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The

BioLogue

Department of Biological Sciences Student Newsletter



A Note From the Chair

Change You Can Believe In?

In August, 1963, the March on Washington awakened the country to a range of social inequalities, and **Martin Luther King's "I Have a Dream"** speech laid out a vision for change. Now, 50 years later, we hear a lot of discussion about whether that dream has materialized. It's not an easy question; slow change can be hard to detect. As in the social sciences, so, too, in the "hard" sciences: without the right tools, we might not see change that happens slowly. **And sometimes, seeing is believing.** In July, an example from outside of biology graphically illustrated this point. The headline read: "The Pitch Dropped!" That exciting observation was the end result of an experiment started in Dublin, Ireland in 1944. The object was to demonstrate that tar pitch—a black, solid-looking petroleum product—is actually liquid. To do so, a "chunk" of tar pitch was put into a funnel and left alone. With a viscosity about 230 billion times as high as water, a drop of tar dripped out of the funnel about once every 10 years. But only this July was that event finally captured on video. At last, we can see: tar pitch is liquid!

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Stay Connected!

Facebook & Bio Dept. Website

You already spend your day on FB, why not include some BIO to make you feel better about it? 'Like' us on FB and receive the most up-to-date news, job opportunities, & current events related to Biology. Search: Wright State University Dept. of Biological Sciences

You can also visit: wright.edu/biology for Dept. info!

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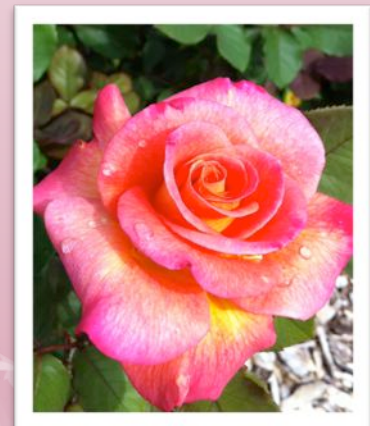
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Good Luck Spring & Summer 2013 Graduates!

Spring 2013

- | | |
|----------------------------|--------------------|
| Luis Aguilar | William Walker |
| Jonathan Ali | Nicole Bailey |
| Bryen Ballard | Jessica Brewer |
| Elizabeth Caddies | Holly Campbell |
| Ashley Cantrell | Kelly Clausing |
| Urmimala Chaudhuri | Andrew Cobucci |
| Elizabeth Coe | Chelsea Cramer |
| Susan Culbertson | Savannah Doliboa |
| Stephanie Farfard-Rousseau | Tara Fulton |
| Paul Garverick | Elizabeth Gimmison |
| Logan Glendenning | Elise Gnagey |
| Matthew Greene | Casey Hess |
| Scott Holdgreve | Siham Hourani |
| Jeffrey Howell | Preston Howes |
| Osarenkhoe Inneh | Jaclyn Johnson |
| Nathaniel Johnson | Amma Boakye |
| Kevin Johnston | Jessica Jones |
| Samuel Kantonen | Joel Kaser |
| Colleen Kelley | Justin Kelley |
| Amy Kerry | Brittany Kliner |
| Alissa King | Jessica Korn |
| Justin Lake | Elizabeth Landis |
| Orly Leiva | Melissa Lewis |
| Joanie Ma | Juliana Machicao |
| Jeremy Martin | J. Chika Morah |
| James Morgan | David Munroe |
| Deepthi Nalluri | Maikhanh Nguyen |
| Vaishnavi Ragavapuram | James Readler |
| Lacey Ruppert | Cody Saylor |
| Amanda Sherwood | Jolene Short |
| Megan Shuret | Shayla Slaugh |
| Samantha Spitak | Timothy Spoon |

- Melanie Stall
 Elizabeth Stayrook
 Claire Triplett
 Alphonso Woodbury
 Bryen Yoon

- Tarra Stanfield
 Zachary Stombaugh
 Seth Wilson
 Michelle Woolum

Spring 2012 Clinical Lab Sciences

- Nickellatt Edwards
 Justin Haney
 Brad Johnston
 Rachel Moore
 Brittany Reed

- Kimberly Green
 Leanna Harrison
 Kelly Kuntz
 Elizabeth Newberry
 Catherine Ripplinger

Summer 2012

- Monica Mitchell
 Joshua Buck
 James Heupel
 Shawn Pan
 Halle Warha

- Trisha Nguyen
 Adel Hanandeh
 Craig Hughes
 Amanda Riddell
 Cheryl Webb



Note from the Chair Continued...



That experiment might not impress you as having much global impact. But the general phenomenon—resistance to accept important ideas when the evidence accumulates slowly—occurs in many areas

of science. Writing in the *New*

Yorker (29 July, 2013), Atul Gawande asks why some ideas in medicine catch on quickly, while others languish. (Gawande is a surgeon and an engaging writer on issues in medicine; you might enjoy his books, *Complications* and *The Checklist Manifesto*). He cites the examples of anesthesia (the control of pain, originally with ether) and of antiseptics (the chemical control of infection). Anesthesia was introduced in 1846, and within 6 months it was being used in hospitals around the world. Antiseptics were introduced about 15 years later, and it, too, had the power to revolutionize medicine. However, in contrast to anesthesia, antiseptics were not widely accepted and practiced for about 25 years after their introduction. Why the difference? Gawande suggests that a major reason is the ability to observe the effect. Anesthesia's consequences are immediate; surgery changed from traumatic and violent to quiet and controlled. Antiseptics, in contrast, combat an invisible foe (microbes) and manifest their benefits over a longer interval, well after the intervention is applied. The less visible process was resisted despite its utility.

Today, difficulty in perceiving slow change likely is responsible, at least in large part, for the high level of public skepticism about two big ideas in science.

The first of these processes—biological evolution—is ongoing all around us. But typically it occurs in tiny increments. One of Darwin's great insights was that the great age of the earth provides enough time for those small changes to accumulate into large-scale transitions. Ohio is a great place to see evidence of those transitions: Ohio geology exposes rocks that range in age from Ordovician (475 million years old) around Dayton to Permian (275 million years old) in the eastern counties, and the rocks are full of fossils. But this summer, I visited a part of the country where earth history is even more obvious. Dinosaur National Monument, in eastern Utah, reveals a rock layer chock full of **dinosaur fossils**. And driving 40 miles north from there along Route 191, one crosses nearly a billion years of history, with layers of rock exposed by uplifting

and erosion. **The evidence for deep geological and biological change is simply overwhelming!** While that evolutionary change occurred over millions of years, climate is changing in our lifetimes. That pace is still slow enough that, in combination with political forces, public resistance to the idea remains widespread. It is increasingly easy to find visual evidence of climate change—from rising sea level around the low-lying Maldive Islands to melting glaciers around the world. And now, this August, a Chinese transport ship sailed from China to Europe across the previously frozen Arctic Ocean. What could be more convincing evidence of warming oceans? My PhD advisor, George Bartholomew, used to joke about his “rule of thumb”: **Never study anything smaller than your thumb!** His joke highlights our intuitive comfort in accepting the evidence of our eyes. But as scientists, we are trained to be observant, and we have tools that help us detect, measure, and explain structures and processes that are a challenge to our naked senses. **Evidence-based medicine, evolution of life, and changing climate: that's change you can believe in!**



Dr. David Goldstein, Chair, Dept. of Biological Sciences

Student, Staff and Faculty News

Bio Faculty: Comings & Goings

Dr. Roberta Pohlman retired in June of 2013. She was with the Dept. of Biological Sciences for many years and we want to thank her for her service to the department, her research and her dedication to students.

Enjoy retirement Bobbie!

The Dept. would like to welcome new faculty members Dr. Labib Rouhana and Dr. Shulin Ju. We look forward to working and learning with you!



Welcome: Matt Skira

Matt joined the Department of Biological Sciences as an academic advisor in the spring of 2013, but he is no stranger to WSU. He graduated in 2003 with a Bachelor's degree in Communications. In 2005, he joined the Office of Residence Services as a Community Director where he served as an advisor to multiple student organizations. Matt received his master's degree in Student Affairs in Higher Education in 2010 and is pleased to have joined a department where he works with a dedicated group of staff members and exceptional students on a daily basis.



Biology Club Officers 2013-14

Get connected and get more involved on campus - join the BIO Club!

President	Jenn Barbadora	barbadora.2@wright.edu
Vice President	Travis Goettemoeller	goettemoeller.20@wright.edu
Treasurer	Prital Mehta	mehta.34@wright.edu
Secretary	Matthew Collins	collins.250@wright.edu
Events Coordinator	Audrey Johnson	johnson.967@wright.edu
House of Reps.	Erica Smith	smith.1488@wright.edu

2013 Fall Departmental Seminars

Sept. 9	Dr. Sarah Covshoff, University of Cambridge, UK <i>"Supercharging rice photosynthesis to meet global food demands"</i>	Host: Dr. Goldstein
Sept. 16	Dr. Greg Hampikian, Boise State <i>"DNA Dangers: Amanda Knox and other innocence cases"</i>	Host: Dr. Krane
Sept. 23	Dr. Nick Barber, Northern Illinois University <i>"Ecological interactions aboveground and belowground organisms in agricultural and restored communities"</i>	Host: Dr. Cipollini
Sept. 30	Dr. Lisa Kenyon, Wright State University <i>Title: TBA</i>	
Oct. 7	Dr. Richard Kinkead, U. Laval <i>"Development of respiratory control and the emergence of air-breathing in frogs"</i>	Host: Dr. Hartzler
Oct. 14	Dr. Kathy Spindler, University of MI <i>"Contributions of viral and host factors to mouse adenoviral encephalitis"</i>	Host: Dr. Excoffon
Oct. 21	Dr. Mike Sorenson, Boston U. <i>Title: TBA</i>	Host: Dr. Peters
Oct. 28	Dr. John Stireman, Wright State University <i>Title: TBA</i>	
Nov. 4	Dr. Morgan Ernst, UT State <i>"Constraint based approaches in ecology"</i>	Host: Dr. Bahn
Nov. 6	Dr. Ethan White, UT State <i>"Addressing macroecological questions with big data"</i>	Host: Dr. Bahn
Nov. 18	Dr. Eric Tepe, University of Cincinnati <i>Title: TBA</i>	Host: Dr. Stireman
Nov. 25	Dr. Paula Bubulya, Wright State University <i>Title TBA</i>	
Dec. 2	Dr. Vladislav Snitsarev, Montclair St. <i>"Under pressure: Mechanosensitivity and signaling in baroreceptor nodose neurons"</i>	Host: Dr. Excoffon

Seminars are at 1:25 p.m. and will meet in in 401 Millett Hall.

Bio Student Published

Frank Speranza's work with Dr. Julian Cambroner and Madhu Mahankali was published in the Journal of Leukocyte Biology. The title of the journal article is *"Macrophage migration arrest due to a winning balance of Rac2/Sp-1 repression over beta-catenin induced PLD expression"*.

Congratulations on this accomplishment
Frank!

Bio Student Scholarship Recipients

Naava Honer
Alban Holyoke
Alicia Mowell
Sativa Johnson
Kayla Fryman
Lola Dennis
Christina Culler

Caitlyn McComb
Alexandra Henley
Melissa McCune
Zainab Sumra
Christine Edwards
Oluwaseun Banjoko

Congratulations students!

APPLYING FOR GRADUATION?

Students now apply for graduation online via Wings Express. To complete this process you must first email Dr. Patti Roberts for approval at patricia.roberts@wright.edu.



One of your best resources is your academic advisor. Do not hesitate to meet with your academic advisor if you have questions about your degree.



WRIGHT STATE UNIVERSITY

Academic Advising

Please call the Advising Line at (937) 775-2556 to schedule an appointment with an advisor. When scheduling, be sure to include your major and/or concentration and describe your questions.

Undergraduate Degrees:

Matt Skira ~ Dr. Patti Roberts ~ Courtney Smith

Clinical Laboratory Sciences: Bev Schieltz ~ Dr. Cheryl Conley

Graduate Degrees: Laura Buerschen



EDITOR: COURTNEY SMITH
THE BIOLOGUE IS A STUDENT NEWSLETTER
THAT CONTAINS IMPORTANT INFORMATION FOR
STUDENTS IN THE DEPARTMENT OF
BIOLOGICAL SCIENCES.
PLEASE EMAIL COURTNEY.SMITH@WRIGHT.EDU
WITH QUESTIONS OR COMMENTS.

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