I want to welcome everyone to a new semester and a new year. This past summer has been very hectic with both the transition from Indiana University-Purdue University Fort Wayne to Purdue University Fort Wayne, as well as my transition into the Chair’s position after being a “regular” faculty member since 1989. In addition to these transitions, we have sadly had some of our esteemed faculty leave the school: Dr. George Mourad, who had been the pillar of our genetics program since the early 1990’s decided that it was time to retire and spend time with his wife and enjoy the grandkids, so he has moved to Florida where he can relax, fish and be grandpa. In addition, Dr. Punya Nachappa and Dr. Vamsi Nalam have moved into new positions at Colorado State University. We will miss them all very much. We currently have hired two Visiting Faculty to help cover some of our courses, Dr. Terry Kamps, who will be teaching in the Genetics area, and Dr. Arturo Lopez Villalobos, who will be teaching our Plant Physiology courses. Please help to welcome them to our campus. I would also like to welcome all our new freshmen students this year. Our BIOL 12000, Freshman Resource class has over 160 students enrolled, compared to about 125 in this class the past two years. And finally, I would like to make everyone aware of a new program that we have for our biology majors who are living in the Residence Halls. It is called a Living Learning Community, and we have about 20 biology majors who are living on the same floor, and who will be studying together, performing community activities and social activities together, and they will be having “fireside chats” with different faculty throughout the year. I think that this will be a great opportunity for these students to form life-long friendships and to have resources that will go a long way towards having a very successful 4 years at PFW. Again, welcome to the 2018-19 academic year.

Elliott Blumenthal
Elliott J. Blumenthal, Ph.D.
Chair of Biology

“Like” Biology on Facebook at facebook.com/Purdue-Fort-Wayne-Department-of-Biology-231430077377306/
CONGRATULATIONS TO OUR SUMMER 2018 GRADUATES

Bachelor of Science:
Tori Getts
Nicole Maki
Dana Sordelet

Master of Science:
Candace Alexander
Abhijeet Bisht
Alysa Hopkins
Alexander Silowsky
Kelcy Tolliver
Adam Yaney-Keller

NEW TEACHING ASSISTANTS FOR 2018-2019

Shannon Calder
Advisor: Associate Professor Tanya Soule

Andrea Funk
Advisor: Assistant Professor Jaiyanth Daniel

Sushanta Ratna
Advisor: Assistant Professor Jaiyanth Daniel

Kenneth Saillant
Advisor: Professor Ahmed Mustafa

NEW TEACHING ASSISTANTS FOR 2018-2019

Elizabeth Cubberley
Advisor: Professor Bruce Kingsbury

Darren Shoemaker
Advisor: Associate Professor Bob Gillespie

COURSE ANNOUNCEMENTS

Spring 2018 – Biology Electives

A Electives
BIOL 33500 – Animal Behavior (lecture only)
BIOL 34500 – Vertebrate Biology (lecture and lab)
BIOL 43400 – Marine Community Ecology (lecture only)
BIOL 50500 – Biology of Invertebrate Animals (lecture and lab)
BIOL 51810 – Biomedicine (lecture only)
BIOL 58000 – Evolution (lecture only)
BIOL 58200 – Ecotoxicology (lecture only)
BIOL 59500 – Seminar Methods in Professional Development (lecture only)

B Electives
BIOL 35000 – Plant Physiology (lecture and lab)
BIOL 50900 – Molecular Biology and Applications (lecture only)
BIOL 53700 – Immunobiology (lecture only)
BIOL 54400 – Principles of Virology (lecture only)
BIOL 55110 – Proteins: Structure and Functions (lecture only)
BIOL 55900 – Endocrinology (lecture only)
BIOL 56500 – Immunobiology Lab (lab only)
BIOL 56600 – Developmental Biology (lecture only)
BIOL 58400 - Molecular Biology and Applications (lab only)
BIOL 59500 – Seminar Methods in Professional Development (lecture only)

Note: Any of the lower level courses (from the above list) can be taken as an upper level course upon consultation with the course instructor.
**STUDENT CLUB OFFICERS FOR 2018-2019**

**APVC-Ag and Pre-Vet Club**
- President: Meredith Werling
- Vice President: Lindee Mason
- Secretary: Hailey Norris
- Treasurer: Therese Schafer

**Microbiology Club**
- President: Kenneth Saillant
- Vice-President: Paul Bojrab
- Secretary: John Garces
- Treasurer: Victoria Hudson

**Biology Club**
- President: Alyssa Laughlin
- Vice President: Kimberly Flores
- Secretary: Sarah Moh
- Treasurer: Kaitlin Meyer

**Pre-Medical Club**
- President: Sarah Moh
- Vice President: Josh Brune
- Secretary: Liliana Hernandez
- Treasurer: Angela Workman

**Dental Club**
- President: Riley Erick
- Vice President: James Baryo
- Secretary: Kyleigh Vibbert
- Treasurer: Nick McCarthy

**Tri Beta**
- President: Paul Bojrab
- Vice President: Kathleen Landrigan
- Treasurer: Sarah Moh
- Secretary: Brianna Ruby
- Historian: Amy Nguyen

**Grants for Students:**

Institute for Research, Scholarship, and Creative Endeavors (IRSC) in the Office of Academic Affairs at Purdue University Fort Wayne has grants for students.

- **Graduate Students** - use the IRSC link to learn more about conference and training support grants
  
  [pfw.edu/irsc/](pfw.edu/irsc/)

- **Undergraduate Students** – Learn more about the summer research and conference travel grants
  
  [pfw.edu/offices/sponsored-programs/resources/student-research--creative-endavor.html](pfw.edu/offices/sponsored-programs/resources/student-research--creative-endavor.html)

**Students in Action:**

Undergraduate students Juan Johnson, Natalie Bojrab, Austin Motz (left) and Erika Steffen (right) helping Visiting Assistant Professor Scott Bergeson set up acoustic bat detectors at Eagle Marsh (Fort Wayne, IN) in an attempt to record and identify the bat species during the summer of 2018 (Photo: Scott Bergeson).

Graduate student Aparna Biswas and undergraduate students Asif Mortuza and Ashley Baum (all from Mustafa Lab) are busy harvesting basil leaves from their aquaponics system, located in the biology greenhouse (Photo: Ashley Baum).

**College of Arts and Sciences**

**DEPARTMENT OF BIOLOGY**
For the last years, Villalobos has been working with pharmaceutical proteins using plants as biofactories. During his postdoctoral studies at the National Council of Science and Technology of Mexico, he was accepted to work at SemBioSys Genetics Inc. where he was a member of the scientific group that produced insulin and other animal crops. After this postdoctoral stay, he moved to the University of Calgary, Canada. Villalobos’s post-doctoral studies in the United Kingdom. Villalobos earned both a M.Sc. and Ph.D. in Biotechnology at Imperial College London, University of London, UK. Upon completion of his postgraduate studies, he was accepted to work in Dr. Maurice Moloney’s laboratory at the University of Calgary, Canada. Villalobos’s post-doctoral studies were focused on improving abiotic stress tolerance in crops. After this postdoctoral stay, he moved to the industrial environment to work as a Research Scientist for SemBioSys Genetics Inc. where he was a member of the scientific group that produced insulin and other animal pharmaceutical proteins using plants as biofactories. For the last years, Villalobos has been working with bioactive plant molecules to alleviate human diseases, including phenylketonuria and hypogalactia. In addition, Villalobos has also taught various courses including, Plant Physiology, Biotechnology, Genetic Control of Plant Development and Biochemistry of Medicinal Plants at a number of universities, including the University of Calgary, Simon Fraser University and Thompson Rivers University.
Visiting Assistant Professor Terry Kamps

Terry L. Kamps has joined the Biology Department as a new visiting assistant professor. She earned her B.S. degree from Michigan State University (MSU) and began a path in research through her technician work in a program investigating fungal organisms that would infect and decay black walnut trees. She began to specialize in genetics with her M.S. degree from the MSU Plant Breeding and Genetics program conducting research to identify sources for increasing chilling resistance in tomato. She earned her Ph.D. from the University of Florida studying nuclear-mitochondrial interactions in maize. The common thread of her subsequent research appointments with the USDA-ARS, University of Georgia, and again at the University of Florida has focused on using classical and molecular genetic, transgenic, and/or bioinformatic tools to investigate the variety of mechanisms and genetics determining reproduction of maize, sorghum, forage grasses, and citrus. Previous full-time teaching positions have been as a Visiting Assistant Professor – Genetics at SUNY Oswego where she taught Human Genetics, Plant Kingdom lecture and lab, and laboratory sections of the Molecular and Cellular Foundations and Genetics courses. At New Jersey City University (NJCU) she taught the core required Senior Capstone, Cell Biology, and Genetics courses including developing and updating laboratory projects conducted in them. Elective courses she taught included independent research and non-majors Honors program courses in Plant Biology/Ethnobotany and a team taught study abroad course “Food, Place, and Cultural Performance in Peru”. As the greenhouse director she created and managed a university-wide experiential learning program. Her collaborative work with NJCU’s organic chemist led to a three year funded NSF IUSE exploratory grant for a novel course clustering through integrated authentic research laboratory projects between biology and chemistry. The undergraduate and high school research interns and students that Dr. Kamps mentored in her lab actively participated in multiple regional and national research symposiums with many of them receiving awards.

New Staff:

Academic Advisor Oluwadamilola Oke

Oluwadamilola Oke, “Dami,” is the primary role academic advisor in the Department of Biology at Purdue University Fort Wayne. She holds a Bachelor of Science degree in Biology from Georgia Southern University, where she graduated with highest honors, summa cum laude. She has experience working with a diverse group of students in her roles as an Admissions Advisor, Peer Academic Advisor, Orientation Leader, and Academic Tutor. Since joining our team in January 2018, her goal remains to guide students on their path to a successful graduation, and eventually a rewarding career. She works primarily with our freshmen and sophomores, advising students on strategic ways to improve their academic performance. She also helps students gain perspective and insight on how best to achieve their academic goals with their major in biology. This fall, she is co-instructing the BIOL 12000 course, an introductory seminar class for new biology students. Outside work, Dami enjoys hanging out with family and friends. Her favorite place to be is by the ocean on a warm day, with a good book in hand. Dami’s office is located in the Science Building, room 336. You can also reach her by email: okeo@pfw.edu or phone: 260-481-5735.
FACULTY / STAFF NEWS (CONTINUED)

Professor in Action:

Research Grants:

Visiting Assistant Professor Scott Bergeson has been awarded a $32,295 grant with Illinois Department of Military Affairs to track Indiana bats on Sparta Training Area.

Professor Frank Paladino has received a $40,000 grant from Community Foundation Sonoma County and a $15,000 grant from Sync Layer, Inc. for his Leatherback Trust research.

Associate Professor Tanya Soule was recently awarded a $12,626 contract with Biodyne Midwest to study the diversity of microorganisms in biofertilizers.

ERC NEWS

The Environmental Resources Center is moving!

The Environmental Resources Center, or ERC, is one of the Centers of Excellence at Purdue Fort Wayne. The mission of the ERC is to promote the understanding and conservation of the natural resources of the region through scientific research, educational opportunities and outreach. Faculty and students from Biology and other departments engage in research and community engagement on a wide variety of environmental topics.

Recently, Professor Bruce Kingsbury, ERC director, obtained permission to move the ERC out of the ground floor of the Science Building into what is now the Printing Warehouse. “This is a great opportunity for the ERC and for Biology,” says Kingsbury. There is ample room inside the new building for meetings, project space and like-minded community partners, and also room outside for projects relating to sustainable landscaping, storm water processing, native flora, and the river.

Biology and other departments will be able to use the facility as a launch point for field research and laboratory experiences. This will not only work better than our current arrangements, it will also free up space in the Science Building for other activities.

Learn more about the ERC at http://erc.pfw.edu, and please “like” ERC on Facebook (facebook.com/PFWEnvironmentalResourcesCenter/) and sign up for its “monthlyish” newsletter.
**RECENT BIOLOGY PUBLICATIONS**


**EDITORIAL**

Fall is here. Soon, plants will stop making chlorophyll and other pigments will start to show their colors. Carotenoids, the pigment that makes carrots orange and leaves yellow, will be exposed as the green will fade. Reds and purples will come from anthocyanins, a pigment that is formed when sugars in leaves will break down in bright fall sunlight. Our campus will look very pretty. Don’t forget to take a walk and enjoy the fall colors along the St. Joseph River as it flows past the campus. You will be able to see live specimens of our native plants, wildlife, and other interesting organisms.

*Ahmed Mustafa, Ph.D.*  
Editor, Bioscope
I want to welcome everyone to a new semester and a new year. This past summer has been very hectic with both the transition from Indiana University-Purdue University Fort Wayne to Purdue University Fort Wayne, as well as my transition into the Chair's position after being a "regular" faculty member since 1989. In addition to these transitions, we have sadly had some of our esteemed faculty leave the school: Dr. George Mourad, who had been the pillar of our genetics program since the early 1990's decided that it was time to retire and spend time with his wife and enjoy the grandkids, so he has moved to Florida where he can relax, fish and be grandpa. In addition, Dr. Punya Nachappa and Dr. Vamsi Nalam have moved into new positions at Colorado State University. We will miss them all very much. We currently have hired two Visiting Faculty to help cover some of our courses, Dr. Terry Kamps, who will be teaching in the Genetics area, and Dr. Arturo Lopez Villalobos, who will be teaching our Plant Physiology courses. Please help to welcome them to our campus. I would also like to welcome all our new freshmen students this year. Our BIOL 12000, Freshman Resource class has over 160 students enrolled, compared to about 125 in this class the past two years. And finally, I would like to make everyone aware of a new program that we have for our biology majors who are living in the Residence Halls. It is called a Living Learning Community, and we have about 20 biology majors who are living on the same floor, and who will be studying together, performing community activities and social activities together, and they will be having "fireside chats" with different faculty throughout the year. I think that this will be a great opportunity for these students to form life-long friendships and to have resources that will go a long way towards having a very successful 4 years at PFW. Again, welcome to the 2018-19 academic year.

Elliott Blumenthal
Elliott J. Blumenthal, Ph.D.
Chair of Biology

BIOscope is an information bulletin published two times during the academic year by the PFW Department of Biology. It is posted electronically in PDF format on the Department of Biology Web site. Students wishing to submit items for the next issue should contact the editor, Professor Ahmed Mustafa, at 260-481-6328, or mustafa@pfw.edu.