

THE VULCAN LETTER

Voice of the MSTP at the University of Alabama at Birmingham

August 2012

AN UPDATE FROM THE DIRECTOR



I want to begin by giving a big THANKS to all of our current students for their efforts during

the past year and by saying WELCOME to our new students. We accepted each of you because of your unique talents and efforts and we believe that together, we are making the UAB MSTP one of the best programs in the country.

We have several significant changes that either already have or are occurring. First, as you all have heard, the Graduate School has approved a stipend increase for all students who have passed their qualifying exams. Therefore, those of you who have been admitted to candidacy will now make \$27,000 per year (instead of \$26,000). A second change has been that we now have our own class code for the courses that all MD/PhD students take. These

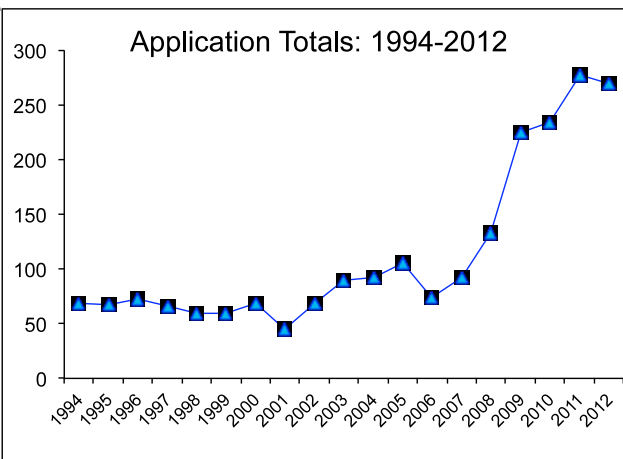
are: MSTP 794 (Translational Research Seminar (i.e. CAMS)), MSTP 795 (Continuing Clinical Education), MSTP 798 (Non-dissertation research hours), and MSTP 799 (Dissertation research hours). Note that starting with the entering class of 2009, all students in their research years are required to register

for MSTP 795 in both Fall and Spring semesters. Third, this year the MS1 and MS2 students will be doing posters about their summer research experiences at the GBS Summer Poster Session. This should be Thursday, August 16 from 1-3. Please drop

by to support the MS1 and MS2 MSTP students! Finally, we have a new MSTP website (www.mstp.uab.edu). Please check it out and let us know if you have any suggestions or improvements!

I also wanted to give you an update on recruitment. As you know, we recently initiated a

multifaceted approach to making the UAB MSTP name known throughout the United States. As part of this initiative, we have relied on you to promote our program when you go back to your home institutions or travel to meetings. The following graph shows the success of our



endeavors. This increase in application numbers is due to your enthusiasm for our program and your efforts to make it the best program possible.

I also thought you might like to see a few numbers from the most recent recruiting season.

2011-2012	Number of Applicants	M/F	States Represented	Average MCAT	Average GPA
All Applicants	273	176/97	39 (+DC)	32 (11-41)	3.64 (2.51-4)
Applicants Interviewed	41	26/15	22	35 (30-41)	3.81 (3.14-4)

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INCOMING CLASS OF 2020

compiled by Jarrod Meadows



Evida Dennis

Evida graduated from George Washington University in 2009 with a B.S. in

Biology, and then completed an M.S. in Biology at UAB. She is currently interested in immunology and pediatrics. During her previous research, she examined *Streptococcus pneumoniae* biofilm formation in patients with cystic fibrosis. Evida enjoys cooking and martial arts, and she spends her time mentoring as a Big Sister.



Nicholas Eustace

Nicholas graduated with a B.S. in Biology from the University of South

Florida in 2012. His research interests include cancer biology and mass spectrometry, and clinically he is interested in preventative medicine. Previously, he studied oncogenic signal transduction pathways involved in the pathogenesis of lung cancer. Nicholas likes to

spend most of his free time in activities such as sailing, scuba diving, and running.



Andrew Hardigan

Andrew obtained a B.A. in Biology in 2010 from Colby College. Following

his interest in immunology, he previously studied signal transduction during T-cell activation. However, he has also been involved in other projects, from examining homologues of a *Vibrio cholera* protein to looking at how certain enzymes play a role in smoke-induced lung injury. Now that he's in Birmingham, Andrew is looking forward to exploring the kayaking and canoeing opportunities around the area as well as checking out the burgeoning microbreweries around town. He's also an avid practitioner of Brazilian jiu-jitsu.



Morgan Locy

Morgan graduated with a B.A. in Biology from Capital University in 2009. His

research interests include cellular redox and computational science/systems biology. Following his interests in electron transfer, he examined how certain redox

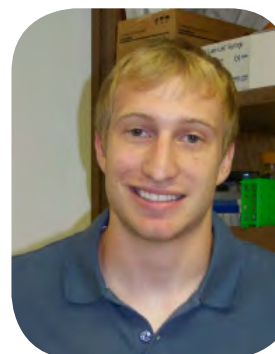
systems effect pulmonary development in hyperoxia. Outside of lab, he has been involved in officiating/umpiring basketball and baseball. He is also the go-to guy for an excellent, brew-induced conversation.



Kelsey Patterson

Kelsey graduated from UAB in 2012 with a B.S. in Neuroscience. She

is very interested in glial cell function in the CNS and various neurological disorders such as Alzheimer's, Parkinson's, and Huntington's diseases. During her previous work here at UAB, she examined the regulatory function of MeCP2 in the hippocampus during adult learning and memory. Outside of school Kelsey enjoys volunteering with the Crisis Center and getting to try out many of Birmingham's tastiest dining establishments.



Ryne Ramaker

Ryne graduated from the University of Arkansas at Little Rock in

2012 with a B.S. in Biology and a B.A. in Chemistry. Due to his

interests in biochemistry and cancer biology, he has previously studied a specific type of antioxidant and also the effects of electromagnetic fields on hepatocellular carcinoma. Outside of work, Ryne runs, hikes, mountain bikes, goes caving, catches snakes and pretty much anything else you can do outside on a regular basis. If he's not busy being a Daniel Boone impersonator, you can probably find him studying or watching reruns of *The Office*.



William Webb

William obtained a B.S. in Biology from Millsaps College in 2012. His current

interest is in Neuroscience, specifically spinal cord injury and its related regenerative medicine aspects. His previous research aimed to elucidate the effects of dopamine-beta-hydroxylase inhibitors on rats addicted to cocaine. He also examined prenatal exposure to oxycodone on cognitive abilities in a rat model. William's extracurricular interests include literature, history, economics, physics, philosophy, botany, and Scotch whisky. Currently, he is co-authoring a book about the economics of college fraternities.

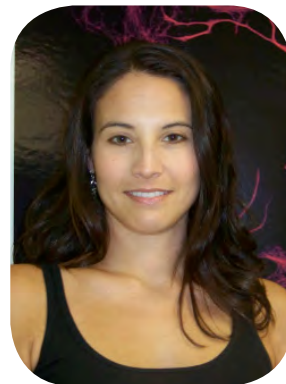
thology. His previous research focused on the role of IL-10 in mucosal immunity, and he has also worked on developing a tool for deciphering functions of non-coding elements in the mammalian genome. As an advanced transfer student in the MSTP, he is currently in the lab of Casey Weaver in the Department of Microbiology. Outside of the lab, Carson is working hard to maintain his relaxed nature by being an avid reader and movie goer.



Lindsay Turner

Lindsay graduated with a B.S. in Biology and a B.A. in Sociology in 2011 from the

University of Mississippi. Before getting accepted into the MSTP, she was also a graduate student here at UAB. Her research interests include pharmacology and toxicology. Her previous research aimed to generate therapeutic targets from the endogenous secreted protein h-VAP; she also looked at the MARCKS protein and its role in survival pathways of irradiated tumor cells. Outside of school, Lindsay's primary activities involve her two horses, Pepper and Jester. She also dabbles in the tropical fish business; currently there are 16 tanks running in her apartment!



Stephanie Robert

Stephanie graduated with a B.S. in Biochemistry from Louisiana State University

in 2008. She also obtained an M.S.B.M.S. in 2012 from the Center for Clinical and Translational Science here at UAB. Her research interests include oncology, neuroscience, and drug development. As the other advanced transfer student this year, she is working in the lab of Harald Sontheimer in the Department of Neurobiology. Her research is focused on investigating the effects of the cysteine/glutamate transporter system and its inhibition on glioblastoma multiforme growth, radiation resistance, and neurotoxicity. Outside of school Stephanie enjoys baking and cake decorating, traveling, exercising, and enjoying free time with friends and family.

TRANSFER STUDENTS



Carson Moseley

Carson graduated from Wake Forest University in 2009 with a B.S. in Biology. He

is interested in the development and function of the immune system, with an emphasis on autoimmunity and immunopa-

Director's note continued...

Finally, I want to congratulate our students who received individual fellowships this year: Stacey Watkins (F31 from NINDS) and Faraz Sultan (F30 from NIMH). In addition, I want to congratulate my fantastic MSTP team (Randy, Mindy, and Lou) for the successes of our program over the past year. They all care deeply about this program and about each

student's welfare and I think they, along with our students, are a significant part of what makes the UAB MSTP one of the best atmospheres for developing physician scientists anywhere in the United States. Please come and discuss with me any ideas or concerns that you might have about the UAB MSTP.

GRADUATING CLASS OF 2012

compiled by Jarrod Meadows

Sarah Baxley

Residency: OB/GYN – UTMB, Galveston, TX
Thesis: The role of Wnt5a in mammary gland development

Sherry Yang

Residency: Internal Medicine – St. Louis University, St. Louis, MO
Thesis: A TIMP2-armed conditionally-replicating adenovirus for the treatment of ovarian cancer.

Kayci Huff

Residency: Internal Medicine – ABIM Research Pathway – UT Southwestern, Dallas, TX
Thesis: The intestinal extracellular matrix as an innate regulator of effector T-cell responses

David Mayhew

Residency: Radiation Oncology – UAB; Prelim Year – Baptist, Birmingham, AL
Thesis: Translation initiation signaling components altered by mechanical load dictate skeletal muscle hypertrophy

Lena Gamble

Residency: Research Fellowship, NIH (Surgery Branch, NCI), Washington DC
Thesis: Generation and analysis of the oncolytic efficacy of a conditionally replicating adenovirus bearing RGD modification on Pix and fiber capsid proteins



PUBLICATIONS

Trends Neurosci. 2012 Jun 7. [Epub ahead of print] Unique biology of gliomas: challenges and opportunities. **Watkins S**, Sontheimer H

PlosOne. 2012;7(5):e37812. Epub 2012 May 18. Derivation of a myeloid cell-binding adenovirus for gene therapy of inflammation. **Alberti MO**, Roth

4 JC, Ismail M, Tsuruta Y, Abraham E, Pereboeva L, Gerson SL, Curiel DT.

Jarboe JS, Anderson JC, Duarte CW, Mehta T, Nowshheen S, Hicks PH, Whitley AC, Rohrbach TD, McCubrey RO, Chiu S, Burleson TM, Bonner JA, Gillespie GY, Yang ES, Willey CD. MARCKS Regulates Growth and Radiation Sensitivity and Is a Novel Prognostic Factor for Glioma. Clin Cancer Res. 2012 May 22. [Epub ahead of print] PMID: 22619307

ANNOUNCEMENTS

Congratulations to Dr. Ryan Well's on a successful dissertation defense on Tuesday, June 26th. His thesis was titled, "Siderophore-mediated iron acquisition in *Mycobacterium tuberculosis*."

Congratulations to Travis Hull and Erika Gruss on the birth of their daughter, Olivia at 2:34PM March 23. She was 8lbs 11.9 oz.



Congratulations to Brian Warmus and Savannah Burleson on the birth of their daughter Zoey Mae at 2:33 AM on June 27. She was 8lbs 15.2 oz.



David Gaston and his wife Kate celebrated the birth of their daughter Adelaide Victoria Gaston. She was born at 3:20 AM on July 15, and was 9lbs 15.4 oz.

Congratulations to Katie Poholek on being awarded a CCTS TL1 grant!

Dr. Juan Calix defended his thesis, "Discovery and Characterization of *Streptococcus Pneumoniae* Serotype 11E Reveals a Novel Model of Serotype Evolution" May 31, 2012.

Congratulations to Simi Akinsiku on her recent wedding.



Stephanie Brosius married Brandon George on May 5.



CREATIVE OUTLETS IN THE MAGIC CITY

written by Mika Guzman Karlsson

As graduate students and medical students living in the greater Birmingham area, we spend a good amount of time away from our studies exploring fun and novel things to do around town. I mean, we are here for eight or so years, right? So might as well get to know the Magic City and what it has to offer. As such you might be inclined to explore the growing number of restaurants, coffee shops, and shopping opportunities offered on 2nd Avenue North as well as other surrounding downtown areas. Or perhaps you tend to save up your energy for larger seasonal events like The Sidewalk Film Festival, Secret Stages, or the Crawfish Boil? Then of course you can always explore the refreshing thirst quenchers provided by local breweries (I encourage you all support the city's third and newest brewery: Cahaba Brewing Company). And in an effort to offset the effects of too much food and beer, perhaps the outdoors is more your style and you rather spend most of your time finding that perfect running trail or cycling route.

Although this sort of urban and outdoor exploration is great, our eight(ish) years in Birmingham can also be used to explore some more personal artistic hobbies and interests. Have you ever been interested in exploring painting, drawing, quilting, or should I dare say, bookbinding, but just never had the opportunities to do so? Or perhaps you have a background in dance, music, or acting, and

you yearn to develop your skills further just in case this physician-scientist career doesn't work out. If you answered "Yes!" to any of these questions then I encourage you to explore the services provided by ArtPlay, an education and outreach initiative of UAB's Alys Stephens Performing Arts Center. Housed in a beautifully restored Victorian home on 19th St. South, close to the Five Points area, ArtPlay offer classes and workshops lead by a group of talented and dedicated teaching artists.

I recently enrolled in one of their classes entitled, "The Art of Music Production," which was taught by Eric Essix, a Birmingham native and accomplished jazz guitarist who has been inducted into the Alabama Jazz Hall of Fame. Besides being something different to do on Wednesday evenings, I found the class providing practical skills to further develop my amateur musical projects. With that said, there are several programs and businesses like ArtPlay that are spread out throughout Birmingham to nurture your artistic abilities and inspire your self-expression. So the next time you're debating how to spend your time away from Volker Hall or the lab, consider taking advantage of our city's creative outlets. I guarantee you will find these experiences extremely rewarding, and besides they make great talking points when you are enjoying Birmingham's fine dining and local breweries!

UPCOMING EVENTS IN BIRMINGHAM

8/2 Jazz on the Porch @ Rucker Place
8/8 Van Halen @ BJCC Arena
8/9 Russian Circles @ Bottletree
8/10 Stokin' the Fire BBQ Competition and Festival @ Sloss Furnace
8/12 Robert Plant @ Alabama Theater

8/17 Art on the Rocks @ Birmingham Museum of Art
8/17-8/26 Birmingham Restaurant Week
8/24 Phish @ Oak Mountain Theater
8/24-8/26 Sidewalk Moving Picture Festival



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