BIOscope is an information bulletin published three times during the academic year by the IPFW Department of Biology. It is posted electronically in PDF format on the Department of Biology website (IPFW.edu/biology). Students wishing to submit items for the next issue should contact the editor, Professor Ahmed Mustafa, at 481-6328 or mustafaa@ipfw.edu.

Message from the Department Chair

What an exciting academic year for biology! From our 31 B.S. biology students who graduated in 2012–13, a good number of them have been admitted into graduate and professional schools! Five of our majors have been admitted into medical schools, five students have been accepted into M.S. and Ph.D. graduate programs ranging from genetics to environmental public policy, and three students were admitted into professional schools like Purdue’s School of Pharmacy and Ohio State University’s Doctoral program in Physical Therapy! We also have biology graduates who were admitted into Parkview’s Clinical Lab Program! That’s 50 percent of our B.S. graduates getting into advanced degree programs. For details as well as names, please check the list found in this issue. Biology also had much success at the graduate level, awarding 12 M.S. degrees and an additional 11 anticipated by the end of Summer II. This M.S. biology group also had great success moving on to doctoral programs or jobs as they leave IPFW.

IPFW is a great place to obtain your undergraduate and graduate education and it is due to our dedicated faculty and strong curriculum. Evidence of this faculty dedication is also provided by the selection of both IPFW Pippert Scholar awards to biologists George Mourad and Ahmed Mustafa. There were also four undergraduate bio students working with our faculty that received IPFW summer research stipends of $1,000. I congratulate all of these students and faculty on their success and look forward to seeing you at graduation this May!

Have a safe and productive summer.

Frank V. Paladino Ph.D. FAAAS
Jack W. Schrey Distinguished Professor
Chair of Biology

Congratulations to May 2013 Graduates!

The following students received the Bachelor of Science degree:

Jacob Barkley
Brian Gray
Loy Hochstetler
Philip Huynh
Stacy Keough
Ajay Mahay

Lindsay McKenna
Theresa McHugh
Molly Miller
Justin Mosley
Adam Murphy

Kristin Musick
Anh Khoa Ngo
Priti Pal
Natasha Perrine

Christopher Perry
Shea Rolf
Natalie Singleton
Noelle Snyder

Don Stephens
Karah Thieme
Jeana Wene

These students received the Master of Science degree:

Alicia Adam
( Supervisor: Professor Elliott Blumenthal)
Alexander Howard
( Supervisor: Professor Robert Visalli)
Hasina Karki
( Supervisors: Professors Shree Dhawale and Ahmed Mustafa)

Paul McCain
( Supervisor: Professor Ahmed Mustafa)
Alexandra Okihiro
( Supervisor: Professor Elliott Blumenthal)

Jessica Schein
( Supervisor: Professor George Mourad)
Christopher Woodley
( Supervisor: Professor Bruce Kingsbury)

DEPARTMENT OF BIOLOGY
INDIANA UNIVERSITY–PURDUE UNIVERSITY FORT WAYNE
COLLEGE OF ARTS AND SCIENCES
2013-14 Scholarship/Award Winners

• Outstanding Senior Biology Award
  Molly A. Miller
  Natasha N. Perrine

• Honors Degree in Biology
  Molly A. Miller
  Natasha N. Perrine

• Leo and Jack Jehl Memorial Scholarship
  Lori E. Morgan

• Henebry Scholarship
  Ryan R. Smith
  Jacob R. Torkeo
  Jodie L. Karn

• Emil Richard Seidel Scholarship
  Amanda J. Stoffer
  Sameha J. Albayyari
  Amber N. McDevitt

• Other Awards
  Michael Ravesi received an award of $500 from the Michigan Society of Herpetologists to support the research of Mike, Sasha Tetzlaff, and their advisor Professor Bruce Kingsbury, entitled “Long-term spatial responses of the Eastern Massasauga Rattlesnake (Sistrurus catenatus catenatus) to timber harvest.”

Student Achievements

Sigma Xi Research Symposium 2013

- Best Graduate Student Presentation:
  Alexandra Okihiro (Advisor: Professor Elliott Blumenthal)

- Best Undergraduate Student Presentation:
  Micah Rapp (Advisor: Professor George Mourad)

Each of these students wins $100, a free dinner at the Sigma Xi banquet, and a one-year membership in Sigma Xi.

IPFW Research and Creative Endeavor Symposium 2013

Second Place: Jessica Schein (Advisor: Professor George Mourad)

Photo: Alexandra Okihiro, Jessica Schein, and Rumman Hossain with their posters at Sigma Xi/IPFW Symposium, 2013 (Photo: Julie Feightner).
Indiana Branch American Society for Microbiology, 2013
McCormic Creek State Park, Spencer, Ind.

Second Place in Poster Presentation:
Ali Okihiro (Advisor: Professor Elliott Blumenthal)

Students Going to Post-graduate Programs Beginning Fall 2013
Heidi Askren: Clinical Lab Program at Parkview
Brittany Byerley: Indiana University School of Medicine
Loy Hochstetler: Doctor of Physical Therapy Program at Ohio State University
Rumman Hossain: Doctor of Philosophy Program in Integrated Biosciences at the University of Akron with full funding
Kevin Ann Hunt: Doctor of Philosophy Program in Genetics, Genomics and Systems Biology at the University of Chicago, with full funding
Theresa McHugh: Indiana University Elementary Certification Masters Program

Madeline Merkel: Doctor of Pharmacy Program at Purdue University
Molly Miller: Indiana University School of Medicine, Fort Wayne campus
Kristen Musick: Physician Assistant Program at Butler University
Natasha Perrine: Indiana University School of Medicine, Fort Wayne campus
Christopher Perry: Master of Public Affairs/Master of Science in Environmental Science (MPA/MSES) dual degree program at the School of Public and Environmental Affairs (SPEA) at Indiana University, Bloomington
Shea Rolf: Purdue College of Veterinary Medicine
Jessica Schein: Doctor of Philosophy program in Biomolecular Sciences at Michigan State University, with full funding
Noelle Snyder: Biomedical Informatics MS program at Arizona State University

Student Clubs

Tri-Beta:

This year 23 outstanding biology students from IPFW have been honored with lifetime membership of Beta Beta Beta Biological Honor Society. These students received their membership at the induction ceremony held March 25, 2013. The inductees are: Sameha Albayyari, Kristine Arvola, Timothy Boly, William Boyd, Destin Furnas, Melissa Garringer, Benjamin Gebhard, James Greer, Jodie Karn, Adam Murphy, Kristin Musick, Shauna Northup, Grayson Ostermeyer, Hallel Paraiso, Han Na Park, Micah Rapp, Andrew Sellan, Cecelia Smith, Amanda Stoffer, Tuan Tran, and Patricia Weiss.

Biology Club:

Biology Club has participated in several activities during 2012–13 school year, such as partnership with Trees Indiana, an organization dedicated to increasing the Hoosier tree canopy by educating Indiana’s youth about the importance of maintaining a healthy urban forest in every community and partnership with the Little River Wetlands Project to plant native species to the Eagle Marsh preserve.
Pippert Science Research Scholar Award 2013

Professors George Mourad and Ahmed Mustafa have been selected for Pippert Science Research Scholar Awards 2013. Professor Mourad’s area of expertise includes molecular and biochemical genetics using the plant model system Arabidopsis thaliana. A combination of approaches involving genetics, molecular biology, and bioinformatics are applied in three areas of research: the regulation of amino acid biosynthesis and metabolic engineering to address membrane transport central to nucleobase biochemistry and to enhance the plant’s ability to extract, sequester, and compartmentalize heavy metals (phytoremediation). Professor Mustafa’s general interests include animal physiology and aquaculture. His research interests include stress and its effects in farmed animals, especially fish and shellfish to identify physiological and endocrinological changes that occur in stressed animals, changes that affect growth, reproduction, health, and disease resistance, and to identify the problems of pathogens and environments which are responsible for causing stress in animals.

Tri-Beta Faculty of the Year Award 2013

Professor William DeMott has been named the recipient of the Faculty of the Year Award 2013 by Tri-Beta, Biological Honor Society, Xi-Epsilon Chapter. Professor DeMott’s area of expertise includes aquatic ecology, trophic relations between fish, zooplankton and phytoplankton, and patterns, strategies, and implications of chemically mediated food selection by zooplankton.

Biology in Science Olympiad 2013

A record nine teams of high school students from six different schools converged on the IPFW campus, Saturday, February 2, to take part in the Science Olympiad 2013. Twenty-three varied events, each of which contained one or more elements of Science, Technology, Engineering, and Math, were undertaken by the student teams. Professor Ahmed Mustafa, along with Professor of Education Jeff Nowak, were the co-directors of this year’s event. Professors Bruce Kingsbury, Jordan Marshall, Punya Nachappa, Vamsi Nalam, and Parveen Quarrar also participated as event coordinators.

Training for Intervention Procedures (TIPS)

TIPS for the University is a two-and-a-half-hour program that helps students make sound choices when faced with difficult decisions about alcohol use. Working together with administration, students address drinking behaviors specific to their schools and develop intervention techniques appropriate to their campuses. TIPS for the University provides students with the knowledge and confidence necessary to reduce high-risk drinking behavior among their peers. As a part of our BIOL/PSY 317: Addiction-Biology, Psychology and Society course, Professor Ahmed Mustafa provides this training program to our students. This spring, the training was done on March 29. Professor Mustafa is the officially certified trainer at IPFW.

Professors on Sabbatical

Several professors will be on sabbatical during the 2013–14 school year. Professors Elliott Blumenthal, Bruce Kingsbury, George Mourad, and Winfried Peters will be on sabbatical in fall 2013. They will not available for student advising for the spring/summer 2014 semesters. Professor Robert Gillespie will be on sabbatical in spring 2014. He will not be available for advising for the fall 2014 semester.

It is likely that Professor Tanya Soule will not be available for advising for the spring/summer 2014 school year as well. We wish her much luck on the upcoming birth of her child.

If you need to speak to an advisor and your advisor is on sabbatical, please call the biology office at 260-481-6305. The secretaries will direct you to another advisor who will be able to help you. You can also stop in the office, located in the Science Building, Room 330.
New Professor

Jaiyanth Daniel received his M.S. in Biological Sciences from the Birla Institute of Technology and Science, Pilani, India in 1994 and his Ph.D. in Biochemistry from the Indian Institute of Science, Bangalore, India in 2001. His research interests involve host-pathogen interactions, molecular microbiology, and lipid biochemistry. He was a post-doctoral fellow at the Ohio State University, Columbus, Ohio and Research Assistant Professor at the University of Central Florida, Orlando, where his research was focused on understanding interactions at the molecular level between a major human pathogen, Mycobacterium tuberculosis, and the human macrophage. He has authored several research papers in major scientific journals. He is very excited to join the Department of Biology faculty at IPFW in fall 2013 and looks forward to making his research accessible to graduate and undergraduate students.

Recent Biology Publications/Presentations


Rumman Hossain and Ahmed Mustafa. Puerarin: from the roots of kudzu, an invasive plant, to the front lines in modulating stress within farmed salmonids. Student Research and Creative Endeavor Symposium, Indiana University-Purdue University Fort Wayne. April 12, 2013.


Hasina Karki, Ahmed Mustafa, Arlis LaMaster, Robert Gillespie and Shree Dhawale. Do Hatchery-raised Tilapia and Coho Salmon Have Antibiotic Resistant Bacteria in Their Guts? Student Research and Creative Endeavor Symposium, Indiana University-Purdue University Fort Wayne. April 12, 2013.

Endeavor Symposium, Indiana University-Purdue University Fort Wayne. April 12, 2013


Alexandra Okihiro, Dr. Peng Jing, and Elliott Blumenthal. Crude Elderberry (Sambucus nigra) Treatment Decreases Melanoma Tumor Size in vivo and Separation of Active Components Reveals Non-protein Fractions Capable of Suppressing Melanoma and Increasing T Lymphocyte Proliferation of Elderly Mice. Annual Meeting of the Indiana Branch of the American Society for Microbiology (IBASM) at McCormick’s Creek State Park, Spencer, IN. April 12-13, 2013.

Alexandra Okihiro, Peng Jing and Elliott Blumenthal. Isolation and Characterization of Active Elderberry Fractions that Inhibit Melanoma Growth in vitro and in vivo. Midwest Graduate Research Symposium at the University of Toledo, Toledo, OH. April 20, 2013.


Courses

Catalog/Bulletin Changes are necessary if students no longer want to follow the old bingo sheets that require CS 10600 and CHM 32100. Students need to contact the biology office at 260-481-6305 to change to the new bingo sheet.

Fall 2013 – Biology Electives

A Electives
BIOL 44500 – Aquatic Biology
BIOL 50100 – Field Botany
BIOL 51810 – Biomedicine
ENTM 20600 – General Applied Entomology
ENTM 20700 – General Applied Entomology lab

B Electives
BIOL 21500 – Basic Human Anatomy (w/lab)
BIOL 38100 – Cell Biology
BIOL 43700 – General Microbiology (w/lab)
BIOL 55900 – Endocrinology

New IPFW Key Policy

IPFW has instituted a new key policy. All faculty, staff, teaching assistants, research assistants (graduate and undergraduate), and other employees, along with SI instructors, must turn in their keys upon completion of their employment, research, or graduation. You need to turn these keys into Campus Safety, located on the ground floor of the Walb Student Union building. All departments are being charged a $15 fee for each key not returned. Should you not return your keys, a hold will be placed on your transcript until they are returned.

If you have any questions, please see either the professor you are working with or anyone in the biology office. You can call 260-481-6305 or stop in the biology office, located on the third floor of the Science Building, Room 330.