

# Bio-logue

## *Spring 2017* Alumni Newsletter



UNIVERSITY OF COLORADO DENVER  
DEPARTMENT OF INTEGRATIVE BIOLOGY



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**Dear Alumni and Friends,**

It is high time that we established our connections with you! The department has changed remarkably over the last decade and even within the last few years. Our faculty and staff have grown in number to better serve expanding undergraduate and graduate programs. Our reputation for important research increases steadily, and at the same time we are working on new approaches to classroom teaching and learning, with support from a talented faculty. In 2010 we moved into new space in the Science Building, with state-of-the-art teaching and research laboratories. Our research-based Masters of Science program continues to grow in quality, as does our doctoral program in Integrative and Systems Biology, which matriculated its first students in 2013. Health Careers has moved into its own space in the North Classroom Building and continues to provide excellent pre-health career advising under the leadership of Dr. Charles Ferguson.

We want to keep you in the loop, and value your ideas and support as we continue our journey. As metropolitan Denver's population grows, access to our Biology programs and the work of our department become increasingly important. As an integral part of "CU in the City," we have helped to build Denver's premier public university.

In this Spring 2017 newsletter we update you about some of the recent events in Biology. In turn, please communicate with us. We want to hear your thoughts about Biology past, present, and future. Please let us know your professional accomplishments and milestones, which we would like to share in future newsletters. Email: [jacki.craig@ucdenver.edu](mailto:jacki.craig@ucdenver.edu).

All my best,

**John Swallow, Ph.D.**  
**Professor and Chair**

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### **TRANSITIONS**

**New faculty:** This academic year we welcomed **Dr. Greg Ragland**, who joined our faculty as an Assistant Professor in fall semester. Dr. Ragland describes his research as follows: "My lab studies the process of evolutionary adaptation to changing environments from genetic, physiological, and ecological perspectives. We wish to understand how natural selection acts on populations, and how populations respond—for example, how seasonal timing in organisms changes with progressively warmer and shorter winters." The principal organisms that Dr. Ragland uses in his work are mountain pine beetles and agricultural pest fruit flies, whose success is directly tied to their ability to track environmental

change. Dr. Ragland's diverse group of postdoctoral, graduate, and undergraduate researchers study these systems with a variety of techniques including field observation, genome sequencing, and metabolic physiology. This research is funded by the National Science Foundation, including a recent Dimensions of Biodiversity grant.

**Retirement:** It is with mixed emotions that we congratulate **Dr. Kent Nofsinger**, Health Careers Advisor and Senior Instructor extraordinaire, on his upcoming retirement. Kent, anchor to the Health Careers advising program and inspiring teacher for 17 years, has helped hundreds of pre-health career students achieve their goals through his dedicated mentoring and support. We know that there is life beyond being a faculty member and sincerely wish Kent a fulfilling retirement.

## **KUDOS**

**Working at the intersection of development and disease: Dr. Aaron Johnson**, Assistant Professor, and 2015 Boettcher Scholar, was recently awarded an R01 grant, which is one of the largest awards that a biomedical scientist can receive, from the National Institutes of Health. The research focuses on the how defects in organ formation can lead to devastating muscle diseases. Dr. Johnson uses skeletal muscle development as a model to uncover the molecules that govern cellular form and function during organ formation. This research has identified a set of genes that regulate muscle cell shape development, and has shown that these same genes are disrupted, or mutated, in patients with inherited muscle diseases.

**Stem cells and signaling pathways: Dr. Chris Phiel**, Assistant Professor, was recently awarded a three-year grant from the National Institute for General Medical Sciences at the National Institutes of Health. Dr. Phiel's lab is working to understand how cells respond to signals from other cells, resulting in specific genes being turned on or off. These "signaling pathways" are important for many cellular processes, and Dr. Phiel and his students have leveraged their expertise in this area to study the properties of stem cells. Stem cells are important because of their ability to replenish cells that have aged and lost function. Dr. Phiel's goal is to make stem cells a viable treatment for degenerative human diseases, such as Alzheimer's disease, ALS (Lou Gehrig's Disease) and muscular dystrophy.

## **SINCERE THANKS**

**Smilodon Integrative Biology Outstanding Student Scholarship:** We are very grateful to an extremely generous anonymous donor for recently creating an endowment in Integrative Biology to fund two \$250 student scholarships for deserving undergraduate Biology students each semester. We are selecting our first Smilodon Outstanding Student Scholars this semester!

**Note:** This is our first Biology scholarship endowment. We have hundreds of deserving Biology majors, many supporting families and working their way through school. Scholarship support for undergraduate and graduate students is one of the most important ways that you can help make our program better.

For information about donating, please go to:

<https://giving.cu.edu/about-us/university-colorado-foundation> and designate your gift for scholarships, Department of Integrative Biology, CU Denver.