

BMS Annual Report 2012

Biomedical Science Major...Developing leaders in research and medicine

An annual publication of the undergraduate Biomedical Science (BMS) major, highlighting the accomplishments of our students during the past calendar year.

Welcome to the BMS Class of 2016

New students, their high schools and hometowns:

Daniel Banaszak, Victor Senior HS, Victor, NY
Jillian Bendt, Findlay HS, Findlay, OH
Andrew Branstetter, Solon HS, Solon, OH
Quinn Cartheuser, Milford HS, Loveland, OH
Lauren Chen, Bay HS, Bay Village, OH
Kathryn Gasior, Bishop Watterson HS, Worthington, OH
Langston Hughes, The Columbus Academy, Dublin, OH
Rebecca Joseph, Hilliard Davidson HS, Hilliard, OH
George Koutras, Upper Arlington HS, Upper Arlington, OH
Nicole Larger, Lehman Catholic HS, Sydney, OH
Brandon Liebau, Jackson HS, Canton, OH
Matthew Lordo, Worthington Kilbourne HS, Columbus, OH
Daniel Moussa, Hilliard Darby HS, Hilliard, OH
Jenna Murray, Moon Area HS, Moon Township, PA
Jared Pradarelli, Muskego HS, Muskego, WI
Mayuran Ravindran, Pickerington Central HS, Pickerington, OH
Rebecca Rings, Dublin Jerome HS, Delaware, OH
Ethan Schimmoeller, Fort Jennings HS, Delphos, OH
Robert Schmenk, Kalida HS, Kalida, OH
Emily Sharick, Dublin Coffman HS, Dublin, OH
Sonia Tandon, Beaver Creek HS, Beaver Creek, OH
Caleb White, Centerburg HS, Centerburg, OH



National Awards

Eight percent may not sound like a lot, but it is a number of great pride for the Biomedical Science major. Ohio State has a strong tradition of its students receiving national awards and fellowships. During the 2011-12 school year, BMS students made up only .01% of the undergraduate student population, but they made up 8% of the OSU national award winners! Award winner Kelsey Gray from Massillon, OH, received a National Science Foundation Graduate Fellowship and is a first year graduate student at the University of North Carolina. Tom Kaffenberger from Spring Valley, OH, received a Fulbright Scholarship and is using the award to do cancer research in Germany for a year. Upon his return in 2013, Tom will start medical school at the University of Pittsburgh. Ron Siebenaler is from Toledo and will graduate in 2013. Ron received a Goldwater award and plans to pursue an MD/PhD upon graduating. Nicholas Jarjour is from Charlottesville, VA, and was a finalist for the Goldwater award. He will also graduate in 2013 and plans to attend graduate school to study immunology.

Congratulations to all!



BMS Class of 2012

Members of the BMS Class of 2012, their hometowns, and where they are now:

Jamie Barnum, Columbus, OH, is in the Molecular, Cellular, and Developmental Biology PhD program at The Ohio State University.

Katie Bingmer, Canal Winchester, OH, is in medical school at The Ohio State University.

Emily Cason, Schaumburg, IL, is in the Master of Public of Health program at Emory University.

Shauna Collins, Hoover, AL, is in medical school at The Ohio State University.

Claire Dolan, Loveland, OH, is in medical school at Wright State University.

Jordan Gales, Strongsville, OH, is in medical school at the Cleveland Clinic Lerner College of Medicine.

Kelsey Gray, Canton, OH, is in the Biology and Biomedical Science PhD program at the University of North Carolina-Chapel Hill.

Thomas Kaffenberger, Spring Valley, OH, is in Germany on a Fulbright Scholarship.

Lily Liu, Mason, OH, is in dental school at Harvard University.

May Matsunami, Cincinnati, OH, is in pharmacy school at The Ohio State University.

Bridget McMurray, Euclid, OH, is in optometry school at The Ohio State University.

Nick Taylor, Grand Island, NY, is in medical school at The Ohio State University.

Igor Voronkin, Mayfield Heights, OH, is taking a gap year before pursuing further academic goals.



“At a big school like Ohio State, opportunities for involvement in scientific research, club sports, and student groups are practically endless, and the student population brings a diverse mix of experiences and perspectives to campus. Within this larger university, students in a small major like BMS benefit from personal relationships with faculty, supervisors and program managers who provide individual attention and counseling. Reflecting on my experiences in the Biomedical Science major, the advantage of working with a tight-knit group of students under the broader umbrella of The Ohio State University is clear. For example, my classmates and I practiced cooperativity and teamwork as we learned in a small-group setting. From providing suggestions for each other's research projects to discussing clinical problems and ethical scenarios, we were able to learn from one another as well as from our faculty mentors. This environment was ideal for learning, preparing me to be an effective team member during my clinical rotations and beyond.”

- **Matt Flanigan**, on what being a Biomedical Science major meant to him. Matt graduated in 2009 and is a 4th year medical student at OSU. Originally from Cincinnati, OH, Matt graduated from LaSalle High School. He plans to pursue residency in pediatrics and internal medicine.

New BMS Student Advisory Group starts in 2012

BMS students have always played an integral role in making the major successful. They host prospective student visits, participate in interviews, plan all-major social events, and mentor each other. Under the leadership of Class of 2013 student Michael Ratti, a new BMS Student Advisory Group is starting in the 2012-13 school year. “The Biomedical Science Advisory Board was started in order to create a greater community within the program that will nurture relationships as well as student success within the major. I'm really excited to get everyone in BMS involved so that we may grow together through friendship and mentorship” says Michael. The advisory group meets every other week and consists of two student representatives from each class, along with Michael, who serves as President.

Summer Research in India

Ron Siebenaler is from Holland, OH, and a graduate of St. John's Jesuit High School. He graduates from OSU in 2013 and plans to pursue an MD/PhD upon graduation. In the summer of 2012 Ron was awarded the opportunity to conduct research in India on a Pelotonia Fellowship.

This summer, I had the opportunity to participate in a ten week research internship at the Indian Institute of Science Education and Research in Pune, India. I worked in the lab of Dr. Nagaraj Balasubramanian studying a pathway that controls cell survival when it is part of a tissue in the body. When normal cells detach from their tissue, this pathway is turned off, and the cells die. In cancer, this pathway is sometimes mutated, which allows tumor cells to metastasize, leaving their tissue and migrating to another part of the body. My project will hopefully shed light on how this pathway is activated in cancer and provide possible targets for future treatments. During my time in India, I stayed in the university's dorms with students from all over the country. Since I was the only non-native Indian working in my lab building, I was able to share what it is like to live in America with students. After spending the day in lab, I was able to explore Pune and learn about the rich culture of India from my new friends and labmates. I traveled on the weekends, visiting the Taj Mahal and enjoying the beautiful scenery throughout India. Throughout the summer, I was able to not only explore a new and exciting country, but I was also able to advance my scientific understanding and research skills. Maybe more importantly, I can't wait to go back and experience India again!



Grever Internship 2012

Dr. Michael Grever, Chair of Internal Medicine at the OSU Wexner Medical Center, has been a champion of Biomedical Science students since the major began. The summer of 2012 marked the seventh year Dr. Grever has offered an internship to BMS students, which allows students to shadow residents in Internal Medicine as they go on patient rounds. The goal of the internship is to give students a significant shadowing experience, so they can determine if a career in clinical medicine is right for them. A secondary goal is to help students better understand how advancements made in the research lab can impact clinical care, and how problems identified at the bedside can become research topics. Pictured above are the 2012 interns with Dr. Grever. They are (left to right): Callie Drohan from Hudson, Mark Rudolph from Toledo, Dr. Grever, Brian Hurwitz from Cincinnati, Rachel D'Amico from Wyoming (OH), Tyler Siekmann from Mason, Allie Butz from Canton and John Wegman from North Bend. All of these students are in the BMS Class of 2014.

BMS by the Numbers

One hundred two students applied to BMS in 2012 and 50 were selected for interviews. Some details about the 22 students who joined the major in August follow:

Average ACT: 32
Average SAT: 1,390
Average GPA: 3.90

SCHEDULE OF EVENTS for 2013

JANUARY

7: Classes begin
21: MLK day, no classes
25: Interview Day

FEBRUARY

1: Interview Day
18: Interview Day

MARCH

1-Interview Day
11-15: Spring Break
28: Denman Research Forum
29: Spring Exploration/lab tours

APRIL

5: Spring Exploration/lab tours
11: OSUWMC Research Day
22: Last day of classes

MAY

4: BMS Graduation luncheon
5: Graduation
11: State Science Day

JUNE

JULY

AUGUST

21: Classes begin

SEPTEMBER

2: Labor Day, no classes

OCTOBER

NOVEMBER

11: Veteran's Day, no school
27-29: Thanksgiving Break

DECEMBER

3: Last day of classes

Check the BMS website for the latest on information sessions and other events.

Highlighting the Faculty

Following is a list of the outstanding faculty who mentored the BMS students in the classroom, the research laboratory, and in various clinical settings during 2012.

Anatomy: John Bolte, Ken Jones

Bioinformatics: Dan Janies, Victor Jin, Carol Powell

Cardiovascular Medicine: Richard Gumina

College of Medicine: Dan Clinchot

Critical Care, Trauma, and Burn: Joanne Trgovcich

Endocrinology, Diabetes, and Metabolism: Larry Kirschner

General Internal Medicine: Andy Thomas

Hematology: Don Benson, Michael Caligiuri, Rob Baiocchi

Medical Oncology: Greg Lesinski

Microbial Infection and Immunity: Mark Drew, John Gunn, Jesse Kwiek, Amy Lovett-Racke, Larry Schlesinger

Molecular and Cellular Biochemistry: Jill Rafael-Fortney, Samson Jacob, Sarmila Majumder

Molecular Virology, Immunology, and Medical Genetics: Samir Acharya, Denis Guttridge, Amanda Toland, Gustavo Leone, David Symer, Virginia Sanders

Neurological Surgery: Balveen Kaur, Mariano Viapiano

Neurology: Steve Kolb

Neuroscience: Candice Askwith, Tony Brown, Courtney DeVries, Andy Fischer

Otolaryngology: Pawan Kumar

Pathology: Tania Oberyszyn, Jim Waldman, Traci Wilgus

Pediatrics: Robert Munson

Pharmacology: Kirk Mykytyn, Frederick Villamena

Physiology and Cell Biology: Jon Davis

Pulmonary, Allergy and Critical Care and Sleep: Susheela Tridandapani

School of Health and Rehabilitation Sciences: Jill Heathcock (Physical Therapy), Huey-Jen Lin (Medical Technology), Emily Patterson (Health Information Management and Systems), Jimmy Onate (Athletic Training), Meg Teaford (Occupational Therapy)