

Biomedical Science Annual Report 2008

The Ohio State University Biomedical Science Major

BMS Students have an Award Winning Year!

If the Biomedical Science major had a trophy case for its students' accomplishments, the 2007-08 school year would have yielded many contributions. Four BMS students received an award at OSU's Denman Undergraduate Research Forum, including Class of 2010 member Tyler Miller, who placed first in the category 'Health Professions-Laboratory/Cellular' and also won the Undergraduate award at OSU Medical Center's Research Day. Two members of the Class of 2009, Peter Sayers and Zach Rossfeld, received Thomas Bardos Awards, which funds them to attend and present at the annual American Association for Cancer Researchers conference for two years. Gina Aloisio, Class of 2009, was invited to present her research at the West Coast Biological Sciences Undergraduate Research Conference



Shannon Conneely, Class of 2009, accepts an award from President Gee at the annual OSU Denman Undergraduate Research Forum. Shannon works in a Neuroscience lab and placed third in the category 'Health Professions-Laboratory/Cellular.'

in San Diego, where she received an award for outstanding presentation. Shannon Conneely, Class of 2009, and Boyan Alexandrov, Class of 2010, had articles published, and Shannon also received her first research grant.

Other BMS students receiving grants for their research include: Class of 2009: Gina Aloisio, Megan Conroy, and Stephen Smith. Class of 2010: Boyan Alexandrov, Jenn Chao, and Amanda Harper. Congratulations to all!

Academics are Priority #1 for BMS Students

Research accomplishments, extra-curricular activities, and leadership are all wonderful additions to a resume, but Biomedical Science students know their academic record is the first priority for admission into graduate or professional

school. The Class of 2009 finished the 2007-08 school year with an average grade point average (GPA) of 3.71 on a 4.0 scale. The Class of 2010 finished the year with a class average of 3.66, and the Class of 2011 finished with an aver-

age of 3.54. A strong academic record is part grades and part quality of the courses taken. During this past academic year, the 56 BMS students completed 110 Honors classes (besides BMS classes), and 20 graduate level courses.

Welcome Freshman!

Meet our newest students, who start in Autumn 2008

Tiffany Baas
Maumee High School

Jackie Bakalarski
Springboro High School

Jamie Barnum
Whetstone High School

Katie Bingmer
Canal Winchester High School

Emily Cason
Schaumburg HS (IL)

Shauna Collins
Hoover High School (AL)

Claire Dolan
Loveland High School

Jordan Gales
Strongsville High School

Kelsey Gray
Perry High School

Tom Kaffenberger
Bellbrook High School

Lily Liu
William Mason High School

Rebecca Lyon
William Mason High School

May Matsunami
Anderson High School

Bridget McMurray
Beaumont School

Rebecca Mohler
Fairfield Union High School

Sean Rose
Fairfield High School

Rebecca Shaffer
Shelby Senior High School

Elsa Sheerer
Medina High School

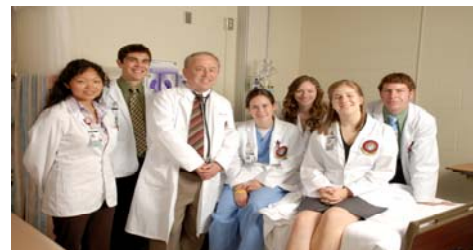
Nick Taylor
Grand Island High School (NY)

Igor Voronkin
Mayfield High School

Internal Medicine Internship Expands and Includes Research Experience

The Summer of 2007 brought a second round of students participating in the OSUMC Internal Medicine Internship, affectionately known by BMS students as the "Grever" Internship, after department chairman Dr. Michael Grever. The internship allows students to shadow internal medicine residents as they attend rounds, lectures, and case studies. Students rotate through the various areas of Internal Medicine and also have opportunities to shadow in Surgery and Pediatrics. While the mornings revolve around clinical activities, students return to their research labs in the afternoon to work on their projects. The goals of the internship are twofold. First,

the internship exposes students to the realities of clinical medicine so they can make informed career choices. They witness the rewards and challenges of working with patients and their families, as well as what it means to be a part of a medical team. Second, the students continue to build their understanding of 'bench-to bedside' research and the importance of lab discoveries becoming actual treatments. The Biomedical Science major is very appreciative of Dr. Grever, Laura Wolfe, Beverly Hildebrand, the Internal Medicine Chief Residents, and everyone else who makes this internship possible.



Dr. Michael Grever, Chair, OSUMC Department of Internal Medicine, and his Summer 2007 Interns. From left: Jenn Chao, Matt Flanigan, Dr. Grever, Abby Short, Megan Conroy, Alex Swain, and Matt Magyar.

What Biomedical Science Students Do in Their Free Time

While homework and research take up a lot of time, Biomedical Science students always make time for other activities. Hospital volunteering, performing with musical groups around campus, undergraduate student government, Greek life, and intramural sports are all common activities, but this year we had some really fun events occur. Matt Flanigan (pictured at right), Class of 2009, received a spot in a commercial for the Medical Center. Tarangi Sutaria, Class of 2010, was selected to do a summer internship with the U.S.

Surgeon General's office. Shannon Conneely, Class of 2009, decided to experience life 'on the other side of the desk' and served as a teaching assistant for Introductory Biology classes.

Ohio State has over 800 registered student organizations that allow students to pursue academic and nonacademic interests. Biomedical Science students are encouraged to pursue personal interests, but to maintain a good balance between personal pursuits and academics.



Meet our Teaching Faculty

The 2007-08 school year saw the implementation of three new junior-level courses. These courses, a year-long continuous series, incorporated the students' research projects and worked to develop the students' oral and written communication skills. The classes met once every other week, and included the students orienting their classmates to their labs, giving updates on their independent projects, and teaching what techniques they use in the

lab. Students learned from both their own lab experience and from their classmates'.

Faculty teaching this past year include: Freshman: Lori Martensen (BMS Program Manager), Dr. Ken Jones (Anatomy) and Prof. Carol Powell (Bioinformatics); Sophomores: Drs. Bruce Biagi, Art Strauch, and Dale Vandre, all from Physiology and Cell Biology; and Juniors: Drs. Tony Brown, Andy Fischer, Richard Burry, and Jamie Jontes, all from Neuroscience.



Former BMS instructor Prof. Ruey Rodman (Bioinformatics) with BMS students Megan Conroy and Zach Rossfeld. Congratulations on your retirement, Ruey!

Principal Investigators: The Backbone of the BMS Major

The success of the Biomedical Science major can largely be attributed to the Principal Investigators (PIs) and their lab team members who mentor our students. It is their generosity of time, knowledge, and lab resources that set this major apart.

BMS students have access to a secured list of faculty who have expressed an interest in having a BMS student in their lab. Students are required to work in a lab on an independent project for at least one year, with the option of being in a lab for up to all four years of their undergraduate studies. Faculty currently mentoring at least one BMS student include:

Bioinformatics

Dan Janies

Endocrinology, Diabetes, & Metabolism

Joe Pinzone

Hematology and Oncology

Robert Baiocchi

Molecular and Cellular Biochemistry

Jill Rafael-Fortney

Kalpana Ghoshal

Tsonwin Hai

Samson Jacob

Sarmila Majumder

Molecular Virology, Immunology, and Medical Genetics

John Gunn

Denis Guttridge

Kay Huebner

Gustov Leone

Larry Schlesinger

Amanda Toland

Caroline Whitacre

Neurological Surgery

E. Antonio Chiocca

Balveen Kaur

Neurology

Maria Kataki

Neuroscience

Candice Askwith

John Bruno

Andy Fischer

Optometry

Melissa Bailey

Mark Billmore

Orthopedics

Ajit Chaudhari

Pathology

Tatiana Oberyzyn

Physiology and Cell Biology

Jonathan Davis

Sissy Jhiang

Mark Ziolo

Pharmacology

Laura Bohn

Pedram Ghafourifar

Kirk Mykytyn



Tyler Miller, Class of 2010, with lab mentor Dr. Sarmila Majumder

Physical Therapy

Jill Heathcock

Public Health-Epidemiology

Amy Ferketich

Surgery

Chandan Sen

Sashwati Roy

Faculty interested in having a biomedical student in their lab should contact Dr. Bruce Biagi, Director of the Biomedical Science major, at biagi.1@osu.edu.

Center for Minimally Invasive Surgery Starts Shadowing Program

Starting in Summer 2008, the Center for Minimally Invasive Surgery at the OSU Medical Center is offering a formal shadowing experience for Biomedical Science students. Students will shadow one day a week for four hours at a time over the course of one month. They will have the opportunity to observe operative and endoscopic procedures as well as discuss the procedures with the surgeon post-operatively. At the end of the shadowing

experience, students will write a reflection paper detailing what they gained from the experience, how it affected their career goals, and how the work of a minimally-invasive surgeon compares with other physicians they have shadowed.

The Biomedical Science major would like to thank the faculty and staff at the Center for Minimally Invasive Surgery for their continued interest and support of our students.



A minimally invasive surgery in progress. You can learn more at <http://cmis.osu.edu>

BMS Students are Frequent Flyers!

Between Summer 2007 and Summer 2008, Biomedical Science students visited four different continents, seven different countries, and numerous U.S. cities as they attended professional conferences, presented their research, studied abroad, and volunteered their time.

International Travels

Study Abroad: Mexico and England

Research: Germany and Chile; conference in Scotland

Service Projects: Dominican Republic, Haiti, Mexico and Tanzania

United States Travels, beyond Ohio

Research: Maryland (NIH), Jacksonville (Mayo Clinic)

Scientific Conferences: San Diego and Houston

Service Projects: Atlanta and New Orleans



A note about Study Abroad:

International experiences are highly valued by the administration of the Biomedical Science Major, but such experiences are limited to summers and between-quarter breaks. The curriculum of the major requires students to be on campus during the regular school year. Because of the small size of the program, required major courses are only offered once per year. Other courses, research, and extra-curricular activities are planned around major coursework.

The Ohio State University Biomedical Science Major

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The Biomedical Science major admitted its first class in Autumn Quarter, 2005, and these students will be the first graduates in Spring 2009!

The major admits 20 high ability incoming freshmen each year who have a strong interest in biomedical research and plan to pursue careers in biomedical research, medicine, or both.

Admission to the major is competitive and details can be found on our website. Our priority deadline is December 1st, with interviews occurring in January and February.

Profile of incoming class:

Average ACT composite: 32

Average SAT (Critical Reasoning + Math): 1400

Average unweighted GPA: 3.9 on a 4.0 scale

