The department is fortunate to have many excellent faculty who enable us to meet the teaching, research, and service missions of the department and the university. No two faculty members are the same, however, as they each have unique research interests and different teaching assignments. Nonetheless, faculty can be distinguished on the basis of whether their primary responsibility is either teaching or a combination of teaching and research. Those faculty who are required to develop a funded research program have tenure-track appointments. The initial tenure-track appointment is made at the rank of assistant professor and after a probationary period of ~6 years, they can be promoted to the rank of associate professor, and then 6 years later to the rank of professor. Prior to the transition from one rank to the next, however, each faculty member undergoes a thorough review and must meet established standards before a promotion is possible. In addition, assistant professors undergo a comprehensive review after the first three years to check that they are making adequate progress toward a positive outcome at the time of review for promotion to associate professor. In this newsletter I would like to recognize several of our faculty who have achieved these goals.

I will begin by telling you about our newest faculty member. After a national search for a new tenure-track position during the fall, the faculty evaluated the dossiers of ~80 applicants and selected Christopher D. Link as our first choice for the position. Dr. Link accepted our offer in March and will begin as the newest member of the tenure-track faculty in August 2012. Prior to beginning this new position, Dr. Link had held a research position since 1995 at the Institute for Behavioral Genetics at CU Boulder. His long-term research goals are to understand the basic biology of neurodegenerative diseases. He has three active research projects: (1) the toxic mechanisms of the beta-amyloid that accumulates in Alzheimer’s disease; (2) the interaction between stress-response pathways and neurodegenerative diseases; and (3) the molecular function of an RNA-binding protein linked to amyotrophic lateral sclerosis (ALS) and other neurodegenerative diseases. Because ~90% of those individuals who acquire a neurodegenerative disease cannot be attributed to simple familial inheritance, there must be important environmental and physiological factors that need to be identified. He expects that the molecular and cellular clues his work is studying will help identify these factors. Furthermore, he intends to develop a number of collaborative projects with other IPHY faculty. Dr. Link will teach a graduate seminar on aging in fall 2012.

The next two faculty I will tell you about are Assistant Professors Alaa Ahmed and Christopher Lowry who have just completed their three-year comprehensive review. With a background in mechanical and biomedical engineering from the American University of Cairo, Egypt, and the University of Michigan, Assistant Professor Alaa Ahmed was recruited by the department to establish an independent research program that focuses on the neural control mechanisms underlying human movement. Prior to beginning her appointment in August 2008, she completed
Dr. Lowry’s work has implications for understanding the integrative physiology of stress-related psychiatric disorders. His studies suggest that the thermosensitive serotonergic neurons play a critical role in the pathophysiology of major depressive disorder and the mechanism of action of antidepressant drugs. Dr. Lowry has taught our core course on human anatomy and a critical thinking course, but will soon begin teaching our undergraduate core course on endocrinology and a graduate course on stress physiology.

The fourth person I will tell you about is Pei-San Tsai, who has been promoted from associate professor to professor. Dr. Tsai completed a PhD in zoology from the University of California Berkeley (1993) and postdoctoral fellowships at the University of California San Francisco (1993-95) and the University of California Los Angeles (1995-96). She was appointed as an assistant professor at CU Boulder in 2003 and promoted to the rank of associate professor with tenure in 2006. Dr. Tsai is a reproductive neuroendocrinologist, which means she studies how hormones from the brain (neurohormones) control reproduction. Her research program explores two divergent yet related topics. One is more clinically oriented and examines candidate genes whose mutations cause reproductive hormone insufficiency and infertility in humans and rodents. The other topic has an evolutionary component and examines the broad pattern of how neurohormones evolved over the course of metazoan (multicellular organism) evolution. After examining her dossier, external reviewers (professors at other universities) commented on her exemplary record in extramural funding, the level of productivity, the publication of her work in high-impact journals, the importance of her timely contributions to the field, and a sustained positive trajectory since being promoted to associate professor with tenure. Several reviewers also noted that Dr. Tsai has made substantial contributions in professional service, often in leadership roles at national and international levels. Based on such positive comments, Dr. Tsai easily met our standards for promotion to professor. Dr. Tsai teaches our undergraduate core course on endocrinology and an elective course on reproductive endocrinology.

Based on these descriptions of the recent accomplishment of four of our 31 faculty members, you can appreciate the breadth and quality of the scholarship performed by our faculty, which is enthusiastically shared with our students.
Suzanne Nelson is the new instructor for our two nutrition courses: Nutrition, Health, and Performance (IPHY 2420) and a new course this year, Nutrition for Health and Wellness (IPHY 3440). Dr. Nelson taught nutrition at CU Boulder for several years before taking this position, and has taught nutrition-based courses for the honors program and several departments on campus. In her doctoral program at the University of Florida, Dr. Nelson focused on the development of osteoporosis in wildlife and completed graduate courses on vitamin metabolism, mineral deficiencies, human nutrition, and feeding strategies.

The first course, Nutrition, Health, and Performance, strives to teach students why it is so important to take care of their health over a lifetime. Dr. Nelson explains the biology of how heart disease, high blood pressure, and cancer, among other diseases, can be the consequence of poor dietary choices. The emphasis in the course is to have students understand how a lifetime commitment to an active and healthy lifestyle directly benefits the body. The students are assigned a complete lifestyle analysis, where their blood is analyzed using a lipid panel, they complete a family history to track major diseases, they take pictures of everything they eat or drink for 48 hours, and they wear a pedometer for seven days. This approach helps students recognize the types of diseases they are personally at risk for developing. Dr. Nelson also spends a significant amount of time discussing current topics in nutrition, so students understand if they represent healthy choices or are largely fad-driven. After taking her class, many students comment, “this class should be a requirement for graduation” in their class reviews.

The newest nutrition course on campus is called Nutrition for Health and Wellness. This course was specifically designed for upper-division IPHY majors who are interested in future careers in medicine, athletics, and the health field. The course is intended to prepare IPHY students for real-life nutrition issues they may encounter in their future careers. The course explains the anatomy and physiology behind major lifestyle diseases, such as diabetes and cancer, to improve understanding of the mechanisms underlying the development of disease. Students examine case studies where real-life examples have been adopted to inform students of the underlying issues in patient care. Such socioeconomic issues as poverty, lack of education, lack of engagement, and language barriers all influence the effectiveness of medical treatments and are discussed in the course. The course also examines issues such as supplements, ergogenic aids, superfoods, and antioxidants, and explains how they have the potential to increase overall health and wellness. Although this elective course has only been offered once (spring 2012), it is obvious that there is considerable interest among IPHY majors in this topic.

IPHY Internship at CU Science Discovery by David Sherwood

This past semester, a new partnership with CU Science Discovery enabled 12 IPHY students, selected through a competitive application process, to gain teaching experience while earning credit toward their IPHY major. The newly established internship, Communicating Science to K-12 Audiences, required students to participate in eight weeks of training and curriculum development, and then lead hands-on physiology activities in after-school programs across the Boulder community. The goals of the program were to develop IPHY undergraduates’ teaching and communication skills, provide undergraduates with opportunities to share their excitement for science with young students, and help increase K-12 students’ interest in science and integrative physiology by serving as knowledgeable and enthusiastic role models.
Throughout the eight-week training period, IPHY students explored key topics such as science communication, the nature of science, inquiry, questioning, and lesson design. They became familiar with state and national science standards and used this information to design age-appropriate classes focused on key topics in integrative physiology. In April and May, they then worked in small teams to put these class plans into action, leading several sessions with their assigned student group. Community partners included the I Have a Dream Foundation – Phoenix Class at Columbine Elementary School, the Cool Girls Science and Art Club at Crestview Elementary, and CLACE (Latin American Center for Arts, Science and Education).

Several IPHY-developed activities will be integrated into Science Discovery’s summer classes this year, and many of the interns acquired paid teaching positions in Science Discovery’s summer program! Science Discovery will also feature additional IPHY activities at its 2012 Summer Showcase, to be held at the University Memorial Center on July 31, from 4:30-7:00 pm. Science Discovery and Integrative Physiology will continue to offer the internship for interested IPHY students; for more information about the program, visit sciencediscovery.colorado.edu or contact Stacey Forsyth (Stacey.Forsyth@Colorado.edu).

People Updates

Erin Risius (BA 1995) graduated from CU Boulder with a bachelor’s degree in kinesiology. For two years she worked as an assistant in the chiropractic field before becoming a certified personal trainer with the American College of Sports Medicine. In 2000, Erin joined A Way of Life Fitness Consulting, a personal training company based in Louisville that specializes in post-rehabilitation, medical exercise, lifestyle coaching, body-mind nutrition, and youth fitness/empowerment programs. She was one of the lead personal trainers and later became co-owner of this company with founder (and now husband), Jerry Siravo. After 10 years in the personal training field, she went back to school and earned a master’s degree in counseling psychology in 2005. She then opened a private counseling practice specializing in eating and exercise disorders, along with women’s and girls’ issues. In 2008 an unexpected opportunity arose to create the first community fitness department for the new Erie Community Center, so she closed her private practice and focused on building this program for her community. After three years as the Erie Community Center fitness director, she decided to pursue opportunities in the corporate wellness industry, and is currently the client services manager for Health Promotion Management, Inc., a corporate wellness company based in Broomfield that provides wellness programs for local and national businesses. In addition, Erin has reopened her private counseling practice, and provides holistic counseling for adults and adolescents. Erin continues to be an advocate for health and fitness programs, and feels fortunate to be able to contribute her expertise to individual, community, and corporate health and wellness programs in a variety of ways.
Jerry Siravo (BA 1993) graduated from CU Boulder with a bachelor’s degree in kinesiology. While at the university he worked as a student assistant in the Athletic Strength and Conditioning Department for Coach “Mad Dog” Madden. After graduation, he worked as an assistant in the chiropractic and physical therapy fields for three years, and then in 1995 he became a certified strength and conditioning specialist with the National Strength and Conditioning Association. In 1996 he founded A Way of Life Fitness Consulting, a personal training company based in Louisville that specializes in post-rehabilitation, medical exercise, lifestyle coaching, body/mind nutrition, and youth fitness/empowerment programs. Jerry is an avid racquetball player and coached the CU Boulder racquetball team from 2004-09. Jerry is also a registered provider with Imagine! — a company that provides support for those who are physically and developmentally challenged — and works with youth who have been diagnosed with autism or Asperger’s on helping them to improve their health and fitness. Jerry also created and facilitated a successful year-long meditation group for Fort Collins area elementary school youth, and currently facilitates a meditation group in Louisville. Jerry regularly provides motivational presentations at local universities, municipalities, and corporations on a variety of wellness topics, and is currently writing a book outlining the A Way of Life philosophy.

Andra Wilkinson (BA 2009) enjoyed many opportunities including working with Drs. Stitzel and Lowry. With Dr. Stitzel, she completed a thesis on the relation between nicotine dose and auditory habituation in mice, research relevant for people with schizophrenia. Under Dr. Lowry’s mentorship in her senior year, Andra learned about the role of peripheral immune activation and serotonergic activity. She has worked in population-health innovation at Kaiser Permanente for the past two years and is looking forward to returning to research this fall when she will begin a doctoral program in the Maternal and Child Health Department at the University of North Carolina. When she’s not working, Andra enjoys running, rock climbing, and traveling.

Kelly Adair (BA 2009) graduated with a degree in integrative physiology and is now the surgical skills lab manager at the Steadman Philippon Research Institute (SPRI) in Vail, Colorado. SPRI is known throughout the world for research into the causes, prevention, and treatment of orthopedic disorders. Their mission is to keep people of all ages physically active through orthopedic research and education in the areas of arthritis, healing, rehabilitation, and injury prevention. At SPRI, Kelly helps with surgical dissections and hosts educational courses for medical device companies, surgeons, physicians, and medical professionals from around the world. The surgical skills lab allows physicians the unique opportunity to practice both arthroscopic and open sports medicine procedures on cadaveric specimens. Prior to SPRI, Kelly worked for another orthopedic and medical education organization called Arthrex, Inc., as a medical sales representative. Kelly’s next goal is to work with a start-up orthopedic medical device company and eventually to start a business in sports medicine or a related field.

On New Years Day, just two weeks after the fall 2011 IPHY graduation, Elena Pellicer (BA) was on a plane headed for Uganda, where she spent five months working as a program coordinator for the Initiative to End Child Malnutrition. After just over two months in Uganda, she had already learned about the craziness of operating a global health intervention in the developing world. Her work was a combination of inpatient and outpatient treatment of malnourished children, management of a team of staff and volunteers, collaboration with hospital administration, and creative development for the future of the program. Although there were many frustrations and challenges to the work, every positive outcome with a healthy and smiling child made it well worth it. This spring Elena supplemented her experience in Uganda by taking an online MPH course on Child Health in Developing Countries through the University of Washington. Upon return from Uganda, she is spending several months studying for the MCAT while enjoying summertime in the beautiful Pacific Northwest; Washington is her home state. In the fall she hopes to find a job in Seattle, either in public health, research, or as a medical interpreter, before applying to medical school in the spring of 2013.
Growing up in Longmont and Littleton, respectively, Anthony Gurule (BA 2010) and Nichelle Francavilla (BA 2010) knew that CU Boulder was their choice for college. Through Anthony’s years as an IPHY student, some of his favorite courses included anatomy, neurophysiology, biomechanics, exercise physiology, and motor learning. Nichelle enjoyed some of the same classes, including immunology and developmental psychology as she doubled majored with Psychology. Antonio’s focus as an undergrad was directed toward a career in physical therapy. He was involved in many volunteer and observation opportunities that prepared him for a physical therapy program, and was also a student intern in the Sports Medicine Program at CU and thoroughly enjoyed working with both the football and basketball teams over the 2009 and 2010 seasons. After having been treated by a chiropractor since she was a child, Nichelle has always been fascinated with the philosophy and practice of chiropractic. Knowing that her future was going to be a doctorate in chiropractic, Palmer College of Chiropractic in San Jose, California was the most obvious choice. Antonio recently moved out to sunny California to be closer to Nichelle, and soon began to question his future as a physical therapist, and has since enrolled in Palmer College. Nichelle has been able to attend numerous seminars and conferences, some of which included a chiropractic conference at the NFL Combine this year in Indianapolis. She has also worked hard to receive her Active Release Technique (ART) certification in 2011. Both Nichelle and Antonio became certified strength and conditioning specialists through the National Strength and Conditioning Association of America. Although they miss the unpredictable Colorado weather and endless activities at CU Boulder, they are both grateful for the academic preparation they received in IPHY.

Before graduating from CU Boulder with a degree in IPHY, Christina DiBrito (BA 2011) transferred to the University of Colorado Denver College of Nursing at the Anschutz Medical Campus in spring 2009. She decided that even though she had not finished all of the IPHY degree requirements, she could not pass up the opportunity to attend nursing school. Ultimately, she was able to transfer 12 credits from nursing school to complete a BA degree in IPHY. She graduated from CU Boulder in May 2011 with help from a favorite professor, Dr. David Sherwood. Shortly after graduating from CU, she began a three-month internship at the Veterans Affairs Medical Center in Denver, CO. The internship provided her with an opportunity to experience what it was like to work full time as an RN in addition to caring for up to five patients on a medical/surgical floor. Her extensive knowledge of the human body, thanks to the IPHY degree, has served her extremely well in nursing. Many patients that she works with are post-cardiac surgery and require constant cardiac monitoring. Since she learned so much about cardiology in the IPHY physiology courses, analyzing cardiac rhythm strips is not as difficult for her as it is for other students who do not have a physiology background. Her internship ended in August 2011, but she continues to be employed by the VA hospital. She works one day a week as a student nurse technician in addition to finishing up nursing courses. She was recently offered a full-time RN position. She was also recently invited to join Sigma Theta Tau International, a nursing honor society. She graduated summa cum laude from CU Denver College of Nursing with a BS in nursing in December 2011. The long and arduous journey of obtaining two bachelor’s degrees has paid off, and she is excited about her future as an RN. She greatly appreciates the wonderful education she has received at both CU campuses. Go Buffs!

Lea Stenerson (MS 2001) completed an MS degree under the tutelage of Dr. Bob Mazzeo. Her thesis research focused on the physiological and immunological aspects of overtraining syndrome in athletes. After graduation, Lea worked locally as a clinical exercise physiologist primarily for the geriatric population. She took some time off in 2003 when her son was born, then returned to work applying her education in IPHY as a certified personal trainer at Rally Sport and with her own business. Lea also coaches triathlon and swimming as well as being the head coach for the Fast Forward Trail Running Program. In addition to personal training and coaching, Lea has been able to pursue her passions with teaching and research in academia as an adjunct faculty member at Regis University, teaching anatomy and physiology (including working with human cadavers) and by coordinating a research study investigating soft-tissue modalities for tension headaches at the Anschutz Medical Center. When not working, Lea keeps busy skiing, backpacking, trail running, and hanging out with her husband and 8-year old son.
After graduating and spending a year as a research assistant for Prof. Russ Moore and Dr. Genevieve Sparagna, **Derek Zachman** (BA, MS 2008) enrolled in the combined MD/PhD program at the Oregon Health and Science University in August 2009. He has completed the first two years of medical school and is currently completing the first year of the PhD program. This past fall he joined the laboratory of Prof. Harvey Fleming, a hematologist in the Department of Cell and Developmental Biology. His work focuses on the interaction between cellular components of the bone marrow microenvironment, and how these interactions contribute to normal and malignant hematopoiesis. Derek is currently investigating a recently identified phenomenon in which endothelial cells are capable of rescuing hematopoietic stem cells from otherwise lethal doses of ionizing radiation. This project involves using methods of hematopoietic-endothelial cell co-culture, microscopy, and flow cytometry/fluorescence-activated cell sorting. The goal is to define the endothelial mediators of hematopoietic rescue, in hopes that they will be useful in treating victims of nuclear fallout/warfare, as well as potentially improving outcomes in certain settings of bone marrow transplantation. Derek is considering a career in pediatric hematology-oncology, although he remains fascinated by a number of potential opportunities. After completing the PhD degree, he will return to the latter parts of medical training and hopes to find a job before he is 40! He likes living in Oregon, but misses the Rocky Mountains and the folks in Boulder. He describes Portland as a great town, albeit moist during the winter, with great food, drink, and recreation, and friendly down-to-earth locals. Outside of his studies, Derek is active in alpine adventuring on cascade volcanoes, hugging Redwoods, and tromping through the thick northwestern brush in search of the elusive Sasquatch. He has been fortunate to make it back to Colorado each year for Camp Wapiyapi and to climb 14ers, which he hopes will remain an annual tradition.

After graduating with a major in integrative physiology, **Stephen Matthews** (BA 2010) spent a service year working for AmeriCorps and has since begun to pursue his dream of becoming a physician. He spent the AmeriCorps year at Port Chester, New York, working at a family medical clinic named Open Door. His time there was filled with valuable non-socialistic learning experiences. The community comprised ~80% minorities who mostly lived below the poverty line. Working with an AmeriCorps team, he participated in several service projects that included community gardens, health fairs, park restorations, and food pantries. At Open Door, he worked as a patient advocate and spent time helping patients who had chronic diseases, such as asthma and diabetes. His primary role was to function as an educator to assist the patients with the management of their symptoms and to do prenatal education. He has many fond memories of his time with AmeriCorps and Open Door. After the year with AmeriCorps, he was accepted into the School of Medicine at New York Medical College, where he is currently in the third trimester of the first year. Although most of his time is spent studying, he is occasionally able to enjoy the wonderful diversities that New York City has to offer, from Broadway plays to one-of-a-kind restaurants. He is currently enamored with the field of cardiology. He is grateful for the preparation he received from CU and the four absolutely wonderful years in Boulder. Go Buffs!!!

**Kevin Keenan** (PhD 2005) completed a doctorate in integrative physiology working with Dr. Roger Enoka in the Neurophysiology of Movement Lab. His dissertation focused on the use of the surface electromyogram as a measure of activity in populations of motor units. After graduation, Kevin and his wife Ann moved to Ithaca, New York, for a postdoctoral fellowship at Cornell University in the Sibley School of Mechanical and Aerospace Engineering. During the postdoctoral fellowship (2005-08), he used numerical simulations and experimental approaches to examine neuromuscular control strategies associated with the performance of dexterous manipulation tasks. During the last year of his postdoctoral studies, Kevin also took a position as an adjunct assistant professor at the University of Southern California in the Division of Biokinesiology and Physical Therapy. Upon completing postdoctoral training, Kevin, his wife, and their son, William (2008), moved to Milwaukee, WI. Kevin is currently an assistant professor at the University of Wisconsin-Milwaukee in the Department of Kinesiology. Kevin’s work is dedicated to understanding the interplay between motor function, physical activity, and health. Kevin and his family welcomed their daughter, Moira Ann, on 11/11/11 at 11:13 AM. [Someone was off by two minutes!] Kevin frequently misses the bug-free hiking and biking that living in Colorado provided.
After graduating from CU Boulder, Brian Schiller (MS 1998, PhD 2000) has accumulated 12 years of clinical and scientific experience in the biotechnology and pharmaceutical industries. He has been employed in various positions in medical affairs and clinical research and development at premier biopharmaceutical firms, including Bristol-Meyers Squibb and Amgen. His scientific and therapeutic expertise includes cardiovascular and metabolic disease, autoimmune and inflammatory diseases, and surgical pathophysiology. He was involved in clinical development for several breakthrough and landmark therapies, including clopidogrel (Plavix), irbesartan (Avapro), metformin (Glucophage), anakinra (Kineret), etanercept (Enbrel), and HA-CMC (Sepafilm). He currently works as director of medical affairs at Genzyme (now Sanofi) Corporation, one of the world’s leading biotechnology companies dedicated to the most advanced technologies in the life sciences. In this role, Dr. Schiller is a senior leader and guides global medical strategy and execution for the biosurgery business and leads a team of scientists and clinicians. In addition, he advises the global strategy and development team at Genzyme/Sanofi to identify and manage internal development projects as well as external scientific and business opportunities. He also serves as a consultant to a number of private nutritional and healthcare companies to advance novel science-based products. He lives in Park City, Utah (7 years), where he is a devoted father to his two daughters Madeline (age 9) and Hayden (age 5). True to his Colorado roots, he remains an avid cyclist and skier, and maintains a complicated relationship with golf.

Rachael E. Van Pelt (MS 1997, PhD 1998) earned a doctorate in kinesiology and applied physiology at CU Boulder under the guidance of Prof. Doug Seals. After graduation, she moved to St. Louis for a postdoctoral fellowship at Washington University School of Medicine under the guidance of Dr. Wendy Kohrt. In December 1999 she moved back to Colorado with Dr. Kohrt and completed her fellowship at University of Colorado Denver (UCD) Health Sciences Center (now the UCD Anschutz Medical Campus), where she has continued to work for ~12 years. Rachael is currently an associate professor of medicine in the Division of Geriatric Medicine and is keeping busy as the principal investigator on two R01 awards from the NIH/NIDDK and co-investigator on three additional NIH-funded R-awards. While in St. Louis, Rachael met her husband Rowdy Clagg. He moved with her to Colorado and found a job at Level 3 Communications, where he has enjoyed working for 12 years as a financial manager. Rachael and Rowdy live happily in Westminster with their two children (Mateo-age 6; Makenna– age 1.5) and recently celebrated their 10-year wedding anniversary. Before having children, Rachael regularly trained and competed in triathlons and marathons, but currently counts herself lucky when she sneaks in 3-4 short runs per week. When she is not involved in research or taking care of Mateo and Makenna, Rachael spends time volunteering with the American Diabetes Association or helping her husband with house renovation projects and financial investments. Rachael feels incredibly blessed every day to have a career that she is passionate about, a family she adores, and a gorgeous place to live.

Several members of the department participated in the Corden Pharma Regional Science Fair in Boulder last February. The judges included Andrew Burke, Chris Lowry, Jared Kopelman, Jodi Lukkes, Nina Donner, Rodger Kram, and Scott Kavanaugh. In addition, Prof. Lowry arranged for the department to sponsor an award given by the American Physiological Society. The winner of the award was Nicolette Laird, a senior from Monarch High School, for her project on an analysis of the tumorigenic miR106b-25 miRMA in different breast cancer subtypes. Her teacher was Kristin Donley (http://www.coloradohometownweekly.com/news/ci_19954160).

Undergraduate student Makenna Morck (right) was awarded a Richard A. McCray Scholarship for the fall 2012. The award recognizes students who plan to pursue a career in education and have demonstrated a strong academic record, community involvement, and leadership activities. The award was established to honor Dr. Richard A. McCray who joined the CU faculty in 1970 and is currently the George Gamow Distinguished Professor Emeritus of Astrophysics. His family established the McCray Scholarship fund to celebrate his 65th birthday.
Prof. Christopher Lowry has been awarded the Donald F. Klein Early Career Investigator Award by the Anxiety Disorders Association of America (ADAA). The award comprises a check for $1,000, up to $1,000 for costs to attend the annual ADAA meeting, and complimentary registration for the annual meeting (April 12-15, 2012). Prof. Lowry will be paired with a mentor from the ADAA Scientific Council and will deliver an oral presentation at the annual meeting.

Jodi Lukkes and Andrew Burke volunteered three hours on May 5 to participate in the Science Fair that was held at Monarch High School in Louisville, CO.

Doctoral student Nina Donner was awarded a travel fellowship by the International Behavioral Neuroscience Society to attend the annual meeting of the Society. Her entry was: Donner NC, Kubala KH, Drugan RC, Maeir SF, Lowry CA. Inescapable tail shock and cold swim stress interact to elevate tph2 mRNA expression in an anxiety-related subset of serotonergic neurons. Her mentor is Prof. Lowry. Unfortunately for Nina the meeting will be held in Kailua-Kona, HI on June 5-10, 2012.

Doctoral student Lida Beninson was awarded an Emerging Public Policy Leadership Award from the American Institute of Biological Sciences. The award recognizes the achievements of biology graduate students who have demonstrated an interest and aptitude for contributing to science and public policy. She will receive the award in Washington, DC in a meeting with congressional delegations. She will also participate in a training program on communicating with policymakers and will be briefed on the federal budget for scientific research. Lida is an editor of The Journal of Science Policy and Governance and a founding member of the Forum on Science and Ethics and Policy, which seeks to facilitate communication between the scientific community and the public. Lida previously completed an internship in the Division of Biological Infrastructure at the National Science Foundation, where she evaluated the success of two programs designed to expand undergraduate participation in scientific research.

At our graduation ceremony on May 11, 2012, four of our graduate students were recognized for completing the requirements for a doctorate in integrative physiology. These graduates, Chris Arellano, Lindsey Gano, Matt Holmes, and Paul Strong, came from diverse backgrounds and had a range of experiences during their 4-5 years of doctoral training in our department.

Christopher J. Arellano – a NASA Harriett G. Jenkins Fellow – successfully defended his PhD dissertation on March 23rd, 2012, under the mentorship of Dr. Rodger Kram. During his time in the Locomotion Laboratory, Chris conducted a range of studies focused on the energetic cost and balance control mechanisms in human locomotion. In addition to his passion for research, Chris is an enthusiastic supporter of STEM education and research for students. He is actively involved in mentoring high school students who are part of the CasaMESA Robotics Academy at the Casa de la Esperanza Community Center in Longmont, Colorado, and was recently awarded the 2011 Multicultural Award (Science Category) from the Boulder County Community Action Programs. He has also mentored several undergraduate students as part of the Summer Multicultural Access to Research Training (SMART) program, the Undergraduate Research Opportunities Program (UROP), and the National Institutes of Health/Howard Hughes Medical Institute (NIH/HHMI) scholars program for diversity in biosciences at the CU Boulder. Under the guidance of Dr. Roger M. Enoka, Chris will continue his scholarly activities as a one-year postdoctoral fellow in the Neurophysiology of Movement Laboratory. In addition to all the academic good news, Chris and his wife, Ruth M. López, are happily expecting a baby boy in mid-July!

Lindsey Gano (MS 2008, PhD 2012–picture on following page) was raised in Arlington, Texas and received her BS in biochemistry from the University of Texas at Austin, where she performed undergraduate research in organic chemistry. She then worked in the Pharmacology Department at University of Texas Southwestern Medical Center in Dallas before moving to Colorado. Lindsey began the master’s program in IPHY in Dr. Doug Seals’ lab in 2006. As an MS student she assisted with clinical studies at the Clinical and Translational Research Center, but her main work focused on oxidative stress and inflammatory gene expression changes in peripheral blood mononuclear cells with age and exercise. After completing an MS, she stayed in Dr. Seals’ lab to perform doctoral work. Her dissertation research utilized the preclinical animal model to determine the efficacy of the longevity enzyme SIRT1 for reversing age-related vascular dysfunction. She found SIRT1 activation restored vascular function in old animals, and this was accompanied by reductions in arterial oxidative stress and inflammation.
These results indicate that activation of SIRT1 may be a novel therapy for reducing age-associated vascular dysfunction, and the associated increased risk for the development of cardiovascular diseases. Lindsey has presented her results at the American Heart Association Scientific Sessions in November 2010, and at the Sirtuins in Metabolism, Aging and Disease conference this past February.

After completing a PhD, she will begin postdoctoral research at Anschutz Medical Campus of the University of Colorado Denver. She will study the role of mitochondria and reactive oxygen species in neuronal disorders. Lindsey, her husband Neil, and their two Labrador retrievers, enjoy the many outdoor activities available in Boulder and Summit County throughout the year. They also enjoy trips back home to Texas to visit family and friends, and especially love spending time at Possum Kingdom Lake. An avid sports fan, she actively follows her beloved Texas Longhorns, Dallas Mavericks, and hometown Texas Rangers. Two of her favorite things about life in Colorado include live music at Red Rocks and taking many pictures of this beautiful state.

Matthew Holmes (PhD 2012) grew up in the sleepy rural town of Barnard Castle in County Durham, northeast England. He chose to attend Manchester Metropolitan University, UK, to study sport and exercise science with the intention of working with professional athletes. Immediately after working with some of these elite individuals, however, he decided that he would prefer to instead become involved with biomechanics research. This work focused on asymmetrical swimming stroke in amputee swimmers and he found this topic to be very interesting. Following completion of his undergraduate degree, Matt pursued his interest in biomechanics to the University of Jyväskylä, Finland, to undertake a master’s degree. It was during the long dark Finnish winter that Matt began learning in detail about the nervous system and ultimately decided that a PhD somewhere a bit warmer was the way forward.

Matt has recently completed a PhD in Dr. Roger Enoka’s lab studying the changes that occur in spinal reflex pathways with age. His doctoral work has shown that changes in the ability of the central nervous system to integrate descending and peripheral input precedes age-associated declines in muscle mass and strength. Outside of the lab, Matt enjoys traveling, hiking, photography, history, as well as watching and playing football. Matt has enjoyed his time at CU, and is extremely proud to be following in the footsteps of department alumnus Dr. Carol Mottram in being awarded the Brinson fellowship to undertake postdoctoral research at Northwestern University and the Rehabilitation Institute of Chicago.

Paul Strong (BA 2007, MS 2009) completed a PhD in integrative physiology and neuroscience at CU Boulder in May 2012. His research was performed in the Stress Physiology Laboratory under the direction of Dr. Monika Fleshner. Paul used functional neuroanatomical, pharmacological, and behavioral approaches to examine how physical activity status alters brain function and behavior including the effects of voluntary exercise on physiological, endocrine, neurochemical, and behavioral responses to various non-exercise challenges. His approach was to use animal models to examine how voluntary wheel running alters: (1) stress-induced depression and anxiety-like behaviors; and (2) learning and memory processes. As a graduate student in IPHY, Paul has also had the opportunity to teach undergraduate students in the human anatomy and physiology laboratory courses. Additionally, he mentored many undergraduate and graduate students in the Stress Physiology Laboratory, where he has found sharing scientific insights and discoveries with others to be rewarding. Paul has a BA in English and currently writes fitness, wellness, and nutrition articles for LIVESTRONG.COM and serves as a volunteer healthcare writer for the Grillo Health Information Center in Boulder. In his free time, Paul loves playing basketball and passing
Many Thanks!!

The faculty and students greatly appreciate recent donations to the CU Foundation on behalf of the Department of Integrative Physiology by:

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