“Supporting our students” is a trendy phrase these days. But at the College of Science and Mathematics and Wright State University, this phrase means something! I am happy to report that for the 2013 entering class, we significantly increased our scholarship offers to talented applicants intending to major in CoSM. For example, by working with Enrollment Management and Financial Aid, we were able to provide an additional Dean’s scholarship to a high achieving transfer student from a local community college, which closed the gap between what they could pay and the original aid package.

Parents are taking on more and more financial burden to send their children to college. Here in CoSM, we are committed to rewarding parents’ sacrifices through the production of a thriving, intellectually curious student scholar. We strive to provide quality academic programs, from first year introductory courses to specialized advanced courses. We provide unparalleled access to faculty-mentored research in NIH and NSF-funded laboratories (see stories on Dr. Cambronero, Dr. Cipollini, page 2, and student Katlin Bowman, page 3). We are expanding academic advising through the hiring of a new advisor, Matt Skira, in Biological Sciences, a new advisor in the College, Jenny Papadakis, to assist with transfer student advising and advising in the pre-health program (see story on Jenny Papadakis, page 2), and movement of Jacqui Neal, Director of Pre-Health Programs, to the College. We encourage entrepreneurship as illustrated by the Environmental Health program and career trajectory of one of its newly graduated students, Jonathan Deak (see story, page 4). We present international symposia, one of which recently brought together researchers, military experts and civilians at Wright State (see story on Aviation Psychology Symposium, page 5). Finally, CoSM is part of a unique plan to construct a building that brings together distinct research fields in the same location, a one of a kind arrangement that could lead to a neuroscience and engineering breakthrough here at Wright State (the Neuroscience and Engineering Collaboration Building, NEC, page 6). I hope you will take great pride in reading this volume of the CoSM Newsletter.
Celebrating Excellence

Academic advisor published in international journal

Jennifer Papadakis, an academic advisor for Wright State’s College of Science and Mathematics, has been published by the National Academic Advising Association (NACADA) for her article on marketing. Papadakis based the article content on her experience as academic advisor with the Department of Psychology.

The article, titled “Increasing Visibility and Student Retention: Marketing Within a Departmental Academic Advising Office,” is in the latest edition of Academic Advising Today, NACADA’s electronic publication distributed quarterly to more than 10,000 members around the world.

Click here to view the article>>

Brage Golding Distinguished Professor of Research named

Julian G. Cambronero, Ph.D. with the Department of Biochemistry and Molecular Biology, has been named the Brage Golding Distinguished Professor of Research at Wright State University. Named after WSU’s first president, the award recognizes outstanding research by a WSU faculty member. The title Distinguished Professor of Research is a special rank awarded by the Board of Trustees to a faculty member who has produced a significant body of work in scholarship, research or the creative arts, which brings distinction to the university and national or international recognition to the faculty member.

Click here to view Cambronero’s research page>>

Biology professor inspires garlic mustard discussions

Don Cipollini, a biology professor at Wright State, is one of the nation’s leading experts on garlic mustard, an aggressive plant that out-competes native species under the forest’s canopy and woodlands. He and his students participate in field studies to determine if the garlic mustard is contributing to the decline of native forest flowers that the West Virginia White butterfly uses to lay eggs and as food.

Cipollini also inspired a recent Washington Post blog about garlic mustard cooking. He discovered a few years ago that the young garlic mustard leaves contain cyanide which could be “concerning for mammals if large amounts were ingested,” but levels are greatly reduced by cooking. It is also high in Vitamin C, carotenoids and minerals. Cipollini doesn't recommend a daily garlic mustard salad. “Eating it on occasion, and in items like pesto, should be harmless if not even beneficial.”

Click here to view the blog>>

Click here to view the Cleveland Plain Dealer article>>

Click here to view Cipollini’s research page>>
Supporting the College of Science and Mathematics

Future college newsletters will include highlights of how CoSM alumni, friends, faculty, and retirees are making a difference in the college with financial support. These highlights will be included to celebrate how gifts support our students and faculty, both today and in the future.

We hope these features will convey:

- Every gift has a positive impact – no matter how big or small
- Matching your interests with CoSM priorities leads to an ideal outcome
- It may be possible for you to make a legacy gift by including CoSM in your will or estate plans

Designate your giving to CoSM

When you think back on your time at Wright State, and in particular the College of Science and Mathematics, there may be a class, lab experience, internship or faculty member that is recognized as a meaningful highlight or experience within CoSM. You may also realize that a particular “something” was missing for you... an opportunity, a research stipend, or a need based scholarship. There may be something you would like to create or fund so resources are available today that may not have existed during your student years. Whatever your realization, you can make a difference in the life of a student or faculty member today with a designated gift to a personal area of interest.

Gifts to CoSM can be large or small. They can be undesignated, meaning the college determines how best to utilize the support. Gifts can be also designated which allows you to select a particular CoSM area or initiative to support that is personally meaningful to you or a priority within the college. Gifts can be annual gifts, one-time gifts, multi-year pledges, planned-gifts within your will or estate plans or, a combination of any of the aforementioned. The most important aspect of a designated gift is that it matches your personal interests with how the gift will be utilized within CoSM.

Making a designated gift to CoSM is just as easy as making an undesignated gift to a fund within the college or the university. If you would like to learn more about making a designated gift to CoSM please contact Chris Adkins-Lamb at 937-775-4980 or christopher.adkins-lamb@wright.edu

Wright State student gains “hands-on” learning through scholarships

“Wright State has just given me a lot of great research opportunities from the very beginning,” said Katlin Bowman, who started doing research as an undergraduate and is currently pursuing her Ph.D. in environmental science. “I was a sophomore in college and just handed this huge opportunity. Doing undergraduate research is where I realized I really liked research. It also helped me jump into graduate school much better prepared.” Bowman received a full tuition scholarship which clinched her decision to attend WSU. “I was looking at the best environmental science programs, and Wright State is one of them in Ohio,” she said.

While at Wright State University Bowman has earned several awards and scholarships to support her pursuit of academic excellences. Below are a few:

- Graduate Student Excellence Award – 2012 Wright State University
- Choose Ohio First Scholarship, 2008 — 2012
- Ohio State Science Fair Full Tuition Scholarship, Wright State University, 2006 — 2010
- Honors Study Abroad Scholarship, Wright State University, 2009
- Honors Undergraduate Research Grant, 2009
- COSM Undergraduate Research Grant, Wright State University, 2009

Katlin Bowman has been on five oceanic research cruises, including an Atlantic crossing with several dozen other scientists to examine metal concentrations in the water.

Click to read Katlin’s blog>>
And click here to read the full WSU article and student statement>>

Learn how you can support academic excellence. Email christopher.adkins-lamb@wright.edu today!
Wright State graduate launching health inspection career

We assume the air we breathe is not polluted. We assume the food we eat at restaurants will not make us sick. We assume the water in the community swimming pool is clean.

That confidence and comfort springs from the work of sanitarians—environmental health professionals and inspectors who ensure that food is sanitary, protect the air and water, and control disease.

Jonathan Deak, a freshly minted graduate of Wright State University, is joining their ranks.

Deak’s interest in public health grew out of his passion for the environment. That passion was fueled by his mother, who taught chemistry, honors anatomy and zoology at Lakota East High School.

Deak originally enrolled at Marietta College. But he quickly transferred to Wright State and jumped on the environmental health track.

“The program is great here. It’s taught primarily by adjunct professors, who have jobs during the day,” Deak said. “I found that to be very helpful because I got to see hands-on experience from people who are in the field right now. This is the cutting edge; this is what literally happened earlier today in the field, and I got to see exactly what that was like.”

Deak also said class sizes in the environmental department were very manageable, usually 15 to 20 students. “That provided a lot of interaction with professors, which is what I like,” he said. “If I have questions, I can ask them. I’m not just a number on a list. I’m somebody to them. They know who I am.”

In early June, Deak took a position at a Sanitarian-In-Training with Greene County Combined Health District. Inspection jobs require a bachelor’s degree and registration by the State Board of Sanitarian Registration. If Deak passes the board’s state exam to be a registered sanitarian, he will be able to do full-time inspections on his own.

Deak said Wright State helped get him to where he is today. “I feel very prepared to go out into my field and succeed,” he said. “I’m going to take what I’ve learned at Wright State and give it back to the surrounding area.”

Click to read the full WSU article and student statement >>>

Through a Wright State professor, Deak obtained an internship with Public Health – Dayton & Montgomery County. The agency protects the air, food, drinking water and community health by inspecting restaurants, motels, schools, swimming pools, tattoo parlors and other establishments.

Jonathan Deak
Aviation Psychology Symposium draws international researchers to Wright State

More than 200 researchers from around the globe converged on Wright State University for the 17th International Symposium on Aviation Psychology May 6-9.

“The symposium is a collaboration between the Air Force Research Laboratory (AFRL), Wright State University, other research institutions, industry, government, military and civilian, trying to improve aviation safety and advance the field,” said Pamela Tsang, Ph.D., professor of psychology at Wright State and one of the event organizers.

“The history of aviation psychology in the Dayton region stretches back to the ground breaking work of Paul Fitts on pilot errors during World War II,” explained John Flach, Ph.D., an event organizer and presenter. This tradition has continued and been reinforced by the establishment of the 711 Human Performance Wing and the extensive research of the Human Effectiveness Directorate of the AFRL. “The Dayton Region has one of the largest critical masses in the world of people studying ways to improve human and organizational effectiveness in aviation and other domains,” he noted.

Patrik Pollare, from Smart Eye AB in Sweden, takes the controls of a flight simulator in the Joshi Research Center on campus. Observing (from left) are Jason Russi, Air Force Institute of Technology; James Sullivan, Smart Eye AB; and Jeffrey Cowgill, information systems analyst in Psychology at Wright State.

Click here to view WSU article>>
And here to view AFRL article>>
Groundbreaking launches pioneering neuroscience-engineering building at Wright State University

Wright State University broke ground on a new state-of-the-art laboratory building expected to become a beacon for translational neuroscience and engineering research. The April 25 groundbreaking launched construction of the $37 million, four-story Neuroscience Engineering Collaboration Building. Left to right are Timothy Cope, Kenneth Gaines, Sundaram Narayanan, Lang Hong, Margaret Dunn, Amol Soin, Eloise Broner, David R. Hopkins, Michael Adams, Yi Li, Jim Pancoast, Joseph Slater and Robert Fyffe.

The NEC building will be strategically honeycombed with offices, student work areas and laboratories outfitted with sophisticated equipment, enabling neuroscientists, engineers and physicians to work side by side.

“The goal is that these scientists, engineers, and physicians will work together to address significant problems and through the synergies, resources and talent available in the NEC Building come up with very creative transformational answers to the questions,” said Robert Fyffe, Ph.D., vice president for research and graduate studies.

Fyffe said, “It’s not just the faculty interacting; it’s the students and the other people in the building. We have a terrific opportunity here to develop a new sense of community on campus...I hope that recognition of the importance of this facility and the work that will be done in it will also lead to significant opportunities for philanthropic investments in the future of research at Wright State University.”

Neuroscientists, physicians and engineers will focus on research and development of new technologies to improve treatment strategies and medical devices especially related to the fields of neurological disorders and traumatic injuries. The goal is to help speed the commercialization and clinical use of research and the new technologies....the NEC building will serve as a model for how things are done in the future.
Chemistry researchers closing in on new atomic force microscope

A high-power atomic force microscope that could revolutionize the study of materials at high temperatures and pressures is coming into focus in a Wright State University lab.

Steven Higgins and his team are building a new version of the hydrothermal atomic force microscope, an instrument that could unlock scientific mysteries and be used in the study of oil production, hydrofracturing of rock layers, storage of radioactive waste and the capture and storage of atmospheric carbon dioxide.

“I took a post-doc position at the University of Wyoming that was built around building one of the very first hydrothermal atomic force microscopes,” said Higgins, Ph.D., professor of chemistry and associate director of Wright State’s Environmental Sciences Ph.D. program. “Ever since, I’ve been interested in building the next best microscope.”

Higgins helped build such a microscope in the late 1990s. It was capable of imaging surfaces at temperatures of 150 degrees centigrade and pressures of 10 atmospheres. The new version would take it to 250 degrees centigrade and 80 atmospheres.

“If we are able to hit 250 degrees, that is truly phenomenal,” Higgins said. “That puts this microscope way above the existing technology. There may be broader research community interest in a microscope that can operate in those conditions.” The hydrothermal microscope can look at minerals and other solid surfaces as they react with fluids in their native environment, giving a more accurate view.

The microscope is being built through a partnership with Oak Ridge National Laboratory, which has a team of geoscientists who are focused on high-temperature, high-pressure reactions at mineral fluid interfaces.

“They’re interested in bringing their suite of instruments to a new level,” Higgins said. “They’re funded to look at problems that might be related to hydrofracturing, radioactive waste storage, carbon dioxide sequestration. These are geochemical problems that the U.S. Department of Energy is worried about.”

Jacky Bracco, a Ph.D. student in environmental sciences from Atlanta, is helping build the microscope, along with mechanical engineering shop supervisor John Lawless and engineering student Matthew Pifher.

The microscope could also help answer questions that would advance the understanding of basic science.
Making higher education more accessible FORE Wright State students

The Wright State University Alumni Association is hosting its annual *Legacy Scholarship Golf Outing, Monday, August 19*. The event will be held at the Heatherwood Golf Club in Springboro, Ohio. Registration for the event begins at 7:00 a.m., and a continental breakfast sponsored by The Wright State Foundation will be provided. Liberty Mutual will provide a putting contest beginning at 7:30 a.m. Golfers will tee off at 8:30 a.m. in a shotgun start. Lunch, sponsored by SEI Investments, will begin immediately following golf.

Proceeds for the event will benefit the Wright State University Alumni Association Legacy Scholarship fund. The scholarship program was formally established in 1994 to help offset the rising cost of tuition and make higher education more accessible. The Alumni Association has been awarding scholarships for over four decades; over 500 awards have been given, worth more than $500,000 for tuition assistance to Wright State University.

The Alumni Association was able to award 55 scholarships for the 2012–13 academic year. Many of these scholarships were a result of generous support from our sponsors.

For more information please contact the Alumni Relations department at (937) 775-2620.

*(L-R)* Senior Advisor to the Provost Ryan Fendley ('05), Wright State Provost S. Narayanan, CFO of Peerless Technologies Corp. Andrea Kunk ('04, '07), President and CEO of Peerless Technologies Corp Michael Bridges ('81).

Click here to visit the event webpage>>