INTERNATIONAL EXCHANGE PROGRAM BRINGS CHINESE STUDENTS TO K&H

In fall 2018, K&H welcomed 12 graduate students from China to its new exchange program. These students from the Shanghai University of Sport (SUS) participated in both coursework and research to increase their academic skills, while also improving their English proficiency and connecting with American culture.

K&H’s Associate Professor of Motor Learning and Control, Qin “Arthur” Zhu, Ph.D., is the International Program coordinator, and is himself an alumni of SUS, which was the first university to offer a kinesiology program in China and is currently one of the top universities in the field. Like UW K&H, SUS’s program has distinct tracks focusing on kinesiology and on PETE and coaching, with a public health component. SUS provides funding for its students to study abroad, and K&H provides the study opportunities and research mentorship.

At the start of the fall 2018 semester, the first 12 exchange students arrived for a six-month residency continuing into the first part of the spring 2019 semester. Zhu stated that it was clear they were all “very eager to learn” at their orientation, and the next step for the students was to improve their English through weekly lessons with UW’s English Language Center. Every K&H faculty member was happy to welcome these students into their classrooms, so each student selected two to three courses to participate in for their first semester. Zhu stated that once the students’ English proficiency improved after the first couple of months stateside, they performed “as well in the classroom as their American counterparts.” Students participated in a variety of courses, but the strength conditioning and movement core courses were particularly popular due to their physical component.

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The students also each identified one to two potential research mentors from the K&H faculty members, and joined the exercise physiology, biomechanics, motor behavior, and PETE labs as participants and researchers. Research is the primary focus of the students’ second, three-month half of their residency, and Zhu explained that faculty encouraged them to “consider how this research experience will help them develop their own research idea” once they return to China, and conduct research related to that at K&H.

Another component the exchange students participated in was a weekly strength conditioning session in the gym with K&H Director and Associate Professor of Exercise Physiology Derek Smith, Ph.D., which enabled them to practice their English in a kinesiology-specific context. They also developed friendships with American students and faculty, being invited to join winter holiday celebrations and go skiing and sledding at the Snowy Range.

The future of the international exchange program also holds exciting possibilities. In December 2018, the president of SUS and his delegation visited Laramie to meet with UW President Laurie Nichols and others to discuss the possibility of a collaborative Winter Sports Science Center. The center would be multifunctional, and one component would be for UW’s Nordic ski team to develop a list of criteria, then SUS would send 10 athletes to train with the team and complete academic coursework, then return to China to coach the sport they learned here. K&H faculty would also collaborate with SUS faculty to conduct various research projects on winter sports at the center. Zhu explained that the center may be particularly relevant to China since it is hosting the 2022 Winter Olympics, and UW’s proximity to the mountains offers the advantages of powder snow and high altitude for Chinese athletes.

Zhu stated that K&H plans to continue the student exchange program, and may eventually further support UW by establishing a credit transfer program where Chinese students could complete coursework both at UW and SUS to earn dual degrees, possibly at the undergraduate and master’s levels. SUS already has international summer camps in martial arts and table tennis, which K&H is exploring the possibility of offering as a summer study abroad program for credit to K&H students. Long-term, UW and SUS may set up a bilateral exchange where American K&H students will also study in China, which would offer unique research opportunities to American K&H graduate students. The K&H community eagerly waits to see what its new international exchange program holds for the future.

New Faculty Members

**DANIELLE R. BRUNS, Ph.D.**

K&H is excited to welcome Danielle (Nellie) R. Bruns, Ph.D. as an assistant professor. Bruns’ research focus is the molecular mechanisms underlying heart disease and heart failure, including new therapies, exercise as medicine, and the impact of age and sex on right heart failure.

Bruns earned her M.S. in health and exercise science from Colorado State University (CSU) as a way to gain experience before medical school, but “fell in love with the research process,” opting instead to pursue a Ph.D. in human bioenergetics at CSU and complete an additional four-and-a-half-year postdoctoral fellowship in Denver. She and her family wanted to stay in the
NEW FACULTY MEMBERS  Continued from page 2

greater Front Range area, and UW, K&H, and Laramie all seemed like a natural fit to her. She is currently funded by a five-year grant looking at “the impact of aging on the right heart,” specifically investigating right heart failure at high altitude with the hope of “identifying therapeutics for older adults with right heart failure,” including exercise as medicine. Bruns will instruct future doctors in the WWAMI Medical Education Program, putting to use her “expertise in cardiovascular physiology” and both building new connections and enhancing existing relationships “with local physicians in cardiovascular, pulmonary, and renal medicine.”

The aspect Bruns finds most rewarding about her work is “the relationships you build with students, . . . evident in how much I love mentoring. My previous mentors really shaped who I am today, and I hope to be able to give that to my students, as well.” She encourages K&H students to “find a mentor who really supports you and will help you” reach goals. She also advises students that “the only way to find out what you want to do is to do it,” so they should “get involved in whatever interests you,” whether that is teaching, coaching, or research.

In her spare time, Bruns enjoys running, being in the outdoors, and spending time with her family. K&H eagerly awaits Bruns’ research findings, and appreciates the support and guidance she will provide to its students.

EMILY SCHMITT, Ph.D.

K&H is proud to introduce Emily Schmitt, Ph.D. as a new assistant professor. Schmitt has research experience and interest in a wide variety of areas, including physiology, toxicology, physical activity, circadian rhythms, polycyclic aromatic hydrocarbon (PAH) metabolism, exercise testing and prescription of college athletics, and cancer rehabilitation.

Schmitt was drawn to exercise science because she loved running, anatomy, and physiology in high school, so when she discovered a career field involving exercise and health, she describes her choice as “a no-brainer.” She earned her M.S. in clinical exercise physiology at the University of North Carolina at Charlotte, and her Ph.D. in exercise physiology at Texas A&M University; she also completed post-doctoral work in toxicology at Texas A&M. She notes how her research comes full circle: in Charlotte, she worked at a hospital using “exercise as a modality to help” cancer patients through surgery and recovery, and now at UW, one of her research projects involves using exercise to regulate circadian rhythms and metabolic pathways in night shift and rotating shift workers, such as doctors and nurses, who are at higher risk for cancer. Additionally, Schmitt is comparing voluntary wheel running in different strains of mice at high altitude versus at sea level in order to apply the findings to exercise and training at high altitude. She will also teach WWAMI Medical Education Program students about blood and cancer in spring 2019.

UW “offers a big school research feel in a small community,” Schmitt says, and states that one of the most rewarding parts of her work is that her research “directly impacts human health,” so her “job helps society,” offering a “direct line to the greater human good.” As for the teaching side of her work, she says she enjoys “helping students choose their career paths and learning alongside them” as new knowledge areas emerge. She advises K&H students to keep an open mind and take a wide variety of courses, because “one class could have one topic that piques your interest that you didn’t know existed,” and to take advantage of opportunities to complete internships and research labs.

“Anytime I’m not in the lab or the classroom, I’m out running, hiking, or driving” at Medicine Bow National Forest and Tie City, she says. K&H welcomes Schmitt to its faculty team and is excited for her varied experience and passion for helping students explore diverse aspects of the field.
**DKH OUTSTANDING ALUMNI**

Solicitation, Nomination, and Selection Information and Criteria (Adopted October 5, 2016)

DKH seeks to recognize and honor distinguished alumni. Recipients meet at least one of the following criteria:

- **Professional Attainment and Achievement:** Candidates have attained prominence in his/her field or profession. His/her work has a demonstrated impact.

- **Engagement and Support of DKH:** Candidates have demonstrated excellent service to DKH in areas such as: student recruitment, financial support, volunteer support of DKH programs, providing internships, or mentoring or job placement.

- **Community Service:** Candidates have made significant contributions to the community (local, state, national, or international levels), greatly impacted the community through his/her actions, or is involved in a variety of service initiatives.

- **Limiting Criteria:** The recipient must have graduated DKH or been advised primarily by a DKH faculty (for interdisciplinary or joint graduate programs) for a minimum of 10 years prior to nomination and is not currently affiliated with UW (e.g., Board of Trustees, employee, UW Foundation).

To submit a nomination, complete the following form and mail, fax, or email to:

DKH Outstanding Alumni Selection Committee
1000 East University Avenue, Dept. 3196
Laramie, WY 82071
Fax: (307) 766-4098 • Email: asicelof@uwyo.edu

Letters of support (maximum of three) are welcome and encouraged. Nominations should submit enough information so the committee can make an informed decision. Letters of support should address at least one of the criteria: Professional Achievement and Attainment, Engagement and Support of DKH, or Community Service.

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**CORBETT BUILDING RENOVATIONS**

Recent renovations to the Corbett Building significantly expand the bench-to-bedside translational research capacity within K&H and promote new collaborations and research ideas amongst K&H faculty that will spur scientific advancement and innovation in exercise physiology and disease prevention/treatment,” says K&H Director and Associate Professor Derek Smith, Ph.D.

Two different renovation projects began in October 2018. The first, completed in January 2019, added 120 sq. ft. to the Biochemistry Wet Laboratory, which will primarily be used by Assistant Professor Danielle Bruns, Ph.D., Assistant Professor Evan Johnson, Ph.D., and Assistant Professor Emily Schmitt, Ph.D., and their student researchers. The second, completed in March 2019, involved the construction of a state-of-the-art vivarium for use in exercise and health research being conducted by K&H faculty, and will also provide needed animal housing for the College of Health Sciences as a whole.

Primary funding for both projects was generated through K&H entrepreneurial programs. Additional funding was provided by the UW National Institutes for Health IDEa Networks for Biomedical Research Excellence (INBRE) Program. Smith states, “K&H would like to thank Dean Jones, Scott Seville, and David Fay for their support and for recognizing the research and teaching capacity enhancement that these new spaces will bring to K&H and the campus.”

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**DKH OUTSTANDING ALUMNI RECOGNITION NOMINATION FORM**

Name of nominee ________________________________

Current address _________________________________________

Phone number ________________________________ E-mail ____________________________

UW graduation year ________________________ Degree attained ________________________

Nominated by ________________________________

Address __________________________________________

Phone number ________________________________ E-mail ____________________________

Please submit enough information so the committee can make an informed decision. Address at least one of the criteria: Professional Achievement and Attainment, Engagement and Support of DKH, or Community Service.

Provide biographical information about the nominee.
PRESTIGIOUS GOLD CAMPUS DESIGNATION AWARDED FOR EXERCISE REFERRAL PROGRAM

K&H faculty and students and their collaborators in Student Health Services, Campus Recreation, and the Dean of Students Office were honored with a prestigious Gold Campus award for its Exercise is Medicine on Campus (EIM-OC) initiative. The Gold Campus designation is the most prestigious award granted by the American College of Sports Medicine. K&H Director and Associate Professor Derek Smith, Ph.D., states, “UW’s Gold Campus award represents campus collaboration at its best! This award demonstrates the phenomenal work ethic, perseverance, and vision of the UW students who were and are the backbone of the program. It also demonstrates the extraordinary commitment to students and a healthy campus embodied by” the collaborators.

Smith explains that UW earned this designation “by linking healthcare providers in Student Health with exercise/fitness professionals in the Division of Kinesiology and Health and Campus Recreation to create a referral system for exercise prescriptions” based on physical activity assessments made routine through UW EIM-OC. Many of the exercise/fitness professionals are “junior, senior, and graduate students in K&H who have received training and education to provided evidence-based exercise prescriptions and work with clients to improve their health through regular exercise,” Smith states. He highlights the leadership of K&H graduate student Lauren Schiller in building and implementing the exercise referral system.

Plans to further improve UW’s EIM-OC initiative include increasing the percentage of students who are successfully connected with an exercise/fitness professional after receiving a referral, expanding the program to the entire campus community including faculty and staff, and creating a permanent graduate assistant position for UW EIM-OC. Additional efforts include increasing the number of “K&H and Campus Recreation certified EIM undergraduate professionals . . . in order to offer more comprehensive services,” according to Smith, including “risk factor screening for diseases that regular exercise is known to prevent/treat” and “fitness assessments such as aerobic, muscular strength/endurance, and flexibility testing.”

Smith states, “Earning the Gold Campus award puts UW in an elite group of universities that have overcome the barriers to engaging Student Health Services in routine assessment of student physical activity levels and providing a referral system to students to positively impact their physical activity behaviors. Regular physical activity is one of the most powerful health behaviors that a person can engage in, and its benefits extend beyond physical health to also include mental health, social wellbeing, and academic performance.”

EXOSKELETONS AND MUSCLE ACTIVATION RESEARCH

Associate Professor of Biomechanics Boyi Dai, Ph.D. is making K&H proud with his multitude of research projects. The National Institutes for Health IDeA Networks for Biomedical Research Excellence (INBRE) Program supports UW, and is funding a “pilot evaluation of a spinal exoskeleton for prevention and relief of low back pain,” which Dai is working on with Assistant Professor of Electrical and Computer Engineering Domen Novak, Ph.D. Separately, INBRE provided funding to Dai to purchase equipment to measure muscle activation when walking, jumping, and squatting following knee injuries (such as ACL injuries), and for a graduate assistant. Dai is further mentoring student researchers by supervising student researchers funded by the International Society of Biomechanics in Sports’ Internship Grant, specifically focusing on international biomechanics students and sports engagement.
In October 2018, UW K&H honored William J. Kraemer, Ph.D. as its Alumnus of the Year for his 43 years of distinguished accomplishments in exercise physiology and numerous health fields, and for his role in helping to build UW’s K&H program from its earliest days.

Kraemer earned both his M.S. in exercise physiology (1978) and his Ph.D. in zoology and physiology (1984) from UW. He is currently a professor and head of the Neuroscience and Neuromuscular Human Research Laboratory at The Ohio State University. Among his multitude of achievements include the National Strength and Conditioning Association (NSCA) honoring him with its Lifetime Achievement Award in 1994 and naming its Outstanding Sport Scientist Award after him in 2006, and the University of Jyväskylä in Finland awarding him the University Medal in 2009 (the first ever granted to a non-Finnish citizen) and an honorary doctorate in 2016, demonstrating the international impact of his research. He has over 475 peer-reviewed scientific publications and has authored 12 books, his research topics spanning from the understanding of the endocrinology exercise and training and its roles in muscular strength and hypertrophy, to recovery methods that can be used after exercise and sports, to the study of aging and resistance training. His CV bursts with abundant professorships, fellowships, and roles as director of various research programs, yet he admirably points out that one of the most rewarding aspects of his career is the scholarly caliber to which his own doctoral students have attained.

When Kraemer came to UW with Bruce Noble in 1976 after earning a B.S in health and physical education from the University of Wisconsin–La Crosse, it was “to develop a new Human Energy Research Laboratory,” including research into altitude physiology and cardiac rehabilitation, and the entire program was in its “embryonic period,” he explains. During that time, he also volunteered to help coach the UW football team. Regarding his interest in kinesiology and the numerous other health-related branches his career has ventured into, Kraemer says, “I’ve always been eclectic,” and credits “the primordial timing of the field” when he entered it and the “multitude of exposures” that resulted.

Currently, his Neuroscience and Neuromuscular Human Research Laboratory is working on, among other projects, “how strength training affects cognitive functions” of people with Down syndrome and post-menopausal women, and recovery modalities including the new technology of using float rooms. He is quick to point out that all of his research benefits from “extremely talented research teams,” and credits “brilliant collaborators and brilliant students over the years” for being major contributors to his accomplishments.

To current students in the field hoping to learn from his success, Kraemer recommends, “Get exposure [to a wide variety of topics] early, then drill down—don’t specialize too soon and miss a broader understanding of the context.” He emphasizes the importance of gaining as extensive of a scientific background as possible and identifying quality scientists to work under and with. “Life experiences are how you get there,” he says, so “take advantage of every unique snapshot [in time]. Get everything you can out of it, appreciate it, and realize how lucky you are.”
Evan Johnson awarded two research grants in 2018

K&H’s Assistant Professor of Exercise Physiology Evan C. Johnson, Ph.D. was awarded a pair of two-year grants in 2018. He received a combination grant through the Mountain & Plains Education and Research Center (MAP ERC) and the High Plains Intermountain Center for Agricultural Health & Safety (HICAHS). This grant funds his research into “the physiological and psychological effects of heat acclimation in wildland firefighters,” and he will begin data collection in April 2019. The National Institutes for Health IDEA Networks for Biomedical Research Excellence (INBRE) Program funds UW, and Johnson received the Wyoming INBRE grant to research “the metabolic effects of high-intensity exercise.” He will continue the data collection stage through summer of 2019. Johnson invites anyone who is interested to participate in a Memorial Day 2019 workout at War Memorial Stadium, an event put on in conjunction with this research project, which will be advertised soon. Those interested in participating in the study can contact Johnson at evan.johnson@uwyo.edu.

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When K&H Professors Tristan Wallhead and Mark Byra decided to include the Irish sport of Gaelic football among the sports that PETE students learn and teach in Wyoming public schools, they were only thinking of the unique advantages of the sport—and they had no idea it would draw so much attention.

In 2011, Wallhead and Byra stopped in Dublin on their way to an AIESEP conference and decided to watch a Gaelic football match. “We both thought it was very fast-paced and included numerous skills from different sports. It is predominantly a punting game like Aussie Rules Football, but players dribble [the ball] using bounces and foot solos, and pass it using a volleyball hand pass,” Wallhead told UW News for its October 11, 2018 article. Their interest in the sport lay dormant until K&H alumna Tracy (McKenzie) Schellberg, who shares an interest in Gaelic football and teaches it in P.E. classes in Seattle, returned to UW to watch the Cowboys take on Washington State and casually offered to do a Gaelic football workshop with the PETE program. The idea took off, and Wallhead integrated Gaelic football as a section in the PETE practicum curriculum for pre-service teachers—something that has never been done before, even in Ireland.

As for why Gaelic football stands out as an ideal sport to include in PETE courses, Wallhead told Joel Moline of the Branding Iron for an October 17, 2018 article, “By the time kids get to middle school and high school, they are already soccer players, or basketball players, or volleyball players. [Gaelic football] levels the playing field a little bit and makes it inclusive because none of the kids particularly dominate” the game due to the variety of skills needed to play well. It involves the use of both hands and feet, but is still easy to both learn and teach because the students have already picked up many of the skills from other sports. Additionally, the sport is extremely inexpensive to implement, and its ball-sharing nature gets all the students involved. In fall 2018, PETE students taught Gaelic football to sixth and seventh graders at Laramie Middle School, and Wallhead plans to continue to include the sport going forward, and he hopes that as the PETE students graduate and spread across Wyoming, they will take Gaelic football with them.