Integrative Physiology
University of Colorado Boulder

Department Newsletter

IPHY

Issue #10 December 2013

Special points of interest:

- The IPHY major has increased to ~2000 students
- A "poor fit" between children's physiology and their environment may lead to the development of sleep and mood problems
- The new cell physiology microscopes equipped with Moticam digital cameras have allowed our students to undertake active experiments where they can visualize the outcome of experimental manipulations in real time

Inside this issue:

A Few Words from the Chair — Roger Enoka

Happy 10th anniversary to IPHY! When our department was established on July 1, 2003 it was populated with 10 professors, 5 associate professors, 6 assistant professors, and 8 instructors from the former departments of Kinesiology and Applied Physiology (KAPH) and Environmental, Population, and Organismic Biology (EPOB). At that time, the department had 675 undergraduate majors, 37 masters students, and 28 doctoral students. Our faculty census in December 2013 has changed little since the department was established and comprises 10 professors, 10 associate professors, 4 assistant professors, 3 senior instructors, and 6 instructors. Interest in our major, however, has increased dramatically and currently includes ~2,000 students. In contrast, there has been little change in the number of graduate students (12 BA/MS, 33 MS, and 31 PhD students) due primarily to the declining availability of research funds and not the lack of interest in our graduate program.

Despite the relatively constant number of IPHY faculty, there have been some departures and additions. Those who have left the department from the original 2003 roster include:

Claire Farley – resigned

Nanci Grayson – moved to Montana

Larry Greene – moved to Florida to care for his parents

Robert Lynch – retired

Dale Mood – retired

David Norris – retired

Mark Osadjan – moved to a similar position at the University of Chicago

Julie Partridge – family relocated

Greg Snyder – retired

Current faculty members who joined the department since 2003 and their area of expertise:

Alaa Ahmed – neuromechanics of human movement

Heidi Bustamante – undergraduate education

Teresa Foley – undergraduate education

Alena Grabowski – improving gait with innovative leg prostheses

Steve Hobbs – undergraduate education

Charles Hoeffer – molecular signaling in neurological disorders

Monique LeBourgeois – sleep and circadian rhythms in early childhood

Chris Link – molecular genetics and neurodegeneration

Chris Lowry – stress physiology and behavior

Matt McQueen – methods to study the determinants of human health

Suzanne Nelson – nutrition

Molly Welsh – undergraduate education

To illustrate the quality of our current faculty, we introduce the newest member (Charles Hoeffer) and describe the activities of another faculty member (Monique LeBourgeois) who has just successfully completed a three-year review of her accomplishments since joining the department.

Charles Hoeffer completed graduate studies in molecular and cellular biology at the University of Arizona where he studied neuromolecular signaling and learning in the fruit fly model system. Subsequently, he completed a postdoctoral fellowship at the Baylor College of Medicine in 2004, and then transferred to New York University in 2006 where he continued his studies of learning and memory in mouse models of neurological disease. Prior to beginning this new position, Dr. Hoeffer held a tenure-track assistant professor position in the Department of Neuroscience and Physiology at the New York University School of Medicine. His long-term research interests are to improve understanding of the molecular signaling mechanisms underlying the cellular and physiological abnormalities associated with neurological disorders and disease. Charles has three active research areas. First, his lab studies Akt regulation of protein synthesis in synaptic plasticity, memory, and neurological disorders such as autism. Second, he investigates a regulator of phosphatase function found on chromosome 21 involved with Down syndrome, Alzheimer's disease, and schizophrenia. Third, his lab examines the role of pathological tau mutations in aging-related stress and neurodegeneration associated with Alzheimer's disease and other tauopathies. He uses genetic mouse disease and mutant models in combination with behavioral, molecular, and pharmacological approaches to address modeled human behavioral and neuronal deficits. His long-term goal is to translate basic research findings to therapies aimed at alleviating human symptoms of neurological disorders and psychiatric disease. He has plans to develop collaborative projects with other IPHY faculty who have related interests.

Assistant Professor Monique K. LeBourgeois joined the department in August 2010, after completing a PhD in experimental psychology at The University of Southern Mississippi, a NIMH-funded postdoctoral fellowship in child mental health at the Warren Alpert Medical School of Brown University, and an appointment as assistant professor (research) of education and human development at Brown University.

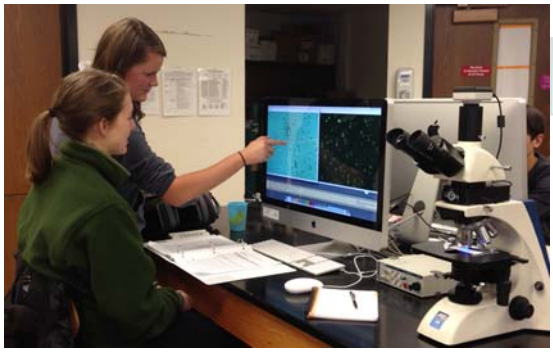
Since arriving in Boulder, she has established an internationally recognized research program focused on the intimate intertwining between sleeping and waking physiology, brain activity, and behavior during early childhood. One line of research funded by the National Institute of Mental Health longitudinally examines early developmental changes in sleep and circadian physiology, as well as the emotion- and cognitive-related consequences of sleep loss in children. Findings from this research are already shedding light on how a "poor fit" between children's physiology and their environment may lead to the development of sleep and mood problems. Another line of research involves determining the relationship between sleep and brain connectivity. For example, her group has recently shown that connectivity between the left and right hemispheres of the brain strengthen over the course of a night's sleep in preschool children. Other collaborative lines of work involve large-scale investigations of the social/demographic predictors of bedtime routines and sleep, as well as links between sleep and health/developmental outcomes (e.g. asthma, obesity, emotion regulation, verbal ability) in at-risk children. The collective goal of Dr. LeBourgeois' research is to develop an integrative longitudinal understanding of sleep-related brain-behavior processes, which may uncover important points of entry for prevention and treatment of mental illness and physical disease. She teaches Introduction to Statistics (undergraduate course) and Professional Skills for the Research Scientist (course for PhD students).

Cell Physiology by Chris Link and Molly Welsh

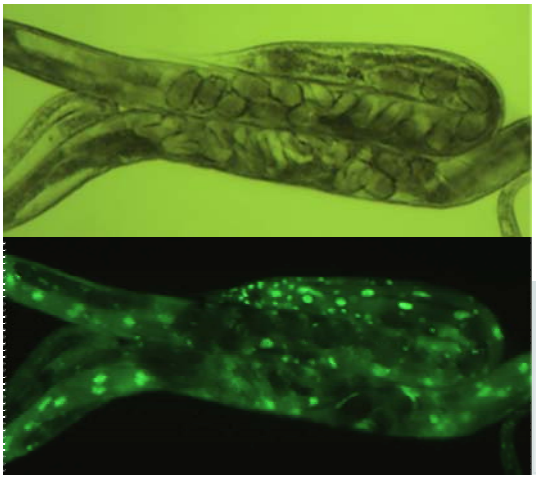
Last May, the cell physiology teaching group received a STEM award to support the complete revision of the combined lab/ lecture course. A major goal of this effort was to provide students with a more active learning experience. Revision of the laboratory experiments has focused on the capabilities available with the purchase of four new LW Scientific Mi5 compound microscopes with fluorescent imaging capabilities. The teaching group was also awarded a CU ASSETT grant to equip the microscopes with Moticam digital cameras. The acquisition of this new workstation set up for the fall 2013 semester has exposed students to the technological tools that are now essential to an active research lab. The digital cameras have allowed the students to capture and quantify images from their laboratory experiments and enter them into electronic lab notebooks. Having students compile their work using computer workstations has also improved the collaborative learning environment by making it easier to share results and observations between lab groups and sections. By generating a series of "how to" videos that students can view beforehand and consult at the computer workstation if necessary, the "hands on" time students have during lab class is also maximized.

The ability to see fluorescent samples has greatly expanded what students can do in the lab classes. Instructors Molly Welsh and Teresa Foley, and Assistant Prof. Chris Link have developed all-new labs that have utilized this new technology. In particular, the new labs have used cells and animals genetically engineered to express Green Fluorescent Protein (GFP). Expression of GFP can be used as a reporter to observe and measure physiology and function in living cells, and is a common approach in academic research labs. This has allowed our students to undertake active experiments where they can visualize the outcome of experimental manipulations in real time. For example, students have been able to watch cell division as it happens using cultured cells with GFP attached to a component of the cytoskeleton, and to use these observations to measure the effects of anti-cancer drugs on dividing cells.

Revising the laboratories to take advantage of our new equipment has also allowed us to institute more inquiry-based labs that require students to think about experimental design and interpretation. In this first semester of revised labs, our IPHY students have proven quite adept at digital microscopy, and have successfully undertaken a number of experiments that have been an excellent complement to the cell physiology lectures.

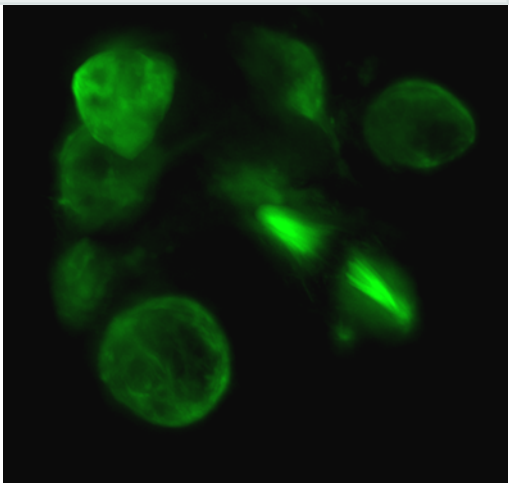


IPHY students comparing bright field and fluorescent digital images they have captured on one of our new microscopes.



Student-generated image of GFP-expressing S2 cells. Note dividing cell at lower right.

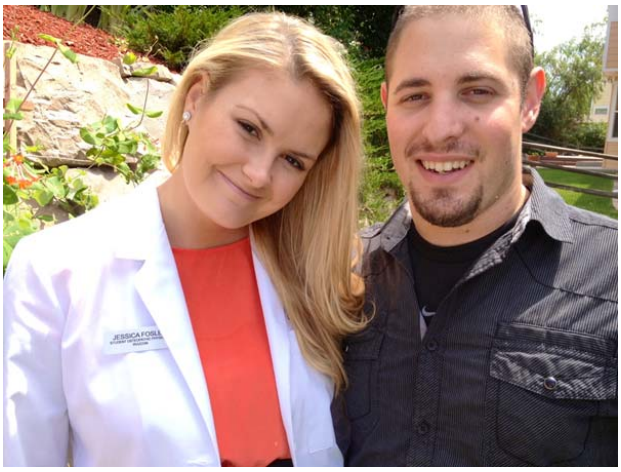
Student-generated image of GPF-expressing S2 cells. Note dividing cell at lower right.



People Updates

Meghan Schadow (formerly Boucher) completed an MS in 2005. While studying arterial function in Dr. Seals' lab, she became interested in drug-eluting stents and their mechanism of action to reduce restenosis in coronary arteries. At that time, the FDA was just approving drug-eluting stents. She capitalized on the flood of literature by including them as her topic in most papers and projects. The experience triggered an interest in medical device companies, and the effort it takes to get new devices to the market. From Boulder she headed to Minnesota to be with her college sweetheart, Matt, who she married in 2007. Luckily for her, the Twin Cities area is known as "Medical Alley" and boasts more than 500 medical device companies. Meghan started her career at ev3 as a clinical research associate. There she worked with hospitals that participated in ev3's clinical trials on stents for the renal artery and iliac artery. Within a year she moved into a new role as a "clinical research specialist" working closely with R&D engineers and regulatory counterparts to get new products to market. She now works in the Scientific Communications group, tasked with disseminating Covidien's clinical trial data. In this role, she supports the development of press releases, manuscripts, conference posters and abstracts. She also gathers competitive intelligence for her marketing colleagues and helps them build pieces that are loaded with clinical data to help physicians make evidence-based decisions. In 2010, ev3 was acquired by Covidien. While the vascular therapies business continues to be housed in Plymouth, Minnesota, there is a business unit in Boulder! She is currently trying to convince her husband that a transfer to the Boulder location is a good idea. Meghan and Matt have two kids. Charlie turned three in September and Anna will be one at the end of January. Just in case her husband decides he's ready to move to the Front Range, she dusted off her old gear and took Charlie skiing two times this past winter (after Anna was safely born). He loved it and is looking forward to making more turns this winter.
[Submitted by Doug Seals]

After graduating with a BA degree (2010) in IPHY and a Spanish degree, Jessica Fosler began working as a medical assistant in a local cardiology office and continued working as a part-time EMT for almost three years. This experienced allowed her to gain a real-world perspective of medicine before going on to medical school, which has been invaluable for her. She was also able to take a break from school and homework to prevent "burnout" upon starting medical school and really beef up her resume with extra time spent on volunteering and studying for the MCAT. She was recently married and moved from Westminster to Aurora. She is currently a first-year medical student at Rocky Vista University in Parker, CO. The osteopathic mindset really appealed to her and she is happy with that decision! Not only was she eager to remain in Colorado, but this school is also one of the top-scoring schools in the nation on board scores. She is learning osteopathic manipulation in addition to the core curriculum presented on the board exams. She is interested in pediatrics and neonatology, more specifically congenital defects, abnormalities, and diseases. After her second year is over, she will begin rotations and hopefully narrow down her interests before applying to residency programs. [Submitted by Dave Sherwood]



Tatiana Fofanova is a former undergraduate student who worked in Dr. Ehringer's lab (http://www.colorado.edu/intphys/research/abuse.html) during the 2008-2009 academic year before transferring to Rice University where she received a BS in evolutionary biology and a BA in anthropology. Influenced by her first lab experience at CU Boulder, she continued to work in university, medical, and government laboratories until her graduation from Rice in May 2013. Currently, she is a first year graduate student at Baylor College of Medicine in the Department of Translational Biology and Molecular Medicine.
[Submitted by Marissa Ehringer]

Kashuap Kalul (BA 2009) graduated with a double major in integrative physiology and molecular, cellular, and developmental biology, and a minor in Nordic/Scandinavian studies. He had worked as an EMT at Boulder Community Hospital's Urgent Care in Lafayette since 2008 and maintained this position after graduation. As an undergraduate, he was also a part of Student Emergency Medical Services and served as director of EMS Operations for the group from 2009 until 2011. In the spring of 2010, he joined a private ambulance company in Denver, and in October 2010 accepted a position in the hospital's Emergency Department. His interests led him to extensive training in incident response involving hazardous materials, weapons of mass destruction, and mass casualties. He has worked with nerve agents (sarin and VX) as well as the biological agents (anthrax and ricin). As a result of this training, he is one of the team leads for the Hospital Emergency Response Team. In August 2013, he completed an MS in biomedical sciences from Colorado State University and he is currently preparing applications for medical school.
[Submitted by Bill Byrnes]

Richard Ellis (MS 2012) graduated with a MS in integrative physiology studying biomechanics with Dr. Rodger Kram. He then accepted a Whitaker Fellowship to do biomechanics research at the Royal Veterinary College just north of London, UK. There he measured and modeled how greyhound dogs rise from lying down to standing using state-of-the-art measurement and modeling techniques and a few very well trained dogs (and several poorly trained ones). It was a truly unique opportunity to be able to leverage his research training into such an exciting job both intellectually and geographically. He also greatly appreciated the perspective on the US possible only from outside its borders and found the London gray to be refreshing after Boulder's repetitive sunniness. He is now a first year medical student at Boston University's School of Medicine enjoying living near his friends and family after several years around the country and around the globe. He hopes to continue his biomechanics research during the upcoming summer.
[Submitted by Roger Enoka]

Rebecca Keith (BA 2003, MS 2005) completed her studies under the guidance of Dr. Chris DeSouza in the Integrative Vascular Biology Laboratory in 2005. In 2006, Rebecca received a MA in curriculum and instruction with a focus on STEM based education at the secondary education level. She currently teaches Algebra II, Geometry, and AP Biology at St. Mary's High School in Colorado Springs and holds an adjunct professor position in biology for the University of Colorado at Denver's CU Succeed Program. Highlights of Rebecca's teaching career include the reception of the Colorado Springs Business Journal Rising Professionals Award (2011) and the AFCEA STEM grant (2012). In addition, Rebecca's AP Biology class was the only one in the country to be featured in the National Institutes of Health Structure of Life booklet geared to teaching genetic pedagogy. Rebecca is starting the Doctorate Program of Educational Leadership, Research and Policy at the University of Colorado in Colorado Springs in hopes to achieve her future goal working as a policy manager in the Colorado Department of Education. In this role, she would like to work on programs for integrating parochial, private, and home-based STEM education to develop compliant curricula and school readiness programs that exceed state and national achievement standards. In her free time, she enjoys spending time with her nephews, Jamey and Easton, and niece Carolyn. [Submitted by Bob Mazzeo]

In addition to a degree in integrative physiology, Madeline Basse (BA 2012) graduated with a degree in ecology and evolutionary biology and a certificate in neuroscience. As an undergraduate at CU, Madeline enjoyed being an undergraduate research assistant in Dr. Tsai's Reproductive Endocrinology Lab and volunteering for the Family Learning Center, a Boulder non-profit that provides resources and promotes lifelong learning skills for economically disadvantaged children. After graduation, she began working as a certified nurse assistant for a home health care company in Boulder. It has been rewarding to apply the knowledge from her IPHY education and learn more about patient care. She works with many elderly hospice patients, an experience that has been emotionally difficult yet extremely rewarding. She has been accepted into physician assistant school and will begin in January or June depending on which school she attends. As a PA, she hopes to continue her care for the elderly and specialize in geriatrics. In her free time, Madeline loves skiing, running and reading. [Submitted by Pei-San Tsai]

Colorado native Trevor Doyle (BA 2010) graduated with integrative physiology and psychology degrees. As an undergraduate Trevor was mentored by Dr. Christopher Lowry, who helped to develop his strong interest in neuropharmacology while studying the distribution of thermosensitive serotonergic neurons in the midbrain. Following graduation, Trevor was awarded a research position within the Molecular Neuropharmacology section of the National Institutes of Neurological Disease and Stroke in Bethesda, Maryland. There he helped to develop a high throughput screen for functionally selective allosteric modulators of dopamine receptor subtypes. In 2013, Trevor was accepted to Purdue University where he currently is pursuing his PhD in molecular pharmacology and medicinal chemistry. In the little free time that graduate school affords, Trevor enjoys hiking, climbing, and is an active member of the volunteer fire department. [Submitted by Chris Lowry]

Jesse (BA/MS 2009) and Michelle Snider (BA 2009) met during their careers in the CU IPHY program. They fell in love while analyzing data, practicing EEG hookups, and working long night shifts in Dr. Ken Wright's Sleep and Chronobiology Lab. After graduating from CU, Jesse and Michelle moved to Portland, Oregon. Michelle attended Chiropractic College at the University of Western States while Jesse worked as a surgical autotransfusionist and taught exercise physiology at Concordia University. With her background in IPHY, Michelle became deeply interested in the field of functional neurology and completed a neurology program while also in chiropractic school. She graduated in June 2013 and they excitedly moved home to Colorado. She has a private practice in Louisville, which focuses primarily on childhood neurobehavioral disorders such as autism and ADHD. Jesse completed the concurrent BA/MS IPHY program with a research focus on the physiological markers of the transition of wakefulness to sleep. Jesse was accepted to Rocky Vista University on the Navy Health Professionals Scholarship Program. This past summer he graduated as an ensign from the Naval Officer Development School in Newport, Rhode Island. Jesse further presented his graduate work at the Colorado Medical Society as he continues his interest in both health care and research. He has co-authored multiple papers published in the journal *Sleep*. Jesse and Michelle were married in 2011 in the beautiful Colorado mountains. They love backpacking with their dog, Summit, and skiing fresh powder in the winters. [Submitted by Ken Wright]

Since graduating from the University of Colorado Boulder with a double major in integrative physiology and psychology/neuroscience, Stephen Faulkner (BA 2009, MS 2011) enrolled in our MS program under the mentorship of Dr. Marissa Ehringer at the Institute for Behavioral Genetics. He was involved in research that sought to discover the genes responsible for nicotine addiction. While in graduate school, he also worked at the Centeno-Schultz Clinic (CSC), a medical clinic that was developing a biotechnology company, Regenerative Sciences (RSI). In the three-year period as a director of research for CSC, he completed a MS and was coauthor on several scientific papers published in the fields of regenerative medicine, musculoskeletal disease and injury, and stem cell biology. These publications provided the opportunity to travel around the globe and present findings at international conferences, such as the Orthopedic Research Society Annual Conference and the Annual International Conference on Drug Discovery and Therapy. This work also gave him insight into the development of proprietary mechanical devices that could be used to improve patient care. This would not have been possible without the education he received at CU-Boulder. In the MS program, he had the privilege of teaching undergraduate students at the university. After gaining enough industry experience in biotechnology, he applied and was accepted into the Leeds School of Business Evening MBA Program, which is ranked within the top 50 programs in the country. He is currently in the process of launching a multi-strategy hedge fund that will focus first on the public side of the pharmaceutical, biotechnology, and healthcare/medicine sectors. He is hoping to also start a private equity vehicle that will focus on the private side of these industries. He remains grateful for the education, experiences, and friendships he developed at CU-Boulder. He hopes to see former and present Buffs on the slopes.
[Submitted by Marissa Ehringer]

Brach Poston (PhD 2006) completed his integrative physiology degree under the mentorship of Dr. Roger Enoka in the Neurophysiology of Movement Lab. His dissertation focused on age-related differences in the accuracy of goal-directed contractions. After graduation, Brach completed postdoctoral fellowships at Arizona State University and the National Institutes of Health (NIH). At NIH, Brach used non-invasive brain stimulation techniques such as transcranial magnetic stimulation (TMS) to examine differences in neuromuscular control strategies between focal hand dystonia patients and healthy control subjects. After completing postdoctoral training, Brach accepted a position as a project scientist at Cleveland Clinic-Las Vegas, Lou Ruvo Center for Brain Health, where he established his own laboratory. Recently, Brach was awarded a grant from the Michael J. Fox Foundation for Parkinson's research to determine the effect of transcranial direct current stimulation on motor and cortical function in Parkinson's disease. In his free time, Brach enjoys hanging out with his friends at various attractions in Las Vegas and lifting weights. [Submitted by Roger Enoka]

After completing an IPHY degree, Sydney Butler-Terry (BA 2012) began a MS degree in kinesiology with a concentration in exercise science at California State University, Sacramento. Sydney has spent extensive time in the Biomechanics Laboratory working as a technical assistant collecting data for research studying the effect of an acute bout of cycling on Parkinson's gait and the kinematics of unanticipated falls. Additionally, Sydney has begun work on her thesis studying the effectiveness of ACL injury prevention programs on reducing biomechanical risk factors in male athletes. She is also studying how fatigue modulates biomechanical risk factors over the course of an injury prevention program. In addition to the thesis, Sydney is working at a physical therapy and training center where she is helping perform cognitive baseline tests on 700 youth athletes to assist with diagnosis of concussions. After completing her degree in May, Sydney plans to pursue a doctoral degree in physical therapy. In her free time, Sydney enjoys hiking, biking, snowboarding, and relaxing with friends and family. [Submitted by Roger Enoka]

IPHY is Becoming Greener by Suzanne Nelson

This semester, the IPHY department was the first department in the College of Arts and Sciences to give e-exams to their students. An e-exam is taken completely on the computer without using any paper. Nutrition, Health, and Performance (IPHY 2420) debuted the new e-exams, which were developed over the summer with the help of IT staff. Approximately 400 students took the e-exams using their personal computers or one borrowed from Instructional Technology (IT). After the first exam, the students were surveyed and 86% had a favorable impression of the e-exams. When asked why, most of the students said that they thought the exams were convenient and they liked saving paper. Over the four tests given in the course, the class saved 16,000 pieces of paper in a single semester.

Dr. Suzanne Nelson, who teaches IPHY 2420, was inspired to try e-exams after taking a law final online in the spring semester. Because it was so easy and saved lots of paper, she asked IT if they could develop the same thing using the Desire to Learn (D2L) software currently used by the College of Arts and Sciences. IT, under the direction of Viktoriya Oliynyk, worked on the project over the summer and it was tested in August. One of the concerns about the e-exams is that there is greater opportunity for cheating due to the availability of the Internet. Dr. Nelson and her teaching assistants (TAs) worked hard to reduce the risk of cheating. For example, 75 questions are loaded onto the test bank, but the computer only chose 50 for each student, and they were different for each student taking the exam. Also, the computer scrambled the correct answer for each multiple-choice question; hence, two students answering the same question would have different correct answers. When the student has completed the exam, a unique picture shows on the desktop so the student knows that the exam has been saved. Dr. Nelson also initiated a new system whereby students have to scan out using their Buff One cards to leave the classroom after the exam to prevent them from logging back on to continue the exam.

After the students take the e-exam, the test is graded instantly. Dr. Nelson can look at the graphed results to see what questions were most often missed or answered correctly. The grades are rapidly posted to D2L and students can see their grade within minutes. Dr. Nelson plans to continue e-exams in the future because of how quick and convenient they are. The IPHY department no longer has to pay for printing exams or scanning the answer sheets. Dr. Nelson says, "Overall it was a very positive learning experience and it worked very well. I am excited to teach others about e-exams so we can continue to save paper and time on campus."

Physiology Club
by Akaysha Joiner and Ashley Miller

The IPHY Student Board aims to close the gap between student and faculty within the Department of Integrative Physiology at the University of Colorado Boulder. It provides resources such as tutoring, guest speakers, and leadership opportunities in order to help guide IPHY students through the curriculum and the selection of their future careers.

This fall, the department took a big step forward that will enable IPHY students to access even greater opportunities beyond those previously offered. This was accomplished by launching the Physiology Club, a club that allows students to connect with other students, faculty, and their future careers at no cost to them.

Heidi Bustamante, the faculty advisor, designed the IPHY club to be set up as a resource and tool for IPHY students. Through participation in the club, students will learn about what careers are available with an IPHY degree, what they can do to become well-rounded applicants for graduate programs such as medical school, physical therapy, pharmacy school, etc., and develop connections within the department. Additionally, students are offered free tutoring for all IPHY courses and auxiliary courses such as physics, chemistry, and organic chemistry. Overall, the goal is to provide information so that students are aware of the opportunities they have within the department and can take full advantage of their time at CU.

Up to date, we have hosted several events to fulfill this goal. To kick off the semester, Tim Houston and Josh Scott presented the first Career Paths Talk on personal training, strength coaching, and fitness management. For the second Career Paths Talk, Candido A. Chacon III, PharmD, director of admissions from Anschutz Medical Campus Pharmaceutical Program, visited CU to discuss the option of pharmacy school. He brought along current pharmacy students who presented a fascinating case study. Dr. David Sherwood, the associate chair of the Department of Integrative Physiology, spoke on independent study, internship, and honors thesis and the value of each. Additionally, Heidi Bustamante introduced UGTA-ships, which give undergraduate students the opportunity to teach. The fall semester will wrap up with open tutoring hours for various subjects in preparation for finals. More events are in the works for spring semester!

All of these events are planned and carried out by the Executive Board, composed of a select few outstanding undergraduate IPHY majors: Alexander Cross (president), Ashley Miller (vice president), Taylor Jennings Pence (treasurer), Lauren Argueta (secretary), Akaysha Joiner (co-social chair), and Alana Tao (co-social chair). It is our goal as the Executive Board to be the voice for IPHY student concerns, ideas, and insights. With open communication between the students and the Board, we hope to bring issues and concerns to attention within the department. Developing this community is essential and will enable both the department and the students to reach their full potential!

December 2013 Bachelor of Arts

Micayla Album
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Joscelyne Armenta
Mohammad Azimi
Kirill Balatsky
Sarkis Barbarian
Cameron Barton
Janine Bobby
Ellen Brinkman
Edward Brown
Khyla Burrows
William Christie
Alex Cohen
Jordan Cohen
David Conrad
Camille Crane
Stephanie Fareri
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Kirk Hohsfield
David Holte
Joshua Jennings
Kyle Johnson
Jaymin Ko
Arielle Krueger
William LaGreca
Joanne Lim
Catherine Mangels
Allison Matti
Kyle Mok
Emily Moll
Christopher Morales
Tchu Mouanoutoua
Elsa Mullins
Damian Musell
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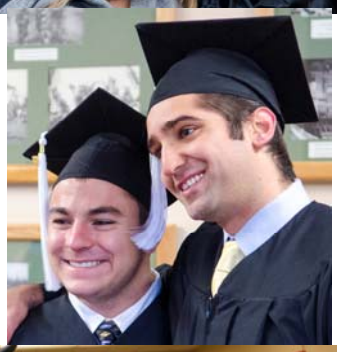

December 2013 PhD, MS, and BA/MS

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