As the year approaches to the end, I want to congratulate our graduates for successfully completing the requirements to earn their degrees, our scholarship winners for their outstanding achievements, our honors students for completing their honors credits and research projects, and our faculty for obtaining grants and for their products in the forms of presentations and publications. I especially congratulate Professor Bruce Kingsbury for receiving the prestigious “Beineke Medal” for services to the liberal arts and sciences.

This spring, 31 of our biology students have presented their research at the 20th IPFW Annual Student Research and Creative Endeavor Symposium and 19 of our biology students have presented their research at the 132nd Annual Meeting of the Indiana Academy of Science. This is impressive. I encourage our students to get more involved with research and extra-curricular activities and get benefit out of them.

I hope, Professor Frank Paladino is enjoying and using his sabbatical time. I wish him health and good luck with his travels all over the world.

Ahmed Mustafa
Editor, Bioscope
SPRING 2017 - BIOLOGY ELECTIVES

**A Electives**
- BIOL 44500 - Aquatic Biology (lecture and lab)
- BIOL 57810 - Biology of Disease Vectors (lecture only)
- BIOL 58600 - Topics in Behavior and Ecology (lecture only)
- ENTM 20600 - General Applied Entomology (lecture only)
- ENTM 20700 - General Applied Entomology (lab only)

**B Electives**
- BIOL 21500 - Basic Human Anatomy (lecture and lab)
- BIOL 38100 - Cell Biology (lecture only)
- BIOL 43700 - General Microbiology (lecture and lab)
- BIOL 50600 - Human Molecular Genetic (lecture only)
- BIOL 53300 - Medical Microbiology (lecture only)
- BIOL 55110 - Proteins Structure & Function (lecture only)
- BIOL 55900 - Endocrinology (lecture only)

P.S. BIOL 58400 (lab only) was originally on the fall schedule, but it has recently been decided to cancel that in the fall schedule and move it to the spring 2018 schedule course offerings.

CONGRATULATIONS TO THE 2016-2017 GRADUATES

**Bachelor of Science:**
- Nathan Abouhalkah
- Brittany Anderson
- Justin Bair
- Storm Baughman
- Rachel Beery
- Maggie Boren
- Shannon Calder
- Nicole Corder
- Jenna Crabill
- Mathew Crim
- Jonathan Danielson
- Srilatha Dasari
- Sean Dunaj
- Nicholas Ferguson
- Holly Fitch
- Megan Fuelling
- Destin Furnas
- Ian Gatchell
- Megan Gerber
- Ethan Gessner
- Benjamin Gibson
- Dusty Gibson
- Joanna Guebard
- Tiler Haigwood
- Baylie Haven
- Alycia Herndon
- Zachary Hodgson
- Taylor James
- Zachary Jones
- Sushma Kancherla
- Ian Keith
- Candace Keller
- Kayla Krieg
- Gavin Lehman
- Adam Lennon
- Landon Little
- John Lozo
- Gretchen Luchauer
- Tyler Marshall
- Amanda Martin
- Brittany Mason
- Justin Mathews
- Gerald’n McGee
- Ariel Miller
- John Myers
- Yar Thet Pan Naing
- Holly Nevala
- Shauna Northrup
- Samantha Niedermeyer
- Sean O’Connor
- Ei Ei Oo
- Alexia Parra
- Adeleian Paul
- Jacob Post
- Emily Potter
- Katreen Quta
- Ziontu Rahla
- McKenzie Roark
- Gabriela Romo
- Aaron Rudoph
- Kara Scobey
- Tyler Siewek
- Heather Sterrett
- Kendra Stuck
- Farzana Tarannum
- Logan Timberlin
- Jennifer Troy
- Alison Turley
- Ryan Urschel
- Esther Vel
- Mark Voors
- Kristen Weimer
- Alexis Wygant
- Preston Yoder
- Brain York
- Chelsea Zahner

**Master of Science:**
- Melissa Beaty
- Jenell Black
- Lauren Cruz
- Jinlong Han
- Jessica Holst
- Kumud Joshi
- Megan Kelley
- Shannon Kuznar
- Jamison Law
- Taylor Lehman
- Jessica Merkling
- Elyse Miller
- Andrea Myers
- Hallel Paraiso
- Amanda Powell
- Michael Ravesi
- Abigail Schnelker
- Patrick Sellig
- Elizabeth Sinclair
- Taylor Smith-Graber
- Amanda Stoffer
- Mahanish Thapa
- Callie Veelenturf
- Luna Wahab

2017 SCHOLARSHIP/AWARD WINNERS

**Outstanding Senior Biology Award**
- Ian Gatchell
- Gabriela Romo

**Leo and Jack Jehl Memorial Scholarship**
- Kenneth Saillant

**Emil R. Seidel Scholarship**
- Adrita Iman

**Bryson & Ernest Henebry Scholarship**
- Aleah Oman
- Andrea Funk
2017 HONORS

The following biology student has presented his honors project at the IPFW Honors Show Case on April 07, 2017:
Zachary Jones
Project title: "Ecology of All Females, Unisexual Salamanders in Eagle Marsh"
Research Mentor: Associate Professor Mark Jordan

The following biology students have received Biology Honors 2017:
Shannon Calder (Mentor: Associate Professor Mark Jordan)
Amanda Martin (Mentor: Assistant Professor Jaiyanth Daniel)
Aaron Rudolph (Mentor: Associate Professor Jordan Marshall)

The following biology students have received IPFW Honors Pins on February 27, 2017 for successfully completing honors credits:
Adrita Iman
Valeria Salazar

STUDENTS MOVING FORWARD

Srilatha Dasari has been accepted to the Indiana School of Medicine.
Megan Gerber has been accepted to the Parkview Clinical Laboratory Science Program.
Ian Gatchell has been accepted to the Indiana School of Medicine.
Alicia Herndon has been accepted to the Parkview Clinical Laboratory Science Program.
Xyril Pablo has been accepted to the Indiana School of Medicine.
Adrian Piatt has been accepted to the Parkview Clinical Laboratory Science Program.
Gabriela Romo has been accepted to the Indiana School of Medicine.
Heather Sterrett has been accepted to the Indiana School of Optometry.

BIOLOGISTS IN ACTION

Caitlyn DeLong, senior majoring in biology, was named Summit League Player of the Week for her performance during the week of March 13-19. This is the first time in her career that Caitlyn earned the honor. During four games at the Miami Invitational, she drove in nine runs, with two doubles and three home runs, scoring seven times. In a win over Detroit Mercy, DeLong went 4 for 4, with two home runs and six RBIs, making her the first Mastodon since 2012 to have two home runs and four hits in the same game. (Photo: IPFW).

IPFW-ASM club recently toured the Fort Wayne Water Treatment Plant (Photo: Tanya Soule).

Graduate student Cecelia Smith and her supervisor Associate Professor Jordan Marshall translocating a research specimen in the IPFW greenhouse. (Photo: Cecelia Smith).
BIOLOGISTS IN ACTION (CONTINUED)

Assistant Professor Tanya Soule, graduate student Taylor Smith-Grabner, and undergraduate Janine Bennett participated in IPFW Day at Science Central on February 18, 2017. They had microscopes, Giant Microbes, a table of everyday items that are made with microorganisms, and coloring/activity pages to share with visitors. There were almost 1100 visitors throughout the day! Thank you to the IRSC and Science Central for organizing the event (Photo: Connie Kracher).

Undergraduate students Alycia Herndon, Kenneth Saillant, and Ashley Baum fixing aquaculture system at the Life Science Resource Center during the spring break (Photo: Ahmed Mustafa).

ALUMNI NEWS

Karson Putt, A.S., B.S. Biology, IPFW (2002), Ph.D. Biochemistry, University of Illinois at Urbana-Champaign (2006), one of our alumni has recently received the prestigious Bob Jesse Medal for his commitment to scientific research. The Bob Jesse Medal honors a Purdue University graduate from any campus who has made unique and significant contributions. Putt is a Purdue graduate from the IPFW campus, where he received degrees in biology and chemistry, and is one of 10 family members to graduate from IPFW. His work touched on many different disease areas including oncology, neurodegeneration, ischemia/reperfusion injuries (e.g. stroke, heart attack, etc.), and antimicrobials. During his four years in the lab of Paul Hergenrother, his discovery efforts led to the publication of 13 articles (peaking with the October 2006 cover story in Nature Chemical Biology), the filing of 11 U.S. patents, the creation of one startup-company, and the out-licensing of four other classes of molecules to various pharmaceutical/biotech companies.

One of these molecules, PAC-1, is currently in the first phase of human clinical trials to treat brain cancers, and a second human clinical trial is set to begin in early 2017. Putt is the managing director of the Purdue University Institute for Drug Discovery. Congratulations Dr. Putt.

A BLOG FROM OUR GRADUATE STUDENTS

Two of our graduate students, Lisa Sinclair and Callie Veelenturf (faculty mentor Professor Frank Paladino), are returning home from Equatorial Guinea, Africa, after a successful season of collecting data on monkeys and sea turtles for five months on the southern beaches and tropical forests of the Gran Caldera Southern Highlands Scientific Reserve, Bioko Island. The work was done under the umbrella of the Bioko Marine Turtle Program, directed by Professor Frank Paladino and Dr. Shaya Honarvar. Their team consisted of 5 American volunteers, 3 local university students, and 5 African residents. Callie Veelenturf worked with leatherback and green sea turtles on two of Bioko's nesting beaches. She followed 35 nests to the end of their incubation period in an effort to study the various environmental characteristics that play a role in hatching success and production between the two species. She also led a small team to all five nesting beaches to profile their morphology. This information will be used to model sea level rise and better understand the future of Bioko's critically important nesting habitat. Lisa Sinclair worked in the forest assessing primate population density of four species of monkeys. The 2 year study aims to evaluate how the presence of shotgun hunting is affecting primate population density.

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Left: Callie taking sand samples from the nest of an early morning Leatherback sea turtle (Photo: Credit: Lisa Sinclair). Right: Callie and Lisa spending Christmas day in the field (Photo: Jonah Reenders).
RECENT BIOLOGY GRANTS

Associate Professor Mark Jordan and Professor Bruce Kingsbury have been awarded with $220,324 research grant from the Indiana Department of Natural Resources for their research project titled, “Assessment of the Population Status and Genetic Composition of the Blanding’s Turtle and Spotted Turtle in Indiana.”

Assistant Professor Vamsi Nalam has been awarded with $29,908 research grant from the Indiana Soybean Alliance for his research project titled, “Evaluation of Second Generation PAD4 Over-Expressing Transgenics to Soybean Aphids and Soybean Cyst Nematode.”

RECENT BIOLOGY PUBLICATIONS


RECENT BIOLOGY PRESENTATIONS

Undergraduate student Kenneth Saillant (Research Mentor: Professor Ahmed Mustafa) with his poster at the 7th Annual Conference of the Indiana Physiology Society, Indianapolis, February 18, 2017. (Photo: Kenneth Saillant).

**Recent Conference Presentations**

Jamison Law and Jaiyanth Daniel. Biochemical Characterization of a Mycobacterial Acryltransferase Involved in the Metabolism of Long-Chain Fatty Acids. Presented at the Annual International Conference “Experimental Biology 2017” of the American Society for Biochemistry and Molecular Biology, Chicago, April 22-26, 2017. (Jamison has received $1000 travel award from the society to present this research).


Neil Schultes, Amanda Stoffer, Candace Alexander, and George Mourad. Functional analysis of the uracil transporter (UraA) of *Erwinia amylovora*. Presented at the 76th Annual Meeting of the Northeastern Division of the American Phytopathological Society, Ithaca, New York,
RECENT BIOLOGY PRESENTATIONS (CONTINUED)

20th IPFW Annual Student Research and Creative Endeavor Symposium, 2017

The following biology students have presented their research at the 20th Annual Student Research and Creative Endeavor Symposium held in March, 2017:

From Daniel Lab: Jamison Law and Amanda Martin
From Gillespie/Isiorho Lab: Gretchen Luchauer and Michael Stoller
From Isiorho Lab: Tessa Abby, David Cole, Mason Fraugher, and Mary Puti
From Isiorho/Pina-Llamas Lab: Dan Deifenbaugh and Harlie Summers
From Kingsbury Lab: Jillian Josimovich
From Mustafa/Blumenthal Lab: Luna Wahab

From Mourad Lab: Candace Alexander, Ian Gatchell, and Amanda Stoffer
From Nachappa Lab: Jonathan Danielson, Jinlong Han, Lauren Hoffmann, Geral’n McGee, Sarah Moh, Asif Mortuza, Tyler Shuman, and Emma Zolman.
From Nalam Lab: Patrick Selig, Kumud Joshi, and Isaac Travis
From Soule Lab: Janine Bennett, Megan Gerber, Aaron Jones, Taylor Smith-Grabler, and Gabriela Romo

132nd Annual Meeting of the Indiana Academy of Science

The following biology students have presented their research at the 132nd Annual Meeting of the Indiana Academy of Science held in Indianapolis in March, 2017:

From Jordan Lab: Jessica Merkling and Aaron Rudolph
From Marshall Lab: Andrea Myers
From Mustafa Lab: Ashley Baum, Alycia Herndon, and Kenneth Saillant
From Nachappa Lab: Jonathan Danielson, Jinlong Han, Geral’n McGee, Sarah Moh, Asif Mortuza, and Tyler Shuman
From Nalam Lab: Patrick Selig and Kumud Joshi
From Soule Lab: Janine Bennett, Megan Gerber, and Taylor Smith-Grabler
From Tippmann (Chemistry) Lab: Kedric Milholland

Graduate student Amanda Stoffer (Research Mentor: Professor George Mourad) with her poster at the 20th IPFW Annual Student Research and Creative Endeavor Symposium, March 29, 2017 (Photo: Ahmed Mustafa).

Photo of IPFW biology students presented at the 132nd Annual Meeting of the Indiana Academy of Science in Indianapolis on Saturday, March 25, 2017 along with Professors Mark Jordan, Jordan Marshall and Tanya Soule (Photo: Delores Brown, Indiana Academy of Science).
GUEST PRESENTATIONS

Team from IU School of Medicine
A team of Alpha Omega Alpha Alpha Honor Medical Society members of IU School of Medicine (Nathaniel Linna, Adam Murphy, Rafid Mustafa, and Jonathan Ringenberg) presented a seminar entitled, “Moving up the ladder: How to become a successful doctor” on March 13, 2017. The team described the admission process to medical schools, curricula, and residency process to our biology students.
(Photo: Dr. Parveen Quarrar)

Dr. Saydur Rahman
Dr. Saydur Rahman from School of Earth, Environmental and Marine Sciences, University of Texas Rio Grande Valley, Texas presented a seminar entitled, “Molecular, cellular, and epigenetic responses to environmental hypoxia and chemical stress in marine fishes” on April 07, 2017. Dr. Rahman has broad research interests in molecular endocrinology, stress physiology, epigenetics, ecophysiology and ecotoxicology of marine organisms. His research covers wide ranging questions with applications from the molecular and cellular levels to the applied environmental stressor and epigenetics. (Photo: Dr. Saydur Rahman)

Dr. Scott Bates
Dr. Scott Bates from Purdue Northwest presented a seminar entitled, “Integrating mycological data for a high-throughput era” on February 24, 2017. Dr. Bates received his MS and PhD from Arizona State University and was a Postdoctoral Research Associate at the University of Colorado, Boulder. He specializes in fungal taxonomy and high-throughput sequence analysis of microbial communities. He is currently collaborating on a project with Dr. Soule, Dr. Marshall, and Dr. Dattilo on the soils of the Indiana Dunes State Park.
(Photo: Dr. Tanya Soule)

FACULTY IN FOCUS

On January 27, 2017, at the College of Arts and Sciences’ Winter Reception, Dean Eric Carl Link presented Professor Bruce Kingsbury with the College’s Beineke Medal for Services to the Liberal Arts and Sciences. Professor Kingsbury joined The College of Arts and Sciences Department of Biology in 1992, and worked his way up through the ranks for engagement with his discipline, his college, and his students over the course of many years. Professor Kingsbury has also distinguished himself as a highly regarded teacher, a tireless and generous service provider, a leader in community engagement and outreach, a fine administrator, and a scholar of the first rank with a national reputation in his field. For a detailed transcript, please visit https://endeavors.ipfw.edu/2017/02/08/awards/.

Professor Bruce Kingsbury receiving Beineke Medal from the Dean of the College of Arts and Sciences, Professor Eric Link
(Photo: https://endeavors.ipfw.edu/2017/02/08/awards/).
SPRING 2017

As the year approaches to the end, I want to congratulate our graduates for successfully completing the requirements to earn their degrees, our scholarship winners for their outstanding achievements, our honors students for completing their honors credits and research projects, and our faculty for obtaining grants and for their products in the forms of presentations and publications. I especially congratulate Professor Bruce Kingsbury for receiving the prestigious “Beineke Medal” for services to the liberal arts and sciences.

This spring, 31 of our biology students have presented their research at the 20th IPFW Annual Student Research and Creative Endeavor Symposium and 19 of our biology students have presented their research at the 132nd Annual Meeting of the Indiana Academy of Science. This is impressive. I encourage our students to get more involved with research and extra-curricular activities and get benefit out of them.

I hope, Professor Frank Paladino is enjoying and using his sabbatical time. I wish him health and good luck with his travels all over the world.

Ahmed Mustafa
Editor, BIOScope

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