KINESIOLOGY

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Kines Grad Connection

Kinesiology Graduate Program Newsletter — December 2008, vol. 3, issue 1

From the Chair…

Thank you for taking the time to read the first ever Graduate Program Newsletter from the SCHOOL of Kinesiology at the University of Michigan. The UM Regents voted just this month to elevate the Division to School status. This is a direct result of the remarkable advancements and exciting changes that have occurred in our unit over the last 10 years. In this newsletter we introduce our new doctoral students for Fall 2008, profile our new Graduate Program Coordinator (Charlene Ruloff), and highlight some recent accomplishments of our current graduate students. Have a happy New Year!

Sincerely,

Daniel P. Ferris

In this issue:

Travel and Presentations

Kinesiology Graduate Students travel to present their ongoing research at scientific conferences in many different specialties. Some recent examples of their work are listed below.

Jesal Parekh, Ph.D. Student
Name of the conference: American College of Sports Medicine Annual Meeting
Location: Indianapolis, IN
Date: May, 2008
Title of Presentation: "Muscle pre-motor phase measures during a simple choice reaction tasks predict high risk knee landing mechanics"

Matt Juravich, Ph.D. Student
Name of the conference: North American Society for Sport Management Annual Meeting
Location: Toronto, ON
Date: June, 2008
Title of Presentation: **"**Professional athlete philanthropy: Walking the talk"

George Schweitzer, Ph.D. Student
Name of the Conference: Midwest American College of Sports Medicine Annual Meeting
Location: Columbus, OH
Date: October, 2008
Title of Presentation: **"**Carbohydrate timing effects on exercise performance: Front, end, & continual loading of carbohydrate beverage during exercise"

Tyler Brown, Ph.D. Student
Jesal Parekh, Ph.D. Student
Name of Conference: Anterior Cruciate Ligament Injuries: the Gender Bias
Location: Greensboro, NC
Date: April, 2008

Title of Presentation:
(**Brown**) "An unanticipated stimulus alters lower limb mechanics during single leg landings"
(**Parekh**) "Fatigue-induced changes in central control increases non-contact ACL injury risk in females"

Travel and Presentations (cont'd)

Chad Tiernan, Ph.D. Student
Name of the conference: North American Federation of Adapted Physical Activity Symposium
Date: September, 2008
Location: Indianapolis, IN
Title of Presentation: "Examining effects of treadmill training in infants at risk for neuromotor deficits"

Alyssa B. Schultz, Ph.D. Student
Name of the Conference:
18th Annual Art and Science of Health Promotion
Location: San Diego, CA
Date: March, 2008
Title of Presentation: "Return-on-investment analysis of a health promotion program at a Midwest Utility company"

Beth A. Smith, Ph.D. Student
Name of the conference: North American Society for the Psychology of Sport and Physical Activity
Location: Niagra Falls, ON
Date: June, 2008
Title of Presentation: "Development of gait periodicity in new walkers with Down syndrome: a mathematical perspective"

Andrea Cornford, Ph.D. Student
Name of Conference: Integrative Biology of Exercise Meeting
Location: Hilton Head, SC
Date: September, 2008
Title of presentation: "Exercise reverses altered lipid metabolism from one day of overeating"

Beth Crane, Ph.D. Student
Name of the conference: Affective Computing and Intelligent Interaction
Location: Lisbon, Portugal
Date: September, 2007
Title of Presentation: "Motion capture and emotion: affect detection in whole body movement"

Travel and Presentations (cont'd)

Antoinette Domingo, Ph.D. Student
Name of Conference: North American Congress on Biomechanics
Location: Ann Arbor, MI
Date: August, 2008
Title of Presentation: "Physical assistance can be detrimental to learning walking balance"

Name of Conference: American Physical Therapy Association Combined Sections Meeting
Location: Nashville, TN
Date: February, 2008
Title of Presentation: "The effects of using handrails on learning to walk on a narrow balance beam."

Name of Conference: Society for Neuroscience
Location: San Diego, CA
Date: November, 2008
Title of Presentation: "The effects of physical assistance on motor learning of narrow beam walking"

Pei-Chun, Ph.D. Student
Name of the conference: Proceedings of the North American Congress on Biomechanics
Location: Ann Arbor, MI
Date: August, 2008
Title of Presentation: "Motor response during unexpectedly reduced plantar flexor torque provided by a powered orthosis during walking"

Brett W. Fling, Ph.D. Student
Name of Conference: International Society of Electrophysiology and Kinesiology Annual Meeting
Location: Niagra Falls, ON
Date: June, 2008
Title of Presentation: "Relationships between motor unit size and recruitment threshold in young and older adults"

Melissa Wright, Ph.D. Student
Name of Conference: American Congress of Rehabilitative Medicine
Location: Toronto, ON
Date: October, 2008
Title of Presentation: "Home sensorimotor training for improved hand control in older adults"

Travel and Presentations (cont'd)

Sean Newsom, Ph.D. Student
Name of Conference: Integrative Biology of Exercise Meeting
Location: Hilton Head, SC
Date: September, 2008
Title of Presentation: "Reducing dietary fat from meals after exercise

Katsu Funai, Ph.D. Student
George Schweitzer, Ph.D. Student
Name of the Conference: American Diabetes Association 68th Scientific Sessions
Location: San Francisco, CA
Date: June, 2008

Title of Presentation: (**Funai**) "Inhibition of contraction-stimulated activation of AMPK partially inhibits the contraction-stimulated increase in glucose transport and PAS-150kD without altering PAS-160kD in rat skeletal muscle"
(**Funai)** " Evidence for a consistent association between the effects of prior exercise on AS160 phosphorylation and insulin-stimulated glucose transport in rat skeletal muscle"
(**Schweitzer) "**The B_2 receptor of bradykinin is not essential for the increase in insulin-stimulated glucose uptake following acute exercise"

Megan MacDonald, Ph.D. Student
Irully Jeong, Ph.D. Student
Janet Hauck Ph.D. Student
Name of Conference: 9th Symposium of the North American Federation of Adapted Physical Activity
Location: Indianapolis, IN
Date: September, 2008
Title of Presentation:
(**MacDonald**) "Participation Patterns of Youth with Down syndrome; an exploratory study"
(**Jeong**) "Balance in children with Down syndrome"
(**Hauck)** "Can we teach youth with Down syndrome or autism spectrum disorder how to ride a two wheel bicycle"

Travel and Presentations (cont'd)



George Schweitzer Ph.D. Student
Katsu Funai, Ph. D. Student
Carlos Castorena, Ph.D. Student
Name of the Conference: Michigan Metabolomics and Obesity Center Symposium
Location: Ann Arbor, MI
Date: October, 2008
Title of Presentation:
(**Funai**) "Inhibition of contraction-stimulated activation of AMPK partially inhibits the contraction-stimulated increase in glucose transport and PAS-TBC1D1 without altering PAS-AS160 in rat skeletal muscle"
(**Funai**)"Evidence for a consistent association between the effects of prior exercise on AS160 phosphorylation and insulin-stimulated glucose transport in rat skeletal muscle"
(**Castorena**) ""Effects of muscle specific overexpression of TUG's UBX C-terminal in mice on skeletal muscle mass, glucose uptake and Akt phosphorylation"
(**Schweitzer**) "A type II myosin ATPase inhibitor reduces contraction-stimulated glucose transport and phosphorylation of AMPK and TBC1D1 in skeletal muscle"

Name of the Conference: Michigan Diabetes Research and Training Center Winter Symposium
Location: Ann Arbor, MI
Date: April**,** 2008
Title of presentation:
(**Schweitzer**)"The B2 receptor of bradykinin is not essential for the increase in glucose uptake by insulin stimulated soleus of mice after acute exercise"
-stimulated glucose uptake following acute exercise"
(**Funai**) "Inhibition of contraction-stimulated activation of AMPK partially inhibits the contraction-stimulated increase in glucose transport and PAS-150kD without altering PAS-160kD in rat skeletal muscle"
(**Funai**) "Evidence for a consistent association between the effects of prior exercise on AS160 phosphorylation and insulin-stimulated glucose transport in rat skeletal muscle"

Graduate Student Awards

Rackham Graduate Student Research Grant

Melissa Wright has received a Rackham Graduate Student Research Grant to assist her with her doctoral research. This grant is designed to support Rackham graduate students who need assistance to carry out research that advances their progress toward their degree.

Shapiro Malik Award

Brett Fling, Brian Mills, and Beth Smith were all recipients of a Shapiro Malik Award, administered by the Rackham Graduate School. These awards were established by Harold T. Shapiro, former President of the University of Michigan, and Vivian Shapiro, former faculty member at the University of Michigan, to assist graduate students with interest payments on unsubsidized educational loans. Dr. John Malik, a devoted Rackham alumnus in Physics, established an endowment for the same purpose.

Rackham One-Term Dissertation Award

Beth Smith was a recipient of a Rackham One-Term Dissertation Fellowship for the 2008-09 academic year. The Fellowships are awarded to students that are at the writing stage of their dissertation and is intended to assist them to dedicate more time to completion of their dissertation.

Paul A. Hunsicker Memorial Award

Beth Smith received the 2008 Hunsicker Award. The Paul A. Hunsicker Memorial Award honors the memory of Professor Paul Hunsicker, Chair of the Department of Physical Education for Men, 1958-70 and Director of the Department of Physical Education, 1970-76. The award recognizes one graduate and one undergraduate student who have demonstrated superior scholarship and professional zeal and promise.

Student Researcher Award

Jesal Parekh received the American College of Sports Medicine Student Research Award in May 2008 at the Annual Meeting. It was presented for her paper entitled “Muscle Pre-Motor Phase Measures During a Simple Choice Reaction Tasks Predict High Risk Knee Landing Mechanics”.

Alumni Update

GREGORY SAWICKI, Ph.D.— Dr. Gregory Sawicki finished his Ph.D. investigating the biomechanics and energetics of walking with robotic lower limb exoskeletons in Summer 2007 with Professor Daniel Ferris. Greg moved on to a post-doctoral position at Brown University in the Department of Ecology and Evolutionary Biology. His current research focuses on understanding the influence of tendon elasticity on muscle contraction dynamics. He performs in vivo experiments on humans using ultrasonography to 'see' muscles and tendons in action during movement and in vitro experiments on isolated frog muscle-tendon. Greg is ultimately interested in applying his findings to improve the design of lower-limb assistive devices (i.e. robotic exoskeletons, powered prostheses).

Greg recently accepted a tenure-track position as Assistant Professor in the Joint Department of Biomedical Engineering at The University of North Carolina-Chapel Hill and North Carolina State University and will start in August 2009.

JOAQUIN ANGUERA, Ph.D.— Dr. Joaquin Anguera, a former doctoral student of Professor Rachael Seidler, will be beginning a post-doctoral position January 1st, 2009, at the University of California, San Francisco. He will be working with Dr. Adam Gazzaley to study how aging affects cognition in humans. For this position, he recently received a post-doctoral minority fellowship through the National Institute on Aging for two years of support.

Graduate Faculty Award

Professor Kathy Babiak recently received a William Diaz Faculty Fellowship Award through the Nonprofit Academic Center Council. The award will support her research on professional athlete philanthropy that she is conducting in conjunction with her doctoral student, Matt Juravich.

Dissertation Defenses

Alyssa Schultz
Date: December 5, 2008
Time: 1:00 pm
Location: Rackham Graduate School - 4th Floor East Conference Room
Title: "Metabolic Syndrome and Workplace Outcomes"
Advisor: Dee Edington

Welcome New Doctoral Students—Fall 2008

Please join us in welcoming our newest cohort of doctoral students!

Jessica Deneweth— Advisor Scott McLean

Area of Research: The focus of Jess's research is on better understanding the mechanism of non-contact anterior cruciate ligament injury, the alterations in joint motion and loading that persist following such injury, and the implication of these changes for the development of early osteoarthritis. Jess has a bachelor's degree in biomedical engineering, with a concentration in biomechanics, from Washington University.

Joe Gwin— Advisor Dan Ferris

Area of Research: Joe's objective is to develop mobile electroencephalography (EEG) techniques for functional brain imaging, and use these techniques to examine brain activity relevant to locomotion biomechanics. He has undergraduate and master's degrees in mechanical engineering from Dartmouth College.

Janet Hauck— Advisor Dale Ulrich

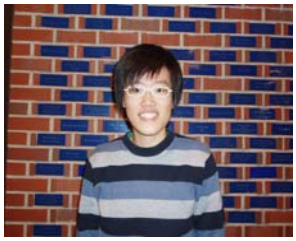
Area of Research: Janet's interests include examining and understanding the physical activity patterns of youth with Down syndrome and autism spectrum disorder as well as developing interventions aimed at maximizing physical activity participation for these populations. She has a master's degree in Adapted Physical Education from Ohio State University and an undergraduate degree in Physical Education from the University of Michigan.

Sanjoy Kahn— Advisor Peter Bodary

Area of Research: The main focus of Sanjoy's research is trying to intervene the signaling mechanism which might be causing difference in glucose tolerance in two different mouse models of impaired leptin signaling. He received his Bachelor of Science in Chemistry and Bachelor of Technology in Food Technology and Biochemical Engineering both from Jadavpur University, Kolkata, India and Master of Technology in Biotechnology from Jadavpur University, Kolkata, India.

Seung Pil Lee— Advisor T. Bettina Cornwell

Area of Research: The focus of Seung Pil Lee's research is sport public policy, specifically sport (events and facilities) as an asset for community development. He has a master's degree in sport management from the Ohio State University and an undergraduate degree in statistics from Korea University in Seoul, Korea.



Po Ju Lin— Advisor Katarina Borer

Area of Research: The main focus of Po-Ju's research is trying to find how the timing of exercise and meals affects blood glucose regulation. She has dual master's degrees in Kinesiology (M.S.) and in Human Nutrition (M.P.H.) from the University of Michigan. Her undergraduate degree in Food Sciences was received from National Chung-Hsing University in Taiwan.

New Doctoral Students (cont'd)

Mary Marzec— Advisor Dee Edington

Area of Research: The current focus of Mary's research is in risk reduction and the worksite environment. She has a master's degree in research design and statistical analysis from the School of Public Health, University of Michigan and an undergraduate degree in biology from Albion College.

Brian Mills— Advisor Rod Fort

Area of Research: Brian's interest in Sport Management lies in statistical analysis in sport and how this analysis interacts with qualitative management issues in sport. He has been working with Professor Rod Fort investigating fan demand and competitive balance, as well as with Professor Kathy Babiak on a pilot investigation of professional athlete philanthropy. Brian has a master's degree in Sport Management from the University of Michigan and an undergraduate degree in Psychology from St. Mary's College of Maryland.

Steve Salaga— Advisor Rod Fort

Area of Research: Steve plans to study player valuation and the relationship between team payroll distribution and success in professional team sports. Steve has a master's degree in Sport Management from the University of Georgia and an undergraduate degree in Exercise Science from East Carolina University.

Jennifer Sansom— Advisor Beverly Ulrich

The primary focus of Jennifer's research will be in developmental motor control for various populations. She has a Master's in Physical Therapy from the College of St. Catherine in St.Paul, MN and a Master's in Exercise Science from Northern Michigan University in Marquette, MI.

Alexandra Voloshina— Advisor Daniel Ferris

Area of Research: The main focus of Alexandra's research is modeling neuromechanical systems through computer simulations. These simulations can potentially lead to alternate control methods for robotic exoskeletons used in rehabilitation. She has a bachelor's degree in Biomedical Engineering from the University of Michigan.

Rachael Weese— Advisor: Jeff Horowitz

Area of Research: Rachael is currently exploring whether some of the key health benefits associated with endurance exercise (i.e., improvements in glucose tolerance, blood lipid profile, and blood pressure) largely stem from the most recent session of exercise in obese women or if more chronic training is required. Ultimately, these findings may markedly alter the approach to lifestyle interventions for obese women by tailoring them to optimize the health benefits of the most recent exercise session. Rachael received her undergraduate degree in Psychology and master's degrees in Exercise Physiology from Eastern Michigan University

Updates

Ironman USA

George Schweitzer recently competed in the Ironman USA competition in Lake Placid, New York (2.4 mile swim, 112 mile bike, 26.2 mile run). He finished 97th out of approximately 2400 triathletes in 10:18:27.

Congratulations, George!

Graduate Program Coordinator

Charlene Ruloff, our new Graduate Program Coordinator, lives in Pinckney with her husband, Tim and her two sons. Charlene has been with UM Kinesiology for a couple of years working primarily with the undergraduate and graduate curriculum. Charlene looks forward to the challenges her new position will bring. Please stop by and welcome her to the graduate program!

Baby Announcement

Carlos Castorena and his wife, Katherine, recently had their second baby. Casen was born weighing 8 lbs 4 oz on October 21st. He is pictured here with his older bother Kevin, who is a year and half old. Congratulations to Carlos and his family!

Performance in China

Lan Wei, a Ph.D. student working with Professor Melissa Gross, was the first person in mainland China to be awarded Advanced 2 classification (a high level ballet technique examination of the United Kingdom Royal Academy of Dance) with distinction. During the summer of 2008, she was invited to perform Don Quixote for an anniversary activity in Shanghai, China.

U-M Becomes Top U.S. Public University in World University Ranking

The University of Michigan was recently rated as one of the top 18 universities in the world by the Times Higher Education publication of London (2008). It was the highest ranked U.S. public university and one of 12 U.S. universities making the top 20. Other U.S. universities in the top 20 included: Harvard University, Yale University, California Institute of Technology, the University of Chicago, MIT, Columbia University, Princeton University, Duke University, Johns Hopkins University, Cornell University and Stanford University. U-M rose from 38th in the 2007 survey to 18th in the 2008 survey.

(http://michigantoday.umich.edu/2008/11/number1.php)

School of Kinesiology

The Regents of the University of Michigan voted to change our unit's name from the Division of Kinesiology to the School of Kinesiology. The new designation took effect, officially, on December 1, 2008.

"This historic event recognizes Kinesiology's unique and invaluable expertise that enriches research, learning, and service at the University of Michigan. Contributing to this profile has been our impressive growth over the years in the importance and impact of our research, the quality of our academic programs, and value in our service. We were able to achieve this designation because of the strength of our faculty, staff, and students, as well as that of our alumni and friends. Becoming a School will enhance further Michigan's status as international leaders in Kinesiology. I am so very proud of all of us and I am grateful to our University leadership for its support and recognition of the excellence that is, the School of Kinesiology, at the University of Michigan!"- Dean Beverly Ulrich

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For more information about a graduate degree in Kinesiology, please contact Charlene Ruloff, cruloff@umich.edu, or visit www.kines.umich.edu