2015 – May 2016

### **Teaching**

*Courses participated in teaching (2013-2017 Johns Hopkins University, School of Medicine)*

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| 2013 | LAM/PATH Integrated Problem Solving (LIPS), Guest Lecturer: Basic Immunology Review  |
| 2013 | LAM/PATH Integrated Problem Solving (LIPS), Guest Lecturer: Review of Immune Deficient Rodent Models   |
| 2015 | JHMI Short Course in Mouse Pathobiology and Phenotyping, Participant in Teaching Basic Mouse Necropsy and Tissue Collection Techniques to Graduate Students, Course Director: Cory Brayton DVM, DACVP, DACLAM (July 27-31) |
| 2015 | Environmental Toxicological Pathology  |
| 2015 |  |
| 2016 | JHMI Short Course in Mouse Pathobiology and Phenotyping, Participant in Teaching Basic Mouse Necropsy and Tissue Collection Techniques to Graduate Students, Course Director: Cory Brayton DVM, DACVP, DACLAM (July 25-29) |

*Training of postdoctoral and graduate students at UAB in necropsy and tissue collection*

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|--------------|---|
| 2017-Present | Basic Techniques in Mouse Necropsy and Tissue Collection, taught as needed and tailored to individuals needs per project. |
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### **Memberships in Professional Societies**

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|--------------|---|
| 2005-Present | American Association of Immunologists       |
| 2013-Present | American Veterinary Medical Association     |
| 2015-2016    | Society for Immunotherapy for Cancer        |
| 2016-Present | American Association for Cancer Research    |
| 2017-Present | American College of Veterinary Pathologists |

### **Bibliography**

#### **REFERENCED ARTICLES: ORIGINAL RESEARCH**

1. **Foote JB**, Kok M, Leatherman JM, Armstrong TD, Marcinkowski BC, Ojalvo LS, Kanne DB, Jaffee EM, Dubensky TW, Emens LA. A STING Agonist Given with OX40 Receptor and PD-L1 Modulators Primes Immunity and Reduces Tumor Growth in Tolerized Mice. *Cancer Immunol Res.* 2017 May 8 (**PMID: 28483787**)

2. Sunay ME, **Foote JB**, Leatherman JM, Edwards JE, Armstrong TD, Nirschl CJ, Hicks J, and Emens LA. Sorafenib has T cell-dependent activity and accelerates tumor clearance in vaccinated mice. *Int Immunopharmacol*. 2017 May;46:112-123. **(PMID: 28282575)**
3. Metcalf Pate KA, Pohlmeier CW, Walker-Sperling VE, **Foote JB**, Najarro KM, Cryer CG, Salgado M, Gama L, Engle EL, Shirk EN, Queen SE, Chioma S, Vermillion MS, Bullock B, Li M, Lyons CE, Adams RJ, Zink MC, Clements JE, Mankowski JL, Blankson JN. A Murine Viral Outgrowth Assay to Detect Residual HIV Type 1 in Patients with Undetectable Viral Loads. *J Infect Dis*. 2015 Nov 1;212(9):1387-96. **(PMID: 25883388)**
4. **Foote JB**, Kabir FM, Graff EC, Cattley RC, DelInnocentes P, Smith BF, Bird Canine PBL-SCID mice: A model of the canine immune system. *Vet Immunol Immunopathol*. 2014 Feb 15;157(3-4):131-41. **(PMID: 24368085)**
5. Vale AM, **Foote JB**, Granato A, Pereira RMS, Zhuang Y, Lopes UG, Bellio M, Schroeder HWJr, Nobrega A. 2011. Fast and Quantitative Method for Quantification of Immunoglobulin Repertoires. *Journal of Immunologic Methods*. 2012 Feb 28;376(1-2):143-9. **(PMID: 22226792)**
6. **Foote JB**, Mahmoud T, Vale AM, Kearney JF. 2011. Generation of two distinct plasma cell populations with different degrees of cell turnover in response to the bacterial polysaccharide  $\alpha$  1 $\rightarrow$ 3 dextran. *Journal of Immunology*. 2012 Jan 1;188(1):57-67. **(PMID: 22116821)**
7. You Y, Myers RC, Freeberg L, **Foote J**, Kearney JF, Justement LB, Carter RH. 2010. Marginal Zone B Cells Regulate Antigen Capture by Marginal Zone Macrophage. *Journal of Immunology*. 2011 Feb 15;186(4):2172-81. **(PMID: 21257969)**
8. **Foote JB** and Kearney JF. 2009. Generation of B cell memory to the polysaccharide antigen alpha 1 $\rightarrow$ 3-dextran. *Journal of Immunology*. Nov 15;183(10):6359-68. **(PMID: 19841173)**
9. Won WJ, **Foote JB**, Odom MR, Pan J, Kearney JF, Davis R. 2006. Fc receptor 3 is a novel immunoregulatory marker for Marginal zone and B1 B cells. *Journal of Immunology*. Nov 15;177(10):6815-23. **(PMID: 17082595)**

#### REFERENCED ARTICLES: REVIEWS

10. Cimino-Mathews A, **Foote JB**, Emens LA. Immune targeting in breast cancer. *Oncology (Williston Park)*. 2015 May;29(5):375-85. **(PMID: 25979549)**
11. Lopes-Carvalho T., **Foote J.**, Kearney JF. 2005. MZ B cells in lymphocyte activation and regulation. *Current Opinions in Immunology* Jun;17(3):244-50. **(PMID: 15886113)**

#### REFERENCED ARTICLES: CASE REPORTS

12. Endo LM, Giannobile JV, Dobbs AK, **Foote JB**, Szymanska E, Warnock DG, Cook WJ, Conley ME, Schroeder HW. Membranous glomerulopathy in an adult patient with X-linked agammaglobulinemia receiving intravenous gammaglobulin. *J Invest Allergol Clin Immunol*. 2011;21(5):405-9. (PMID: 21905506)

#### PRESENTATIONS AT NATIONAL MEETINGS

1. **Oral presentation:** STING signaling in breast tumor microenvironment modulates immune checkpoint blockade efficacy in the neu-N mouse model of breast cancer. AACR Annual Meeting 2017. Washington DC. April 1 – 5<sup>th</sup>
2. **Poster:** Comparative Assessment of Graft Versus Host Disease in Canine and Human PBL SCID Mice. American College of Veterinary Pathologists Annual Meeting 2016. New Orleans LA, December 3<sup>rd</sup> – 7<sup>th</sup>
3. **Guest Lecturer:** Cancer Vaccines: Rationale, Progress, and Place in Combinatorial Immune Therapies. 3<sup>rd</sup> Conference of Vaccinology in the Tropics. January 20 – 22. Panama City, Panama
4. **Poster:** Direct Activation of STING in the Tumor Microenvironment Partially Overcomes Immune Tolerance in Neu-N Transgenic Mice. Society for Immunotherapy Annual Meeting. November 5 – 8, 2015.
5. **Poster:** Characterization of graft versus host disease in Ca-PBL-SCID mice. Mouse Phenotyping and Pathology Course. Johns Hopkins University School of Medicine. July 15 – 19, 2013.
6. **Poster:** Canine PBMC NSG mice: A model canine specific immunity. ACVP meeting in Seattle WA. December 1 – 5, 2012
7. **Poster:** Role of Antigen Persistence in the Maintenance of DEX-specific Antibodies. Keystone Symposium: B Cells in Context, Taos, NM, 2009.
8. **Oral presentation:** Generation of B Cell Memory to the Bacterial Polysaccharide Alpha 1→3-dextran. Keystone Symposium: B Cells in Context, Taos, NM, 2009.
9. **Poster:** V<sub>H</sub>J558 Transgenic Mice: A Model to Study Development and Function of Polysaccharide Specific B Cells. Annual Meeting of the American Association of Immunologists, San Diego, CA, April 5-9 2009.
10. **Poster:** Marginal Zone B Cell Development can be recapitulated by Purified CD36+ Immature Transitional and Mature Follicular B cells. Annual Meeting of the American Association of Immunologists, Boston, MA, May 12 – 16, 2006.