



included a variety of high impact learning practices

2016- 2021 **Program Director**, Department of Clinical and Diagnostic Sciences, Biomedical Sciences Program, School of Health Professions, University of Alabama at Birmingham (UAB), Birmingham, AL

2016-2018 **Research Fellow**, NIH NCI CURE (continuing umbrella of research experiences), collaboration between NCI, Washington D.C., Mitchell Cancer Institute - USA, Mobile, AL (*Mentor*: Dr. Ajay Singh), and Department of Radiology at UAB, Birmingham, AL (*Mentors*: Drs. Lalita Shevde-Samant & Kurt Zinn)

2010- 2016 **Graduate Faculty**, Center for Lung Biology, College of Medicine, University of South Alabama (USA), Mobile, AL

2010- 2016 **Assistant Professor**, Department of Biomedical Sciences, College of Allied Health Professions, University of South Alabama (USA), Mobile, AL

2009-2010 **Post-doctoral T32 Fellow** - Immunology Training Grant Director: Harry W. Schroeder, Jr. M.D., Ph.D., University of Alabama at Birmingham

2008-2009 **Post-doctoral T32 Fellow** - Lung Biology and Translational Medicine Training Grant Director: Dr. David Allison, University of Alabama at Birmingham

2001-2002 **Research Technician**  
Hospital, Memphis, TN. Dr. Dario Vignali

Summer 2001 **Pediatric Oncology Education Intern (POE)**, Department of  
, TN

		Obstetrics & Gynecology (CM-Ob/Gyn)	School Curriculum
2022	present	MED7301: Clinical Medicine - <b>(Lecturer)</b> Hematology & Oncology (CM-Heme/Onc)	VCOM-Auburn, Medical School Curriculum
2022	present	MED7301: Clinical Medicine - <b>(Lecturer)</b> Dermatology (CM-Derm)	VCOM-Auburn, Medical School Curriculum
2022	present	Board Review - <b>(Lecturer)</b> MSK and Heme/Onc Topics	VCOM-Auburn, Medical School Curriculum

**GRADUATE & PROFESSIONAL SCHOOL COURSES:**

2019		BHS503: Virology and Vaccines <b>(Lecturer)</b>	UAB, Biomedical and Health
2018		CLS518: Immunology and Vaccines <b>(Lecturer)</b>	UAB, Clinical Lab Sciences,
2009		T cell/Antigen presentation <b>(Lecturer)</b>	UAB, Microbiology & Immunology Doctoral Program
2008		BIO225: Microbiology	Samford University Nursing Program
2006-7		BIO261L: Microbiology Lab	UAB, Nursing Program

**UNDERGRADUATE COURSES: (COURSE DIRECTOR & LECTURER IN ALL OF THE FOLLOWING)**

2018-2019		BMD201: Bioethics <b>(Lecturer only)</b> <i>Alcoholism &amp; Mental Health</i>	UAB, Biomedical Sciences
2018-2021		BMD475 (2h): BMD Capstone <b>(writing intensive)</b> UABTeach: Writing Case Studies in Science	UAB, Biomedical Sciences
2017-2020		BMD497: Directed research <b>(writing intensive)</b>	UAB, Biomedical Sciences
2017 2021		BMD490: Directed Reading (journal(t)-4(ed)14( )-4(R)5(e 7)5(4)3(ce)] TJ ET Q q 0.00000912	

*Hypersensitivity Reactions*

2012-2016

BMD350: Genomics

USA

<i>Year(s)</i>	<i>Award</i>
2011-12; 2014-15	University of South Alabama, Mobile, AL

**PROFESSIONAL SERVICE:**

<i>Year</i>	<i>Role</i>
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**SCIENCE & TEACHING EXPERTISE:**

2022-2023	Science Consultant, Merck Pharmaceuticals and Sidley Austin
2022	External Reviewer for Undergraduate Program, Department of Microbiology & Immunology, University of Nevada - Reno

	in PDAC tumors decreases tumor growth	
2018-2021	Greg Williams (UAB Honors College) <u>Thesis:</u> CXCR4 role in PDAC cell line UN-KC-6141	applying to medical schools
2018-2019	Shelly Choi (BY492 Directed Research) <u>Thesis:</u> Oral gavage injury and pharmaceutical delivery systems	South Korean Med School
2017-2019	Sydney Byrd (BY492 Directed Research) <u>Thesis:</u> Development of Pancreatic Ductal Adenocarcinoma mouse model	Auburn University Vet School
2017-2018	Hayley Nichols (BMD 497 Directed Research) <u>Thesis:</u> Development of Pancreatic Ductal Adenocarcinoma mouse model	VCOM-Auburn
2016-2017	Chris Burton (BMD 497 Directed Research) <u>Thesis:</u> Development of Pancreatic Ductal Adenocarcinoma mouse model	UAB Public Health
2016-2017	Devin Howton (BMD 497 Directed Research) <u>Thesis:</u> Development of Pancreatic Ductal Adenocarcinoma mouse model	Pharmaceutical Sales
2015-2016	Syeda Kabir (BMD499 Directed Research) <u>Thesis:</u> Chronic Stress promotes cancer tumor growth and suppresses cancer immune responses in mice.	Clinical Lab Scientist
2015-2016	Kory Dees (BMD 499 Directed Research) <u>Thesis:</u> Physical Activity promotes cancer tumor growth and cancer immune responses in mice.	UAB Medical School
2012-2014	Chase Lunsford (University Honors USA) <u>Thesis:</u> $\beta$ -adrenergic receptor activation generates cAMP levels that increase suppressive function of T Regulatory cells within an asthmatic lung.	Unknown
2011-2013	Kacie Watson (University Honors USA) <u>Thesis:</u> $\beta$ -Adrenergic Receptor on T cell.	Assistant
2011-2013	Parker Chastain (University Honors USA) <u>Thesis:</u> The Role of $\beta$ -Adrenergic Receptor on T regulatory cell Suppressive Function.	Global Health Outreach
2011-2012	Taylor Chrisman (Depart. Honors USA) <u>Thesis:</u> Effects of Exercise on T cell Function in the Asthmatic Lung.	Law School

2009-2010 Ben Jones, M.D. (BI470 Birmingham South. Univ.) Neuro-M



2017	Scoring Participant, Sci-Tech Honors Critical Thinking Assessment, Scored Exams
2016-2021	Chair, Capstone Development Committee (UAB)
2016-2021	Chair, UAB

Edward Via College of Osteopathic Medicine (VCOM)  
Amount: \$50,000  
**Role: Primary Investigator**

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2. Deshmukh SK, Tyagi N, Khan MA, Srivastava SK, Al-Ghadhban A, **Dugger K**, Carter JE, Singh S, Singh AP. Gemcitabine treatment promotes immunosuppressive microenvironment in pancreatic tumors by supporting the infiltration, growth, and polarization of macrophages. *Sci Rep*. 2018 Aug 10;8(1):12000. PMID:30097594
3. **Dugger KJ**, Sayner S, Chastain P, Watson K, Chrisman T, and Estes NR. Beta-2 adrenergic receptors increase TREG cell suppression in an OVA-induced allergic asthma mouse model when mice are moderate aerobically exercised. *BMC Immunology*. 2018 Feb, 19:9. PMID: 29452585
4. Deshmukh SK, Srivastava SK, Tyagi N, Ahmad A, Singh AP, Ghadhban AAL, Dyess DL, Carter JE, **Dugger K**, Singh S. Emerging evidence for the role of differential tumor microenvironment in breast cancer racial disparity: a closer look at the surroundings. *Carcinogenesis*. 2017 Aug 1;38(8):757-765. PMID: 28430867
5. **Dugger KJ**, Chrisman T, Jones B, Chastain P, Watson K, Estell K, Zinn K, Schwiebert L. Moderate aerobic exercise alters migration patterns of antigen specific T helper cells within an asthmatic lung. *Brain Behav Immun*. 2013 Nov;34:67-78. PMID: 23928286 (PMCID: PMC3826814)
6. **Dugger K\***, Lowder T, Estell K, Schwiebert LM. Repeated Bouts of Aerobic Exercise Enhance Regulatory T Cell Responses in a Murine Asthma Model. *Brain Behav Immun* 2010 Jan;24(1):153-9. \*co-first authors PMID:19781626 (PMCID: PMC2787986)
7. Hu X, Wohler JE, **Dugger KJ**, Barnum SR. beta2-integrins in demyelinating disease: not adhering to the paradigm. *J Leukoc Biol*. 2010 Mar;87(3):397-403. PMID:20007244 (PMC Journal In Press)
8. **Dugger K**, Lowder TW, Tucker TA, Schwiebert LM. Epithelial Cells as immune effector cells: The role of CD40. *Semin Immunol*. 2009 Oct;21(5):289-92. Review. PMID:19628407 (PMCID: PMC 2749080)
9. **Dugger KJ\***, Chewning J, Zinn, K, Weaver, CT. Bioluminescence-based visualization of CD4 T cell dynamics using a T lineage-specific luciferase transgenic model. *BMC Immunol*. 2009 Aug 3;10:44. \*co-first authors PMID:19650922. (PMCID: PMC2736162)

<https://education.asu.edu/sites/default/files/substance-of-stem-education-concept-paper.pdf>  
and





