

JEFFREY BLOODWORTH

6102 S Kimbark Ave Apt 2W Chicago, IL 60637 | 614-302-6924 | jeffrey.bloodworth@gmail.com | www.jeffreybloodworth.com

PROFILE

I am currently pursuing admittance to a Doctor of Philosophy program in biomedical science. I received a Master of Science in Molecular Biology and Biochemistry from Loyola University Chicago in 2016. I have extensive knowledge and expertise in oncology and immunology research. My Master's thesis project was focused on elucidating a novel Notch signaling mechanism in Estrogen Receptor α positive breast cancer. My previous research experience at The Ohio State University involved investigating TGF- β signaling in vascular angiogenesis. In the three years since completion of my Master's degree, I have performed research at The University of Chicago in tumor immunology with a special emphasis on developing mouse models of disease. I am motivated and enthusiastic about scientific research. In the lab, I am detail-oriented and thoughtful in my experiments. I strive daily to advance our knowledge of the natural world and disease through thoughtful inquiry and a positive attitude.

EDUCATION

Loyola University Chicago

M.S. Biochemistry and Molecular Biology

2016

The University of Mississippi

B.S. Biology

2011

The University of Mississippi

B.A. Biochemistry

2011

RESEARCH EXPERIENCE

University of Chicago

Research Specialist II

September 2017 - Present

I am currently employed as a research technician in the Department of Medicine. Our research is focused on mechanisms of immune checkpoint inhibitors in bladder cancer.

University of Chicago

Research Specialist I

October 2016 – September 2017

I was previously employed as a research technician in the Department of Microbiology. Our research was focused on mechanisms of retroviral infection in murine models.

Loyola University Chicago

Master's Student

August 2014 – October 2016

Work toward my Master's thesis employed several biochemistry and molecular biology techniques used to investigate the crosstalk between Notch, Estrogen Receptor- α , and MAP Kinase signaling pathways in breast cancer.

The Ohio State University Division of Pharmacology

Research Assistant II

October 2011 – April 2014

As a Research Assistant, I was responsible for carrying out biochemistry and molecular biology experiments pertaining to TGF- β signaling in vascular endothelium. I was also responsible for lab inventory, ordering, personnel training and supervision, and general management duties.

The University of Mississippi Department of Chemistry and Biochemistry

Undergraduate Research Assistant

January 2011- May 2011

In this position, I gained experience with PCR and cloning techniques and protein purification.

The University of Mississippi Department of Biology

Undergraduate Research Assistant

Sept 2009-April 2010

My main task in this lab was maintenance and histological characterization of *Drosophila* lines. Prepared and delivered lab lectures, prepared and graded all quizzes and exams, and supervised and assisted students with lab assignments.

TECHNICAL SKILLS

Biochemistry and molecular biology:

- Western Blotting: 8 years
- Co-immunoprecipitation: 3 years
- Fluorescence/confocal microscopy: 3 years
- ELISA and ELISPOT: 3 years
- Flow Cytometry: 3 years
- Tissue culture (immortalized cells): 8 years
- T-cell harvest and culture: 2 years
- Cloning and site-directed mutagenesis: 8 years
- Quantitative RT-PCR: 5 years
- Chromatin Immunoprecipitation: 1 year

Mouse Models: 3 years experience for all these techniques

- Husbandry and breeding
- Anesthesia
- Genotyping
- Blood collection
- IP injection and oral gavage
- Tumor xenografting and implantation
- Gross dissection and tissue harvest
- In vivo imaging (luciferase and fluorescence)
- Bladder catheterization

Bioinformatics:

- Online tools (i.e. NCBI, UCSC genome browser, GSEA from Broad Institute) 8 years
- R and bioconductor: 1 year
- Python coding: I am currently pursuing the "Python for Everyone" certificate from University of Michigan through Coursera

PUBLICATIONS AND PAPERS

Swais RF, Golan S, Barashi N, Hill E, Andolfi C, Werntz RP, **Bloodworth J**, Steinberg GD. "Association of the commensal urinary microbiome with response to *Bacillus Calmette-Guérin (BCG)* immunotherapy in nonmuscle invasive bladder cancer." In: *J Clin Oncol* 37, 2019 (suppl 7S; abstr 423); February 15, 2019; San Francisco, CA; Abstract 423.

Bloodworth J.C., Osipo C. (2018) The Role of Notch in Breast Cancer. In: Miele L., Artavanis-Tsakonas S. (eds) Targeting Notch in Cancer. Springer, New York, NY, https://doi.org/10.1007/978-1-4939-8859-4_9

Shah N, Kumar S, Zaman N, Pan CC, **Bloodworth JC**, Lei W, Streicher JM, Hempel N, Myhre K, Lee NY. "TAK1 activation of alpha-TAT1 and microtubule hyperacetylation control AKT signaling and cell growth." *Nat Commun*. 2018 Apr 27;9(1):1696. doi: 10.1038/s41467-018-04121-y.

Pandya K, Wyatt D, Gallagher B, Shah D, Baker A, **Bloodworth J**, Zlobin A, Pannuti A, Green A, Ellis IO, Filipovic A, Sagert J, Rana A, Albain KS, Miele L, Denning MF, Osipo C. "PKC α Attenuates Jagged-1 Mediated Notch Signaling in ErbB-2-Positive Breast Cancer to Reverse Trastuzumab Resistance." *Clin Cancer Res*. 2016 Jan 1;22(1):175-86. doi: 10.1158/1078-0432.CCR-15-0179. Epub 2015 Sep 8.

Pan CC, Kumar S, Shah N, **Bloodworth JC**, Hawinkels LJ, Myhre K, Hoyt DG, Lee NY. "Endoglin Regulation of Smad2 Function Mediates Beclin1 Expression and Endothelial Autophagy." *J Biol Chem*. 2015 Jun 12;290(24):14884-92. Epub 2015 Apr 30.

Kumar S, Pan CC, **Bloodworth JC**, Nixon AB, Theuer C, Hoyt DG, Lee NY. "Antibody-directed coupling of endoglin and MMP-14 is a key mechanism for endoglin shedding and deregulation of TGF- β signaling." *Oncogene*. 2014 Jul 24;33(30):3970-9. Epub 2013 Sep 30.

Pan CC, **Bloodworth JC**, Myhre K, Lee NY. "Endoglin inhibits ERK-induced c-Myc and cyclin D1 expression to impede endothelial cell proliferation." *Biochem Biophys Res Commun*. 2012 Aug 3;424(3):620-3. Epub 2012 Jul 10.