INTEGRATING MEDICINE, SCIENCE, AND EXERCISE

Department of Human Physiology

IN VIVO

Message from the Dean

Joe Stone, Dean of the College of Arts and Sciences

Welcome to In Vivo!

The Department of Human Physiology evolved from the first school of physical education in the United States. It has educated more than 3,000 UO students since 1920. These alumni are university professors, physical therapists, physicians, athletic trainers, public school teachers, school principals and business owners. They conduct biomedical research, perform surgery, educate students, administer schools and rehabilitate the injured and disabled.

The department is one place where Ducks have always gone to learn about human health and physiology. It has grown significantly in the last century—even in the last year! Some 675 students enrolled in anatomy and exercise science courses last year, an increase of more than 25 percent from the year before.

Student interest in the curriculum is high. A dynamic and energetic faculty provides state-of-the-art instruction in the classroom, and leadership and vision to the College of Arts and Sciences. Faculty members' enthusiasm springs from their own research expertise and accomplishments. The faculty continues to be awarded numerous research grants from a leaded range of sources—from the Department of Defense to the National Institutes of Health.

Some 25 percent of undergraduates have an opportunity to conduct research with faculty members, benefiting from the intellectual and experiential resources that accomplished researchers bring to the labs. Dynamic teaching allows students to be involved at all levels and with many different types of instructional technological equipment. Team-taught courses allow students to learn from the complementary expertise of our faculty in introductory courses such as Exercise as Medicine, and Exercise and Performance. This kind of professional synergy is also spilling over into the larger community. A newly announced department partnership creating the Oregon Heart & Vascular Institute offers the potential for success and stability had changed dramatically.

The last decade has been a challenging one for our program. As many of you know, the implementation of Measure 5 in the early '90s resulted in the closing of our college and the departure of a significant number of our colleagues. Those tragic events provided two clear choices to the department. The first was to allow the events to threaten its existence and the second the history of its commitment to the value of exercise and physical activity. The alternative was to re-create the department in such a way that its mission would carry on and adapt to an ever-changing environment where the requirements for success and stability had changed dramatically.

I know there has been much confusion and uncertainty among many of you with respect to the fate of the program. I am sure that the question, “what’s happening there anyway?” has come up often in conversations among our alumni. My simple answer to that question comes in the form of this newsletter and the people and events it highlights. My sincere hope is that, after you peruse these pages, you will have taken the first step in being convinced that the department has returned to a position of prominence within the university, one in which you can be proud. We are confident that you will see a change, but it is important that our alumni know with confidence that, despite the name change, the department maintains a firm commitment to its historical core of study centered in the science of exercise and human movement centered in the science of exercise and human movement.

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IN THE PAST, THE PRESENT, AND THE FUTURE

First University of Oregon gymnasium building—the fourth building constructed on campus

1889

1904

1908

1909

1915

1920

1988

Gary Klug, Department Head

Greetings from the Department Head

I am happy to welcome you to the first edition of In Vivo. The last decade has been a challenging one for our program. As many of you know, the implementation of Measure 5 in the early ‘90s resulted in the closing of our college and the departure of a significant number of our colleagues. Those tragic events provided two clear choices to the department. The first was to allow the events to threaten its existence and the second the history of its commitment to the value of exercise and physical activity. The alternative was to re-create the department in such a way that its mission would carry on and adapt to an ever-changing environment where the requirements for success and stability had changed dramatically.

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Perhaps the biggest news of the department is the change in its name from the Department of Exercise and Movement Science to the Department of Human Physiology. This process took more than two years and was in response to a decade-long metamorphosis in the department that established the training of students in the pre-health and biomedical sciences as its primary mission. Space does not permit a detailed discussion of the rationale for the change, but it is important that our alumni know with confidence that, despite the name change, the department maintains a firm commitment to its historical core of study centered in the science of exercise and human movement.

John Bovard named first dean

Bertha Stuart becomes first director of women’s physical education

Mabel Cummings becomes second director of women’s physical education

William Hayward is fourth director of physical education

Hugo Baxt is named third director of physical education

Charles Burden becomes second director of physical education

William Hayward is fourth director of physical education

Gary Klug, Department Head

IN THE PAST, THE PRESENT, AND THE FUTURE

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Michigan State Education, the first in the United States. John Bovard named first dean

UNIVERSITY OF OREGON

IN VIVO
DEPARTMENT NEWS

Graduate Student Receives Prestigious ACSM Award

The Department recently received a $10,000 grant from the ACSM for research on the effects of exercise on bone health. This project is being conducted by graduate student Sarah Johnson with the assistance of Dr. Paul van Donkelaar, faculty member in the Department of Physical Education. The grant will fund the purchase of new equipment and supplies necessary for the research.

FACULTY PROFILE: Dr. Paul van Donkelaar

Paul van Donkelaar is the "oldest" new faculty member in the department, having arrived at the University of Oregon in 1997 as an assistant professor. He received tenure the previous year and is now an associate professor. Van Donkelaar has a background in physical education in which he received bachelor's and master's degrees from the University of British Columbia in Vancouver, Canada. He then went on to a Ph.D. in clinical neurosciences at the University of Calgary. This was followed by two post-doc stints in Europe—one in Marseille, France, and another in Oxford, England. Throughout his academic career, van Donkelaar has had research interests in a variety of topics broadly related to motor control. This has included examining deficits in a number of different patient populations with neurological deficits that affect the control of movement—including cerebellar damage, stroke, and Parkinson's disease. More recently, van Donkelaar has undertaken research projects addressing the motor deficits in children with cerebral palsy in collaboration with Marjorie Woollacott, and in young adults with concussion in collaboration with Li-Shan Chou and Lou Osternig. These projects are funded by the National Institutes of Health and the Centers for Disease Control and Prevention, respectively. Van Donkelaar is also a member of the Institute of Neuroscience and has active research collaborations with several faculty members in the Department of Psychology.

"Our department provides a fantastic learning environment at both the undergraduate and graduate levels because of the group of people we have here," van Donkelaar remarks. When he is not in classroom teaching or doing research, he and his family spend a lot of time at their new cabin in the mountains near Wallowa Pass.

ALUMNUS PROFILE: Dr. Jack H. Wilmore

It is a great pleasure to honor Jack H. Wilmore as a Distinguished Alumnus of the Department of Human Physiology. Wilmore recently completed an illustrious research and teaching career that has placed him clearly among the most influential authorities in exercise physiology over the past 30 years. We are sure that many department alumni are aware of Wilmore's many accomplishments and recognize the significant impact he has had on our discipline.

Wilmore received his Ph.D. in physical education from the University of Oregon in 1966, an event that started him on a path that resulted in numerous contributions to the long-term health and well being of society. Wilmore retired in 2003 as a distinguished professor in the Department of Health and Kinesiology at Texas A&M University. From 1985-1997, he was the Margie Garley Swag Endowed Centennial Professor and chair of the Department of Kinesiology and Health Education at the University of Texas at Austin. Prior to that, he served as professor and chair at the University of Arizona, and on the faculties at the University of California, and Ithaca College.

Wilmore was president of the American College of Sports Medicine from 1977-79 and chaired the Research Committee of the United States Olympic Committee Sports Medicine Council. Currently, he is a member of the American Physiological Society, as well as a fellow and former president of the American Academy of Kinesiology and Physical Education.

Wilmore's research interests have focused on the prevention and control of obesity and coronary heart disease, on mechanisms that alter physiological function with training and detraining, as well as factors limiting the performance of elite athletes. During his celebrated career, Wilmore published more than 300 peer-reviewed research papers, 53 chapters, and 15 books, prodigious numbers by any account. Although retired, he is still active as one of five principal investigators for the NIH-funded HERITAGE Family Study, a large multi-center clinical trial investigating the possible genetic basis for the variability in the responses of physiological measures, and risk factors for cardiovascular disease and type-2 diabetes mellitus, to endurance exercise training.

In addition to Wilmore's research activities, he served as a consultant for a number of professional sports teams, the California Highway Patrol, the President's Council on Physical Fitness and Sport, NASA, and the U.S. Air Force.

Wilmore remarks that, "there have been many times during my life that I have looked back at my experiences at the University of Oregon and realized how important they were to providing me with a solid basic foundation for my professional career. Close interaction with individual faculty members (Doctors Sigerseth and Clarke, in particular) and fellow graduate students was invaluable. Overall, I could not have been better prepared for the challenges of a career in higher education. A special thanks to the University of Oregon for preparing me to run the good race."

Wilmore is now settling into a less hectic life with his wife Dottie in Suttlebrook, Arizona. He has three daughters—Wendy, Kristi, and Melissa—and five grandchildren.

We salute our Distinguished Alumnus, Jack H. Wilmore.

Faculty Receive Grant to Build Environmental Chamber

The Department of Psychology has been honored with a $30,000 grant from the National Institutes of Health and the Centers for Disease Control and Prevention, respectively. Van Donkelaar is the principal investigator on this grant, which will fund construction of an environmental chamber for the study of human integrative physiology. When completed, the twelve-foot square room will be capable of controlling temperature from between 10 percent and 95 percent, and simulating minus 10 to 50 degrees Celsius, as well as humidity, light, and sound levels. The chamber will be used to study the effects of environmental factors on human physiology and anatomy courses, including labs, to students who cannot make it to the campus on a regular basis. The grant will also be used to purchase a new software technology called Virage. This software, which is often used in business environments, allows material such as PowerPoint presentations to be webcast to remote locations in a very powerful and user-friendly way.

We want to hear from you!

The Department of Human Physiology very much wants to know about you. What are you doing now and what paths did you take after receiving your degree in Physical Education, Exercise and Movement Science or Human Physiology? How did your UO experience affect your life? What is your opinion of In Vivo? We want to share with you and you to share with us.

We intend to keep you informed about the department via future issues of In Vivo and through our extensive website at http://www.uoregon.edu/health. Check it out!

Our goal is to have an alumni link there in the very near future.

You can 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.

Keep in touch and we’ll do the same!
The Department of Human Physiology and Sacred Heart Medical Center recently joined together to form the Oregon Heart & Vascular Institute, a comprehensive program of clinical medicine, research, and education. The institute functions as a hospital-within-a-hospital, with distinct leadership and governance. We are a top 100 hospitals for cardiac services. The University of Oregon brings more than eight decades of research and expertise in human physiology to the institute. Faculty in the Department of Human Physiology are investigating factors and interventions that contribute to cardiac and vascular health that span the spectrum from molecular-based research to direct patient care. Collaborations between the UO and Sacred Heart already result in cosponsored medical education and research seminars, student clinical/surgery observations, and physicians in the classrooms. However, the institute will facilitate and expand these opportunities and open the door to many others. Bringing such teaching and basic research from the university to clinical care and practice is an extraordinary opportunity rarely found outside of medical schools. While physicians apply the best-known medical science to the immediate care of patients, researchers advance that knowledge for future treatments. Through the institute, physicians will have access to the latest medical research, and researchers will have the opportunity to try all sorts of projects with nationally recognized physicians. This will facilitate student, patient, and public education in new and innovative ways.

UNDERGRADUATE STUDENT PROFILE: Amanda Fenton

Amanda Fenton was one of the top 2004 graduating seniors in the Department of Human Physiology. Originally from Lake Chelan, Washington, Fenton had a very stimulating and challenging undergraduate college career while completing the requirements for her major in human physiology and for her minor in Spanish. Her academic performance enabled her to graduate in the UO Honors College which required the completion of an honors thesis. Her thesis, entitled “The effects of divided attention on gait patterns of college students after a concussion,” examined the residual effects of head injuries over time. In addition to her academic achievements, Fenton served as the student coordinator of the Peer Advising Program. Her professional goal is to become a physician’s assistant following a trip to Ecuador to work in a health care facility.

“One of the reasons I came to Oregon in the first place was the Exercise and Movement Science department,” she says. “I was very interested in sports medicine and athletic training at the time, and excited about the program here. As I went through the courses, my career goals changed to becoming a physician assistant, and the classes I have taken here have provided a sound and quality foundation for graduate school. The requirements for this major are not only challenging, but they are also stimulating, thought provoking and applicable to everyone. I highly encourage students that are interested in the human body to become involved in this department. They will receive an excellent education, and their understanding of how the body functions will only fuel their interest for the future.”

GRADUATE STUDENT PROFILE: Brett Wong

Brett Wong, M.S., has been a doctoral student in the Department of Human Physiology for four years. Prior to attending the University of Oregon, Wong received his B.S. in exercise physiology from University of California, Davis. He received his M.S. degree from the UO in 2002. Currently, Wong is involved in research in the Human Cardiovascular Physiology Laboratory working under Christopher Minson where their research focuses on the neural control of the circulation. Specifically, his research focuses on the control of skin blood flow during heat stress. Increasing skin blood flow and sweating is the primary means by which humans regulate their internal temperature during heat stress. Wong recently received the National Student Research Award from the American College of Sports Medicine (ACSM) and presented his work at the National Conference of the ACSM in Indianapolis on June 2, 2004. The highly competitive research award is given to only one student per year. Wong also has been involved in six research projects that have been published in the top journals in his field, including the Journal of Physiol- ogy, the American Journal of Physiology, and the Journal of Applied Physiology. For the past two years, Wong has received the Jan Broekhuis Scholarship for his involvement in research and teaching in the department. In addition to his research, Wong has been an outstanding laboratory instructor and supervisor for undergraduate human physiology students. He helped to restructure the way in which the laboratory courses in human physiology are taught, moving away from the typical laboratory format and integrating collaborative and case-based learning strategies.

“The four years I have spent as a graduate student in the Department of Human Physiology have been extremely rewarding on many fronts,” Wong says. “In terms of the research experience, working under Dr. Minson has been challenging and fun. As we answer more questions with each research project we also uncover more and more questions. In terms of teaching experience, I feel that I will leave the department with a great deal of experience as an instructor. I owe a lot to both Dr. Klag and Dr. Verscheure in helping me to improve my teaching skills and to become a better instructor. As a whole, I feel I have been provided with the guidance and instruction from all areas within the department. I feel that I will graduate from the department having had great research and teaching experience.”

FACULTY

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

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


Andy Karduna, Assistant Professor: B.S., Mechanical Engineering; M.S., Biomedical Engineering, Johns Hopkins; Ph.D., Biomedical Engineering, University of Pennsylvania. Focus: Biomechanics, at UO since 2000. http://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. http://www.uoregon.edu/~ems/ems1.htm

Christopher Minson, Assistant 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://esplabs.uoregon.edu/


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. http://www.uoregon.edu/~paulvd/lab/eye_research.html


Marjorie Woollaccott, Professor: B.S., Music; Ph.D., Neurophysiology, University of Southern California. Focus: Motor Control, at Oregon since 1980. http://www.uoregon.edu/~ems/ems1.htm
Bachelor of Science Degree

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<th>Name</th>
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<tr>
<td>Lisa Adams</td>
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<td>Jonah Lee</td>
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Erika Lindland        | Lake Oswego, Oregon |
Ronalyn Malagig       | Kauai, Hawaii |
Tara Mc Gann          | San Francisco, California |
Gregg McGill          | Clackamas, Oregon |
Lindsey Mordoff       | San Ramon, California |
Callocco O'Flaherty   | Auburn, California |
Rita Patil            | Portland, Oregon |
Shane Peterson        | The Dalles, Oregon |
Nicole Potteri        | Astoria, Oregon |
Stacie Shepherd       | Roseberg, Oregon |
Brittany Stodol       | Tualatin, Oregon |
Grant Simmons         | Portland, Oregon |
Jeff Soulia           | Springfield, Oregon |
Hugh Stamp            | Eugene, Oregon |
Angela Trstt          | Roseberg, Oregon |
Lindsey Werdell       | Eugene, Oregon |
Hannah Wiley          | Newberg, Oregon |
Laythen Young         | Prineville, Oregon |

Master of Science Degree

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<tr>
<td>Julia Berry</td>
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Doctoral Degree

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<tr>
<td>Michael Hahn</td>
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<td>Jennifer Hess</td>
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Message from the Dean, cont. from page one

care providers, builds upon successful past collaborations in UO classes and practicums. Plans are in progress for developing an even wider range of student and clinical programs involving the joint research of physicians and faculty who are pursuing critical questions in cardiovascular health.

Human Physiology takes its place alongside other world-class science departments at the University of Oregon while marching to its own drummer and in its own innovative direction.

Kudos to the Department of Human Physiology!

Recognize these students?

Who is in this picture and what year was it taken? If you know, tell us at: hphy@uoregon.edu

Greetings from the Department Head, cont. from page one

that has characterized it for more than a century. The department is building on its rich heritage by expanding its research, curriculum, and innovative instructional capabilities to better prepare students for medical, health science, and research careers.

Department faculty members believe it is extremely important to reconnect with our alumni, particularly in light of recent history. We are deeply grateful to Gary Moran, Ph.D. ’74, and his wife Jody who provided the financial support to create In Vivo. Our desire is that this issue of In Vivo reminds us of the department’s rich history and reconnects us to its early leaders, introduces the college in which the department now resides, and highlights current department faculty and some of its outstanding students. Please consider this issue of In Vivo the first of many steps in a process that will reestablish active communication between you and the department.

Department Reception Slated for 2005 ACSM Annual Meeting

The UO Department of Human Physiology is organizing a reception for UO alumni, faculty and students at the 2005 American College of Sports Medicine meeting in Nashville, Tennessee. The many department alumni who attend this meeting are cordially invited to reconnect with friends and colleagues who share a common heritage with the University of Oregon.

The details of this event will be forthcoming in the next issue of In Vivo and in the department website.