

INTEGRATING MEDICINE, SCIENCE, AND EXERCISE

Department of Human Physiology

"What's Your Max?" Going to Extremes to Advance Human Health and Performance

Most graduates of the Department of Human Physiology are familiar with the term "VO2 max test," but how many ever had the chance to be tested? Exercise and fitness testing services are now provided in a state-of-the-art facility operated by the Department of Human Physiology. The new facility, located in the Bowerman Family Building at historic Hayward Field, serves the department's mission of providing testing, education, and research related to exercise performance, physical fitness, and the link between physical activity and health.

Exercise and fitness testing is conducted by expert exercise physiologists who are committed to providing accurate knowledge of an athlete's personal fitness and exercise capacity by using the latest technology and testing methods. A variety of testing packages are available to meet the needs of athletes of all levels, including the elite and trained athlete as well as those just beginning an exercise program. Those interested in endurance competition such as distance running, road cycling, and triathlons will find that testing results are useful for designing, improving, and evaluating their exercise and training programs. The facility is open to the public by appointment and can accommodate individuals as well as athletic teams and clubs.

In addition to providing testing services for the public, the facility is used by the department as a training and instructional facility in which University of Oregon students are exposed to the latest technology for body composition and fitness assessment. The facility also supports healthcare oriented research on topics related to obesity, osteoporosis, and hypertension.

Core equipment in the facility includes a dual energy x-ray absorptiometry scanner for bone density and body composition analysis, an electrocardiograph and metabolic cart for VO2 max testing, and a research-quality treadmill and cycle ergometer. Each measurement system represents state-of-the-art technology and the current gold standard of body composition and fitness assessment.

Greetings from the Department Head

t is once again a pleasure to extend warmest greetings to you from our faculty, staff, and students. The pace of activity within the department continues to be slightly frenetic as the enrollment count shows that some 550 undergrads and forty graduate students currently call the human physiology department (HP) their home. Past issues of In Vivo have focused on our instructional program. Our hope was that you would see firsthand how important to our faculty is the work of providing HP students with a solid background in anatomy-physiology and related disciplines. I am deeply proud of my colleagues and office staff for the manner in which they have adjusted to the huge growth we have experienced. As you may know, independent research is a major responsibility of the UO faculty. During the last twenty years, the department has worked hard to acquire expertise and create labs where high-quality research can be conducted. Consequently, all tenure-track faculty members now have their own laboratories and each has received substantial financial support from agencies such as the





When visiting the campus, alumni are especially welcome to tour the facility to learn more about these programs. The facility is administered by the department's Exercise and Environmental Physiology Laboratories. A call in advance—(541) 346-2988—will help ensure a mutually convenient time for a visit. Better yet, call for an appointment and find out "what's your max?" For more information, visit our website: eeplabs.uoregon.edu/EFTS.

National Institutes of Health, the Centers for Disease Control and Prevention, the National Science Foundation, and the American Heart Association. "Translational research" is a term describing work done in basic science that has some immediate relevance to clinical medicine, and accurately describes our research mission. Examples of such research conducted by members of the HP faculty include finding more efficacious protocols to rehabilitate stroke patients, monitoring the neurological health of people with traumatic brain injuries, identifying strategies to improve balance and gait in elderly people and children with cerebral palsy, shoulder rotator cuff injuries, treatment and prevention of hypertension, and the vascular health of women who use hormone replacement therapy. The practical nature of some HP science is illustrated by the recent filming of a National Geographic television segment examining Susan Verscheure's work on the physics surrounding the creation and evolution of the sports bra. The segment is due to air nationally this spring (see page two).

"In the Living!"

In Vivo or "in the living" connotes a focus common to those who study the science of exercise and human movement; hence, it is the title of the Department of Human Physiology alumni newsletter. Our goals for *In Vivo* are to:

- Honor the department's past
- Acquaint department alumni with current student and faculty member successes
- Highlight new and exciting directions
- Provide opportunities for alumni to communicate with the department.

Haven't received prior issues of *In Vivo*?

If you have not received prior issues of *In Vivo* (fall 2004, spring and fall 2005, and spring 2006) and wish to acquire a copy, please let us know via e-mail, hphy@uoregon.edu, or regular mail, Department of Human Physiology, 1240 University of Oregon, Eugene OR 97403-1240, or phone (541) 346-5430. We will send one to you right away!

Connect to the Department!

Be sure to log on to the Department of Human Physiology Alumni Website. You can access past issues of *In Vivo* as well as learn about department events and highlights. Go to www.uoregon .edu/~hphy, select your browser (Explorer, Netscape, or Safari), and then click on "Alumni" in the lower left-hand column.

We value your comments and encourage you to communicate with us through e-mail at hphy@uoregon. edu or regular mail at Department of Human Physiology, 1240 University of Oregon, Eugene OR 97403-1240.

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Krista Parent Named 2007 Oregon Superintendent of the Year

Krista Parent, South Lane School District superintendent, was recently named the 2007 Oregon Superintendent of the Year.

Parent, an HP alumna (B.S. '84), was cited for leading a turnaround in the Cottage Grove schools that produced dramatic improvements in student academic performance.

Among her many accomplishments as superintendent are a \$5 million National Science Foundation grant awarded to the district for improving math instruction, a \$1 million educational technology grant, and a \$1 million 21st-Century Schools grant for afterschool and summer programs.

Parent will represent Oregon and compete for the National Superintendent of the Year honors at the American Association of School Administrators National Conference in New Orleans on March 2. Kudos, Krista!

DEPARTMENT NEWS

Department Researchers Zero In on How the Body Regulates **Its Response to Heat Stress**

ssociate Professor Christopher Minson and former graduate student Brett Wong may have isolated an elusive neurotransmitter pathway in the skin, a discovery that, if confirmed, would be a leap forward in understanding how temperature regulation occurs. "We really need to understand the basic mechanism of skin blood-flow responses," Minson said. "There is a wide range of implications for this very basic science. When we find things, other groups can immediately apply it in patient populations." The research was funded to Wong through a Eugene Evonuk Foundation Fellowship in Environmental or Stress Physiology and to Minson through a grant from the National Institutes of Health.

National Geographic **Interviews Anatomy Professor** about Sports Bra Research

he National Geographic Channel recently was on campus filming a segment for its new series Man-*Made*, which explores processes used to produce everyday items. Since one of the items investigated was the brassiere, the film crew interviewed anatomy instructor Susan Verscheure about her prior biomechanical research on the sports bra. Her study concluded that "the typical sports bra you pull over your head is actually the least effective for breast stabilization," said Verscheure. The interview is anticipated to be part of a National Geographic Channel program scheduled for spring 2007. Check your TV listings!

Department to Host Biomechanics Symposium

he Department of Human Physiology will host the third annual Northwest Biomechanics Symposium in May 2007. The symposium is dedicated to highlighting graduate student research conducted at universities throughout the northwest United States and western Canada. The meeting will take place on campus in the William W. Knight Law Center and will feature presentations of works from some 100 student-scholars.

Former Department Professors Honored at the University of Illinois

wo former UO HP faculty members, who are currently professors in kinesiology and community health at the University of Illinois, were recently honored for their teaching and scholarly activities. Kim Graber earned a Distinguished Teacher-Scholar Award for teaching excellence and faculty mentoring while Edward McAuley received honorable mention accolades for the Campus Award for Excellence in Guiding Undergraduate Research. Congratulations, Kim and Eddie!

Graduate Student and Alumni Receive Research Awards



ALUMNUS PROFILE: Russ Pate

Anyone who has kept abreast of the American College of Sports Medicine or is interested in the health implications of physical activity, particularly for children, undoubtedly is familiar with Russell R. Pate, whom the Department of Human Physiology recognizes as a distinguished alumnus.

Pate, a native of upstate New York, was educated at Springfield College (B.S., 1968) and the University of Oregon (M.S., 1973; Ph.D., 1974). In 1974 he joined the faculty of the University of South Carolina, where he now serves as professor in the Department of Exercise Science in the Arnold School of Public Health. During leaves of absence from the University of South Carolina, he

has held positions at the University of Virginia and the Medical College of Georgia.

Pate is an exercise physiologist with interests in physical activity and physical fitness in children and the health implications of physical activity. He has published more than 170 scholarly papers and has authored or edited five books. His research has been supported by the National Institutes of Health, the U.S. Centers for Disease Control and Prevention, the American Heart Association, and several private foundations and corporations. He heads a research team that currently is supported by three grants from the National Institutes of Health. He coordinated the effort that lead to the development of the recommendation on physical activity and public health of the U.S. Centers for Disease Control and Prevention and the American College of Sports Medicine. He also served on the U.S. Dietary Guidelines Advisory Committee (2003-4), an Institute of Medicine panel that developed guidelines on prevention of childhood obesity.

Pate has served in several leadership positions with the American College of Sports Medicine, and was elected as that organization's president for 1993–94. He is a past president of the National Coalition for Promoting Physical Activity, and he is an elected fellow of the American Academy of Kinesiology and Physical Education. In 1996 he received the Citation Award from the American College of Sports Medicine, and in 1999 received the Alliance Scholar Award of the American Alliance for Health, Physical Education, Recreation, and Dance.

"I had a wonderful experience at the UO," recalls Pate. "I chose to attend the UO for two reasons-to take advantage of its prestigious graduate program and to pursue my distance running career. I could not have been at the UO and in Eugene at a better time. I benefited from the opportunity to study with wonderful faculty members including my major adviser, Gene Evonuk, as well as Harrison Clarke, Lou Osternig, Jan Broekhoff, Cliff Brubaker, Stan James, Frank Reithel (in chemistry), and many others. And my years in Eugene, 1968–74, essentially spanned the Pre era. Bill Bowerman and Bill Dellinger were most welcoming to me, as were the athletes associated with the UO's track-and-field program and the Oregon Track Club. For me, the UO and Eugene were just perfect settings."

A lifelong distance runner, Pate competed in three U.S. Olympic Trials marathons and twice placed among the top ten finishers in the Boston Marathon. For more than twenty years he served as president of the Carolina Marathon Association, which hosted the U.S. Olympic Trials for the women's marathon in both 1996 and 2000.



FACULTY PROFILE: Andrew Karduna

Andrew Karduna was hired into the Department of Human Physiology as an assistant professor in 2002. Prior to his arrival in Eugene, Karduna was a faculty member in the Department of Physical Therapy and Rehabilitation Sciences at MCP Hahnemann School of Medicine (now Drexel University College of Medicine). Originally from New York, he did his undergraduate work at the Massachusetts Institute of Technology, receiving a B.S. in mechanical engineering. He earned the M.S. from Johns Hopkins University and the Ph.D. from the University of Pennsylvania, both in biomedical engineering.

For his doctoral work, Karduna developed a cadaver model to examine the biomechanics of a new total shoulder arthroplasty system.

Shortly after beginning work with physical therapists, he discovered that "the upper extremity was actually connected to the rest of the body," says Karduna, and he modified his methodology to begin studying shoulder motion. He developed an approach to track dynamic scapular motion in vivo, which led to funding from the Foundation for Physical Therapy, the Whitaker Foundation, the Arthritis Foundation, and the Centers for Disease Control and Prevention.

Karduna's current research projects revolve around the general hypothesis that the majority of orthopedic shoulder disorders are related to dysfunction of the rotator cuff muscles and tendons. These intrinsic shoulder muscles play a key role in helping to stabilize the shoulder, and injury to them can result in common shoulder pathologies, such as impingement syndrome, rotator cuff tears, instability, occupational disorders and possibly osteoarthritis. Work in his laboratory focuses on the study of many key biomechanical parameters, such as scapular kinematics, glenohumeral translations, proprioception, and electromyography. Karduna comments: "The best part about working in this department is the freedom and support I have been given to develop both the educational and research programs that are of interest to me."

ennifer McCord, M.S. '04, a current doctoral student in human physiology, received the Environmental and Exercise Physiology Section Predoctoral Recognition Award from the American Physiological Society. McCord's research on the role of histamine during recovery from exercise was judged an outstanding study with significant merit. Lacy Holowatz, M.S. '02, and Belinda Houghton, M.S. '04, both received a Caroline tum Suden–Frances A. Hellebrandt Professional Opportunity Award from the American Physiological Society for research presented at the experimental biology conference. Holowatz is currently a doctoral student at Pennsylvania State University and Houghton is a doctoral student at University College Cork, Ireland.

Karduna is the director of the department's Orthopaedic Biomechanics Laboratory and teaches biomechanics at the undergraduate and graduate levels. He also teaches and coordinates a popular course for nonscience majors, Exercise and Performance.



IN MEMORIAM: John Borchardt

Former professor of physical education, John Borchardt died of age-related causes on November 14, 2006, a few days shy of his ninetieth birthday.

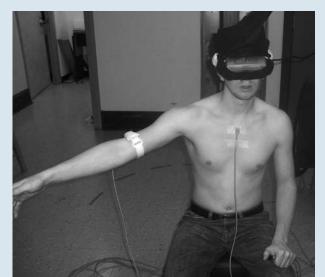
Borchardt came to the university as a department faculty member in 1948 and retired in 1982. Born in Germany in 1916, he emigrated to the U.S. via Ellis Island at the age of six. He served in the Army Air Corps in World War II and received a bachelor's degree from the University of Wisconsin, La Crosse, where he was a gymnast, and a doctorate from the University of Iowa. In more than thirty-five years of service to Oregon, Borchardt taught thousands of students; he will be missed.

Orthopedic Biomechanics Research

Where is my arm?

That is the question in the Department of Human Physiology Orthopedic Biomechanics Laboratory. The main research focus in this laboratory, under the direction of Andrew Karduna, is on upper-extremity biomechanics with an emphasis on disorders of the human shoulder. The biomechanics of the human shoulder is often described in terms of a balance between mobility and stability, since it has the largest range of motion of any human joint, but is also the mostly commonly dislocated. This balance is coordinated by multiple bones and muscles that define the shoulder.

For all synovial joints, stability is important for the coordinated performance of functional tasks necessary for activities of daily living as well as for more demanding athletic skills. Joint stability is afforded in part by feedback loops involving joint and musculotendinous mechanoreceptors that are integrated with the central nervous system. This system of feedback, termed proprioception, is especially important at the shoulder, where the relative incongruity between the glenoid fossa of the scapula and



Subject positioned for upper extremity proprioception test.

humeral head, coupled with insufficient capsuloligamentous restraints, particularly in dynamic conditions, leads to an increased risk of injury.

Recently, Karduna and his graduate student, David Suprak, developed a novel, unconstrained task for assessing a subject's ability to position their arm in space. Subjects were asked to position their arms in space with the use of motion data acquired from a magnetic tracking device. This apparatus provides real-time feedback through a set of virtual reality goggles (see figure). Subjects were then asked to replicate the target position in the absence of visual cues. Preliminary data from this model demonstrate that subjects are better at reproducing arm positions with higher levels of muscle activation. These findings appear to implicate muscle spindles (proprioception neurons found in muscles), instead of neurons found in ligaments, as a primary source of sensory input. This is possibly due to heightened sensitivity of the muscle spindle neurons during increased muscle activation. However, future studies are needed to confirm this hypothesis. These results have potential applications for the use of specific exercise activities that could potentially help improve a person's ability to know where his or her arm is in space. The laboratory staff is currently working with local orthopedic surgeons on a study using this approach to examine patients with traumatic shoulder instability. Future studies are planned that involve collaboration with the Labor Education and Research Center on campus to examine workers in high-risk occupational settings, such as dental hygienists and construction workers.



UNDERGRADUATE STUDENT PROFILE: Nana Dickson

A "desire to help those in need" aptly describes the motivation underlying Nana Dickson's pursuit of a dentistry career. Dickson, a senior in human physiology, was born in Freetown, Sierra Leone, to Ghanaian parents. She moved to Montreal, Quebec, at eleven months and to Vancouver, British Columbia, at seven years old. "My father studied chemical engineering at Concordia University in Montreal," she says, "and he gave me a solid understanding of the sciences and pushed me to explore it further. My mother, a nurse, inspired me to look at health science as a career."

After graduating in the top 10 percent of her class from St. Thomas More Collegiate high school in Burnaby, B.C., Dickson began studies at Oregon, where she now majors in human physiology with

minors in business administration and chemistry. She hopes to attend the University of North Carolina at Chapel Hill, where she recently interviewed for admission to the dental school. Dickson comments, "During my visit to UNC, I spoke with some students who had visited Malawi, southern Africa, and they told me about the amazing experience of not only helping patients, but seeing firsthand the extreme poverty and conditions under which many people live in Africa."

Among Dickson's goals is to work with other professionals to open schools in rural areas of Africa, "so that young people can better realize their potential," she says. As part of her career, she also hopes to offer free dental care in rural Africa. "Often, people silently bear with oral health problems because they don't understand that oral health is just as important as overall physical health. Many Africans place a higher importance on medicine than dentistry, so there simply aren't many dentists. Providing dental care there will allow me to reach out and help those who need it the most.

"To whom much is given, much is required," says Dickson. "The Department of Human Physiology has given me the opportunity to learn from a very knowledgeable faculty, and it is up to me to take what I have learned and continue along the road of education, and to give back to those in need."



GRADUATE STUDENT PROFILE: Jessica Meendering

Jessica Meendering graduated with a bachelor of science degree in athletic training and health promotion from South Dakota State University in 2002. She then spent a short period of time working as an athletic trainer and cardiac rehabilitation intern before entering the master of science program in human physiology at the University of Oregon. Meendering comments: "I truly enjoyed the profession of athletic training and hope to always be involved in it at some level. However, I was really interested in learning more about human and exercise physiology, and the program at the University of Oregon was a great fit for me."

FACULTY

Li-Shan Chou, Associate Professor: B.S., Mechanical Engineering, Tatung Institute of Technology, Taiwan; M.S. and Ph.D., Biomechanics, University of Illinois, Chicago. Focus: Biomechanics, at UO since 2000. www.uoregon.edu/~chou/

John Halliwill, Associate Professor:

B.S., Zoology, Ohio State University; Ph.D., Physiology, Medical College of Virginia. Focus: Physiology, at UO since 2002. http://eeplabs.uoregon.edu/

Andy Karduna, Assistant

Professor: B.S., Mechanical Engineering, Massachusetts Institute of Technology; M.S., Biomedical Engineering, Johns Hopkins; Ph.D., Biomedical Engineering, University of Pennsylvania. Focus: Biomechanics, at UO since 2002.

www.uoregon.edu/~ems/ems1.htm/

Gary Klug, Professor: B.S., Chemistry and Physical Education; M.S, Physical Education, University of Wisconsin-La Crosse; Ph.D., Washington State University, Exercise Physiology. Focus: Physiology, at UO since 1985.

www.uoregon.edu/~ems/ems1.htm/

Christopher Minson, Associate

Professor: B.S., Psychology, University of Arizona; M.S., Exercise Science, San Diego State University; Ph.D., Exercise Science, Penn State University. Focus: Physiology, at UO since 2000. http://eeplabs.uoregon.edu/

Louis Osternig, Professor: B.S. and M.S., Physical Education, Cal State, Hayward; Ph.D., Physical Education, University of Oregon.

Focus: Sports Medicine, at UO since 1972.

www.uoregon.edu/~ems/ems1.htm/

Richard Troxel, Senior Instructor: B.S. and M.S., Health Education and Physical Education, University of Oregon.

Focus: Sports Medicine, at UO since 1976.

www.uoregon.edu/~ems/ems1.htm/

Paul van Donkelaar, Associate Professor: B.S. and M.A., Physical Education, University of British Columbia; Ph.D., Clinical Neuroscience, University of Calgary. Focus: Motor Control, at UO since 1997.

Meendering came to the University of Oregon to work with Chris Minson. Her master's degree work focused on the influence of the menstrual cycle on blood pressure regulation during orthostatic stress in women. After graduating with the M.S. in 2004, achieving a 4.02 GPA, she remained with the department to work toward the Ph.D. In her current doctoral studies, Meendering conducts research in the area of women's health, and her dissertation examines the effects of synthetic female sex hormones on markers of cardiovascular health in young women. Her work is highly regarded, as she has been the lead or coauthor on three manuscripts published in top physiology and cardiovascular journals. She has also presented her studies at major scientific conferences across the U.S. "To date, most research in this area has focused on the effects of synthetic hormones on the cardiovascular health of postmenopausal women," says Meendering. "I hope to gain a better understanding as to how different synthetic hormones in contraceptives affect markers of cardiovascular health in women my age."

In addition to research, Meendering has been very active teaching at Oregon and is in her fifth year serving as a graduate teaching fellow (GTF) for the human physiology and exercise physiology laboratories. Meendering's talent and hard work as a student, researcher, and GTF have been recognized with a number of awards in the last year. She received research grants from the Eugene and Clarissa Evonuk Foundation, the American College of Sports Medicine, the Center for the Study of Women in Society, and the Northwest Health Foundation. In addition, Meendering was also the recipient of the Jan Broekhoff Scholarship, the Betty Foster McCue Scholarship, the Henry Howe Scholarship, and a general University of Oregon graduate student scholarship.

Meendering recently accepted an assistant professor position in the School of Health, Physical Education, and Recreation at the University of Nebraska at Omaha, starting in January 2006. There she will join four other University of Oregon alumni who are faculty members or postdoctoral students (Daniel Blanke, Ph.D. '75; Nick Stergiou, Ph.D. '95; Shing-Jye Chen, Ph.D '05; and Ka Chun "Joseph" Siu, Ph.D '06).

"I am so thankful for the incredible research and teaching opportunities that I have been given during my time at the University of Oregon," comments Meendering. "I have had amazing mentoring in both the laboratory and the classroom, which has allowed me to discover the type of teacher and researcher I aspire to be."

www.uoregon.edu/~paulvd/lab/eye research.html/

Susan Dawson Verscheure,

Senior Instructor: B.S., Sports Therapy, York University; M.S. and Ph.D., Exercise and Movement Science, University of Oregon. Focus: Human Anatomy and Athletic Training, at UO since 2003. www.uoregon.edu/~uogradat/

Marjorie Woollacott, Professor: B.S., Music; Ph.D., Neurophysiology, University of Southern California. Focus: Motor Control, at Oregon since 1980.

www.uoregon.edu/~ems/ems1.htm/



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2006 GRADUATING STUDENTS

Bachelor of Science Degree

Martin Christian Anderson, Eagle River, Alaska Elspeth Allyson Anthony, Lake Oswego, Oregon Kali Lee Baker, Bend, Oregon Jacqueline Elizabeth Biner, Moraga, California Kimberlie Grace Bishop, Eugene, Oregon Andrew James Boehm, Portland, Oregon

Lindsay Karlynn Brown, Aloha, Oregon Shannon Renee Bullard, Roseburg, Oregon Kimberly Lynne Burford, Springfield, Oregon Elizabeth Marie Carskadon,

Waldport, Oregon Laurel Ann Conley, Eugene, Oregon Jamie Marie Cowley, Eugene Oregon Jeremy Paul Crandall, Saint Helens, Oregon Andrea Eileen Cronin, Salem, Oregon Alexander Matthew DeHaan, Portland, Oregon

Logan Michael Dethman, Eugene, Oregon Leslee Nicole Dinsdale, Tigard, Oregon Luke Samuel Dohman, Turner, Oregon Heather Donaldson, Wilsonville, Oregon Carla Kye Donofrio, Dallas, Oregon Zachary John Duerr, Eugene, Oregon Rachel Nicole Enderle, Orinda, California Brian Christopher Fedor,

San Diego, California Danielle Femrite, Creswell, OR Anne Wells Fetcher, Salem, Oregon Anthony Gunsul, Portland, Oregon Amanda Jo Fitz-Gustafson, Springfield, Oregon

Sean Daniel Flannery, Eugene, Oregon Ellie Marie Folk, Astoria, Oregon Man-Sze Fong, Portland, Oregon Andreana Marie-Concetta Gentile,

Eugene, Oregon

Kelsie Lynn Graboyes, Beaverton, Oregon Hillary Joyce Gross, Hillsboro, Oregon Jordan Roper Guffin, Missoula, Montana Jennifer Lindsay Gull, Dallas, Oregon Whitney Noel Gum, Billings, Montana Joshua John Hagemeyer,

Springfield, Oregon

Lillian Marie Dickens Hallock, Eugene, Oregon

Sarah Hamra, Tucson, Arizona Lisa Joy Haniuk, Eugene, Oregon Elizabeth Hanselman, Portland, Oregon Andrew Michael Hardy, Portland, Oregon Kristin Healey, Portland, Oregon Brandon Michael Holliday,

Beaverton, Oregon Sasha Hood, Oakland, California

Allen Iloreta, Kapaa, Hawaii Stephanie Eloise Jackson,

Spokane, Washington Corinne Lindsey Jimenez, Woodinville, Washington

Pamela Ruth Kalstad, Eugene, Oregon Sarah Spencer Kenney,

Kenmore, Washington Stephanie Darcy Leake, Springfield, Oregon Nicole Lynn Lien, Silverton, Oregon

Kristin Ashley Lindquist, Eugene, Oregon Evan Long, Eugene, Oregon

John Jason Lovendahl-Toepke, Eugene, Oregon

Erin Elizabeth Manning, Medford, Oregon Levi Jeh Martin, Long Creek, Oregon Alicia Marie McIntire, Troutdale, Oregon Brent Anthony McManus, Ukiah, California Julie Ann Miller, Orinda, California Nicole Patrie Miller, Portland, Oregon Terri Ann Marie Miller, Springfield, Oregon Diana Kathleen Monroe.

Memphis, Tennessee

Lauren Masako Moanikea Morita, Kailua, Hawaii

John Michael O'Brien,

Coronado, California Leia Janine Paden, La Jolla, California Ryan Christopher Pearson, Poway, California Adam M. Perkins Creswell, Oregon Courtney Elizabeth Phillips, Eugene, Oregon Alanna Noelle Rintalan, Eugene, Oregon Matthew Stephen Rogers, Oregon City, Oregon

Jarrod Alan Schechla, Oregon City, Oregon Stephanie Ann Schultz, Oak Grove, Oregon Farrah L. Snyder, Portland, Oregon Jessica Lee Sojka, Beaverton, Oregon Janiece Stanaland, Medford, Oregon Ryan Street, Salem, Oregon Carlyn Michelle Stronach, Portland, Oregon Lori Christine Tabor, Bend, Oregon Takashi Tarumi, Tokyo, Japan Tiffani Noelle Tedrow,

Huntington Beach, California Allison Linn Thomas, Windsor, California Tristilynn Teiko Tomono, Hilo, Hawaii

Roberto Karlo Villanueva, Salem, Oregon Amy Michelle Wirth, Albany, Oregon Andrew John Young, Newberg, Oregon Amanda Nadine Zehrung, Oregon City, Oregon Alena Marie Zweben, Berkeley, California

Master of Science Degree

STUDENT ADVISER Patima Silsupadol Charlene Halterrnan Tonya Amann Jeffrey Beavers Jason Chapman Anthony Drew Aaron Epperson Kathleen Green Ashlely Heard Virginia Klausmeier Gregg McCord Laef Morris Heather Murray James Pilgrim Eric Sorenson Craig Switzler Gregory Waltner

Marjorie Woollacott Paul van Donkelaar Susan Verscheure Li-Shan Chou Andy Karduna Paul van Donkelaar Susan Verscheure Susan Verscheure Susan Verscheure Li-Shan Chou Christopher Minson Susan Verscheure Susan Verscheure Susan Verscheure Susan Verscheure Susan Verscheure Susan Verscheure

Doctoral Degree

STUDENT Jeanne Langan Heng-Ju Lee Tonya Parker David Mandeville Ka Chun Siu

ADVISER Paul van Donkelaar Li-Shan Chou Louis Osternig Louis Osternig Paul van Donkelaar

Greetings from the Department Head continued from page one

Faculty grant support now measures in the millions of dollars. National awards have been bestowed on students and faculty members for their outstanding achievements from flagship organizations such as the American Physiological Society and the American College of Sports Medicine. This success, coupled with program growth, has enabled the department to hire a new colleague this year, a rare distinction in these days of tight budgets. Please check our department website (easily accessed through www.uoregon .edu) for an in-depth look at HP research.

We offer our deepest thanks to all of you who have generously provided us financial support. Contributions from alumni and friends helped create a new teaching lab, send graduate and undergraduate students to conferences, create In Vivo, and incorporate technology into our classrooms in ways we could have never imagined possible. We trust that you will enjoy this edition of In Vivo and that you will take the time to communicate with us about your activities so we may include more alumni news in future editions. –Gary Klug

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Former students Maria Roncesvalles, Stasinos Stavreaneas, and Nicholas Stergiou enjoy a light moment at the 2006 ACSM-UO reception in Denver.

Department Reception Scheduled for 2007 ACSM Annual Meeting

The department has planned a reception for UO alumni, faculty members, and students at the 2007 American College of Sports Medicine meeting in New Orleans. It is slated for 5:30-7:00 p.m., Friday, June 1. Last year's highly successful reception in Denver was well attended and enabled alumni across five decades to enjoy each other's company. We cordially invite the many department alumni who attend this meeting to join us in reconnecting with friends and colleagues who share a common heritage. If you have colleagues attending the meeting whom you think would enjoy our group, please invite them!



Answer to last issue's puzzle: 1974 intramural soccer champs—back row, left to right: John Ashton, Colin Tilley, Eric Thomas, Steve Pepper, Bill Kosman, George Rada, Gary Moran, Ian Bennett; front row, left to right: M. Fooladi, Gene Brown, Fred Loveys, Jan Broekhoff, Lawrence Prosser, Jeff Elphenston.

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