



IUPUI

SCHOOL OF HEALTH
AND REHABILITATION
SCIENCESINDIANA UNIVERSITY
Indianapolis

April - June 2014

Teaching & Learning

- In April, the Dietetic Internship Program admitted 16 students from a pool of 65 qualified applicants. The admitted Internship Class of 2015 includes graduates of the following universities: Indiana University at Bloomington; Purdue University; University of Southern Indiana; University of Arizona; University of Vermont; St. Louis University, MO; Lipscomb University, TN; Case Western Reserve University, OH; Bowling Green State University, OH; St. John's St. Benedict University, MN; and the University of California at Davis.
- In May, two graduate students, **Emily Myatt** and **Elizabeth Hamilton** received their Master of Science in Nutrition and Dietetics. The title of Emily's thesis is "Effect of Learning Preference in an Online Learning Environment among Nutrition Professionals." The title of Elizabeth Hamilton's translational research project is "Parenteral Protein Intakes of Very Low Birth Weight Infants during the First Week of Life: Impact of a Feeding Protocol in the Neonatal Intensive Care Unit."
- **Judith Ernst, DMSc, RD** returned to Kenya for the summer where she cohosted an NIH sponsored workshop in June.
- On June 18, 2014 the Dietetic Internship Program Faculty and graduating Dietetic Internship Class of 2014 hosted an orientation for the incoming Dietetic Internship Program Class of 2015 and their significant others.
- Fifteen students graduated from the Dietetic Internship Program on June 19, 2014, which qualifies them to sit for the Registration Examination for Dietitians.
- The Department of Nutrition and Dietetics awarded the Sheila Ward Fellowship to master's student **Amy VanDeWiele**.
- The Department of Physical Therapy celebrated the graduation of 37 new DPTs at the May IUPUI commencement ceremony.
- The Department of Physical Therapy hosted 50 undergraduate students at their annual Open House on April 11, 2014.
- **Mary Beth Brown, PhD, PT, ATC** hosted a visiting medical student from University of New England who spent a week in her lab in June learning some techniques unique to her lab and utilizing some of her tissue sources.
- **Thomas Fisher, PhD, OTR, CCM FAOTA** and **Patricia Scott, PhD, MPH, OT, FAOTA** presented "Competencies for research and clinical competencies: Curricular Design to maximizing both" at the World Congress of Occupational Therapy in Yokohama, Japan in June.
- **Robyn Fuchs, PhD** is mentoring three students this summer in her Bone Physiology Laboratory, including Ty Robinson from the Bridges to Baccalaureate Summer Research Program, Andrew Gutierrez from the Indianapolis Project Seed, and Audrey Kramer with the Women in Science Summer Internship program through the Indiana BioMedical Gateway program of PhD study.
- **Gaylen Kelton, MD** served as instructor for the IU Family Medicine Residency Cadaver Lab course "Emergency Airway and IV Skill Station" on June 17, 2014.
- **Rebecca Rebman, PhD, PA-C** graduated with her PhD in Health Behavior, with a minor in Social Science Approach to Health and Healing Systems. Her dissertation was titled: "Determinants of Physician Assistant Intention to Recommend the ACOG-Supported Initial Reproductive Health Visit."
- **Patricia Scott, PhD, MPH, OT, FAOTA** received the IUPUI Trustees Teaching Award for Excellence in Teaching, May 2014.

Research, Scholarship & Creative Activity

Research

- **Mary Beth Brown, PhD, PT, ATC** received one internal grant, the Life Health Sciences Internship (LHSI) program, to fund an undergraduate student in her lab for the 2014-2015 Academic Year.
- **Robyn Fuchs, PhD** continues to actively recruit patients for her study evaluating bone and muscle health in children with cerebral palsy that are receiving botox therapy. This study is funded by the Indiana Clinical and Translational Sciences Institute and is being done in collaboration with **Dr. Peter Altenburger** and Dr. Linda DiMeglio from the Indiana University School of Medicine.
- **Terry Loghmani, PhD, PT, MTC, CMT** and colleagues Todd Lugar and Mike Ploski, were invited to present an update on currently available instrument-assisted soft tissue mobilization research during a video podcast [web-based], titled "Graston Technique - An Evidence-Based Intervention: Education & Research."



Research, Scholarship & Creative Activity (cont.)

Research (cont.)

- **Niki Munk, PhD, LMT** received \$10,000 from IU SHRS Promoting External Applications for Research (PEAR) for her work titled "Massage therapy for phantom limb pain: Feasibility and pilot study."

Published Abstracts

- **Munk N, Elder WG, Love M.** (2014). Massage effectiveness for primary care patients with chronic low back pain and below normal SF-36v2 mental health scores: Secondary analysis. P02.29. *The Journal of Alternative and Complementary Medicine*. May 2014:A49. (Poster presentation at the 2014 International Research Congress on Integrative Medicine and Health Conference in Miami, FL: May 14-16, 2014).
- **Elder WG & Munk N.** (2014). A pragmatic-explanatory continuum indicator summary (PRECIS) examination of a recent study of massage and relaxation therapy effectiveness. *The Journal of Alternative and Complementary Medicine*. May 2014:A23. (Oral presentation at the 2014 International Research Congress on Integrative Medicine and Health Conference in Miami, FL: May 16, 2014).

Publications

- **Avin KG, Coen PM, Huang W, Stolz D, Sowa GA, Dubé JJ, Goodpaster BH, O'Doherty R, Ambrosio F.** Skeletal muscle as a regulator of the longevity protein, Klotho. *Frontiers in Physiology* 2014; 5.
- **Brown MB, Hunt WR, Noe JE, Rush NI, Schweitzer KS, Leece TC, Moldobaeva A, Wagner EM, Dudek SM, Poirier C, Presson Jr RG, Gulbins E, Petrache I.** Loss of CFTR impairs lung endothelial cell barrier function and increases susceptibility to microvascular damage from cigarette smoke'. *Pulmonary Circulation* 2014;4(2):260-268.
- **Lockett AD, Brown, MB, Santos-Falcon N, Rush NI, Oueini H, Oberle AJ, Bolanis E, Fragoso MA, Petrusca DN, Serban KA, Schweitzer KS, Presson RG Jr, Campos M, Petrache I.** Active Trafficking of Alpha 1 Antitrypsin Across The Lung Endothelium'. *PLoS One*. 2014 Apr 17;9(4):e93979. doi: 10.1371/journal.pone.0093979. eCollection 2014. PMID: 24743137.
- **Crabtree J, Fisher T.** Contributing authors to 2nd Edition of Occupational Therapy Essential Competencies (May).
- **Kolobe T, Christy JB, Gannotti ME, Heathcock JC, Damiano DL, Taub E, Majsak MJ, Gordon AM, Fuchs, RK, O'Neil ME, Caiozzo VJ,** for the Research Summit III Participants. Research Summit III Proceedings on Dosing in Children with an Injured Brain or Cerebral Palsy: Executive Summary. *Physical Therapy*, 94 (7); 907-920.
- **Liu CJ, Gutierrez ARM, Jones L, Clark D.** (May 2014). Feasibility of 3-Step Workout for Life Program to Prevent Late-Life ADL Disability. Third summit of occupational therapy scholars. Philadelphia, PA.
- **Munk N, Stewart K, Love MM, Carter E, Elder WG.** (2014). Intersection of massage practice and research: Community massage therapists as research personnel on an NIH-funded effectiveness study. *International Journal of Therapeutic Massage & Bodywork*, 7(2), 10-19.
- **Lowe W, Munk N, Porcino A.** (2014). Introducing IJTMB's Tigger Points: Topical dialogue amongst therapeutic massage & bodywork practitioners and educators. Editorial. *International Journal of Therapeutic Massage & Bodywork*, 7(2), 1-2.
- **Warden SJ, Mantila-Roosa SM, Kersh ME, Hurd AL, Fleisig GS, Pandy M, Fuchs RK.** Physical activity when young provides lifelong benefits to bone size and strength in men. *Proceedings of the National Academy of Sciences USA* 2014;111:5337-42.
- **Warden SJ, Galley MR, Hurd AL, Richard JS, George LA, Guildenbecher EA, Barker RG, Fuchs RK.** Cortical and trabecular bone benefits of mechanical loading are maintained long-term in mice independent of ovariectomy. *Journal of Bone and Mineral Research* 2014;29:1131-40.
- **Warden SJ, Mantila-Roosa SM.** Physical activity completed when young has residual bone benefits at 94 years of age: a within-subject controlled case study. *Journal of Musculoskeletal and Neuronal Interactions* 2014;14:239-43.

Presentations

- **Mary Beth Brown, PhD, PT, ATC** sponsored Undergraduate Research Opportunities Program (UROP) student TJ Chingombe who presented research at the National Conference on Undergraduate Research in Lexington, KY. The title of her poster presentation was "Acute Exercise Activates Pulmonary Enos and Lowers Pulmonary Pressure in Rats with Pulmonary Arterial Hypertension."
- **Mary Beth Brown, PhD, PT, ATC** sponsored Bridges to Baccalaureate (IU Undergraduate Research programs) student Angela Pittman who presented at the National Conference on Undergraduate Research in Lexington, KY. The title of her poster presentation was "Effects of Aerobic Exercise Training on Diaphragm Muscle Metabolism in a Rat Model of Pulmonary Arterial Hypertension."

**Research, Scholarship & Creative Activity (cont.)****Presentations (cont.)**

- **Mary Beth Brown, PhD, PT, ATC** presented research at the national ACSM meeting in Orlando, FL and at the national meeting of the American Thoracic Society in San Diego, CA titled "Aerobic Exercise Training Ameliorates RV Cardiomyocyte 'Glycolytic Switch' And Improves Aerobic Capacity In Rats With Hypoxic Pulmonary Hypertension."
- **Mary Beth Brown, PhD, PT, ATC** co-authored 4 research presentations (posters) presented at the national meeting of the American Thoracic Society in San Diego, CA May 2014:
 - 17 beta-Estradiol (E2) Improves Right Ventricular (RV) Function And Exercise Capacity In Su5416/Hypoxia; first author is Dr. A. Cucci in the Division of Pulmonary and Critical Care, IUSM.
 - Postnatal Hyperoxic Lung Injury Alters Adult Right Ventricular Remodeling Responses To Hypoxia Exposure In Rats; first author is Dr. K. Goss in the Division of Pulmonary and Critical Care, IUSM.
 - The Effect Of Endogenous Sex Hormones On Hemodynamics, Exercise Capacity And Right Ventricular (RV) Pro-Apoptotic Signaling In Su5416/Hypoxia-Induced Pulmonary Hypertension (SuHx-PH); first author is J. Wood in the Division of Pulmonary and Critical Care, IUSM.
 - Worsening Right Ventricular Dysfunction By Fueling An Impaired Autophagic Flux With Rapamycin; first author is Dr. A. Cucci in the Division of Pulmonary and Critical Care, IUSM.
- **Mary Beth Brown, PhD, PT, ATC** co-authored 1 research presentations (posters) presented at the at the national meeting of the American College of Sports Medicine (ACSM) titled "Amphetamine Increases VO₂max And Time To Exhaustion At The Expense Of Body Temperature And Economy." The first author is Dr. Dan Rusyniak in the Dept of Emergency Medicine, IUSM.
- **Mary Beth Brown, PhD, PT, ATC** presented research at the national meeting of the Pulmonary Hypertension Association titled "Aerobic Exercise Training Ameliorates RV Cardiomyocyte 'Glycolytic Switch' And Improves Aerobic Capacity In Rats With Hypoxic Pulmonary Hypertension."
- **Tracy Dierks, PhD** and colleagues: Nittoli VC, Lawrence SE, Snook EM, and **Schwipps AR** gave a poster presentation titled "Effectiveness of a multidisciplinary training program for improving elite athlete skills and physical attributes" at the ACSM 61st Annual Meeting and 5th World Congress on Exercise is Medicine.
- **Tracy Dierks, PhD** and colleagues: Nittoli VC, Justiss MD, and Wilkerson GB gave a poster presentation titled "The association between quality of movement and dynamic stability in high school cross country runners" at the American College of Sports Medicine 61st Annual Meeting and 5th World Congress on Exercise is Medicine.
- **Thomas Fisher, PhD, OTR, CCM, FAOTA** presented at the National Occupational Therapy Program Directors Meeting on April 2, 2014 on "How to Implement Scholarship in One's Teaching."
- **Thomas Fisher, PhD, OTR, CCM, FAOTA** presented at AOTA Conference in Baltimore – Research Paper on Leadership (April 4, 2014).
- **Thomas Fisher, PhD, OTR, CCM, FAOTA** presented at Indiana OT Association on April 26, 2014 about "Understanding OT Scope of Practice."
- **Michael Justiss, PhD, OTR** presented on Functional Assessment for Technology and Mobility at a workshop on May 6, 2014 for a local assistive technology vendor.
- **Michael Justiss, PhD, OTR** presented Driving Safety and research review on May 16, 2014 for Paxair Industries at Indianapolis Motor Speedway.
- **Michael Justiss, PhD, OTR** presented at a workshop at RESNA in June in Indianapolis. He was also invited as Panelist for RESNA Special Interest Workshop (June 13 & 15, 2014).
- **Elder WG, Munk N, Cardarelli R, Roper K.** Application of the PRECIS criteria to characterize and refine a PBRN study. Poster for the PBRN 2014 - North American Primary Research Group Practice-based Research Network Conference. Bethesda, MD, June 30-July 1, 2014.
- **Sharon Pape, MS, OTR, Hung SP, Jordan J, VanBastelaer B** presented at the 2014 AOTA National Conference and Expo-Baltimore, MD, April 5, 2014. Poster presentation titled "Student Facilitated Interprofessional Education – Learning in the Changing Health Care Environment."
- **Sharon Pape, MS, OTR, O'Connor, M and Yoh L** presented at the 2014 IUPUI Robert Bringle Civic Engagement Showcase and Symposium – IUPUI Campus, April 23, 2014. Poster presentation titled "Establishing Occupational Therapy Services at the IU Student Outreach Clinic – Learning in the Changing Health Care Market."
- **Sharon Pape, MS, OTR** faculty advisor for OT Clinic at IUSOC, along with Occupational Therapy students, conducted a "meet and greet" OT clinic at IU Student Outreach Clinic on April 12, 2014 in recognition of OT Month. An article featuring the event has been accepted for publication in OT Practice.



Research, Scholarship & Creative Activity (cont.)

Presentations (cont.)

IUPUI Research Day Presentations from the School of Health and Rehabilitation Sciences April 11, 2014

- **Natalie Kowalinski SPT, Laura Heckroth SPT, Stuart Warden, PhD, Amy Bayliss, DPT** presented: Ultrasound imaging for measuring the material and mechanical properties of the Achilles tendon: inter-day reliability and correlation with a functional calf length test.
- Angela Pittman, an undergraduate Bridges to Baccalaureate student, presented work from **Dr. Mary Beth Brown's** lab titled 'Effects of Aerobic Exercise Training on Diaphragm Muscle Metabolism in a Rat Model of Pulmonary Arterial Hypertension'.
- Abigail Zinn, a Masters student from the School of Medicine, presented work from **Dr. Mary Beth Brown's** lab titled "Hemodynamic Responses to Acute Exercise and L-Arginine Recorded in Real-time via Implantable Telemetry in a Rat Model of Pulmonary Arterial Hypertension."
- **Courtney Mathews, SPT, Alicia Schwipps, SPT, Ryan Cardinal, DPT, and Peter Altenburger, PhD, PT** presented on "The impact of variable dosage using robotic-assisted task-specific upper extremity training in children with CP."
- **Kathryn Goncalves, SPT and Carolyn Ebbens, SPT** along with their advisor, **Dr. Terry Loghmani**, discussed physical therapy learning outcomes obtained from the IU Student Outreach Clinic at the April 3, 2014 meeting.
- **Mary Beth Brown, PhD, PT, ATC** delivered an invited presentation to the Department of Medicine, Division of Pulmonary and Critical Care, IU School of Medicine, Research Seminar, titled "Novel Assessment of Pulmonary Pressure Responses During Treadmill Running in a Rat Model of Pulmonary Arterial Hypertension."
- **Mary Beth Brown, PhD, PT, ATC** gave an invited presentation on June 24, 2014 to the Department of Cellular and Integrative Physiology, IU School of Medicine, Research Seminar, titled "Novel Assessment of Pulmonary Pressure Responses During Treadmill Running in a Rat Model of Pulmonary Arterial Hypertension."
- **Sara Gleason, DPT** mentored by **Dr. Peter Altenburger** and **Dr. Ryan Cardinal** presented her research titled "Robotic-assisted locomotor training for a four-year-old child with CP emphasizing intensity and cognitive engagement," at the Riley Maternal and Child Health Partners Leadership in Education in Neurodevelopmental Disorders (LEND) Research Conference.
- **Tracy Dierks, PhD** and colleagues Nittoli VC, **Schwipps AR**, and Foster AE gave a poster presentation titled "The association between quality of movement and dynamic stability in high school cross country runners" at the 10th Annual St. Vincent Research Symposium.
- **Tracy Dierks, PhD** and colleagues Nittoli VC, **Justiss MD**, and Wilkerson GB gave a poster presentation titled "The association between neurocognitive reaction time and injury risk in starter and non-starter adolescent football players" at the 10th Annual St. Vincent Research Symposium.
- **Liu CJ, Jones LY, Gutierrez A, Lesniewski KE, Clark D.** (April 2014). Feasibility of 3-Step Workout for Life Program to decrease ADL disability in vulnerable elderly. IUPUI Research Day. Indianapolis, Indiana.

Video/Audio Podcasts, Blogs, and Other Contributions

- **Munk N, Reynolds M, Werner R.** (Narrators). (2014, June 18 @ 9:04AM). Research Perch 5: Treatment of Tactile Impairment in Young Children with Autism: Results with Qigong Massage. [Audio & Video podcast]. Retrieved from <http://info.massagetherapyfoundation.org/blog/bid/346415/Treatment-of-Tactile-Impairment-in-Young-Children-with-Autism-Results-with-Qigong-Massage-Research-Perch>.
- **Munk N, Reynolds M, Werner R.** (Narrators). (2014, June 4 @ 8:00AM). Research Perch 4: Better or Worse: A study of day-to-day changes over five months of Rosen Method Bodywork Treatment for chronic low back pain. [Audio & Video podcast]. Retrieved from <http://info.massagetherapyfoundation.org/blog/bid/346414/Better-or-Worse-a-Study-of-Day-to-Day-Changes-over-Five-Months-of-Rosen-Method-Bodywork-Treatment-for-Chronic-Low-Back-Pain-Research-Perch>.
- **Munk N, Reynolds M, Werner R.** (Narrators). (2014, May 28 @ 11:46AM). Research Perch 3: Massage efficacy beliefs for muscle recovery from a running race. [Audio & Video podcast]. Retrieved from <http://info.massagetherapyfoundation.org/blog/bid/346411/Massage-Efficacy-Beliefs-for-Muscle-Recovery-from-a-Running-Race-Research-Perch>.
- **Munk N, Reynolds M, Werner R.** (Narrators). (2014, May 7). Research Perch 2: Positive effect of massage therapy on a patient with narcolepsy. [Audio & Video podcast]. Retrieved from <http://info.massagetherapyfoundation.org/blog/bid/344798/Positive-Effects-of-Massage-Therapy-on-a-Patient-with-Narcolepsy-Research-Perch>.
- **Munk N, Reynolds M, Werner R.** (Narrators). (2014, April 17). Research Perch 1: The effects of self-massage on Osteoarthritis of the knee. [Audio & Video podcast]. Retrieved from https://www.youtube.com/watch?v=Cb1vFM235_o.
- **Scott PJ, Forsyth K, Bonsasken T, Haglund L, Mentrup C, Yamada T.** (accepted presentation) Cross-cultural Validity of the Role Checklist V2: QP. Implication for an international measure of Participation. World Congress of Occupational Therapy, Yokohama, Japan, June 2014.



Research, Scholarship & Creative Activity (cont.)

Video/Audio Podcasts, Blogs, and Other Contributions (cont.)

- **Scott PJ** (2014). The Role Checklist Version 2: Quality of Performance: An Outcome Measure To Reflect Improved Performance Over Time. American Occupational Therapy Association 94th Annual Conference and Expo April 3-6, 2014, Baltimore, MD.
- Halle J, LeMond K, Robinson I, Sloss R, **Scott PJ**. (2014). Supporting Healthy Lifestyles of Liver Transplant Candidates and Recipients. American Occupational Therapy Association 94th Annual Conference and Expo April 3-6, 2014, Baltimore, MD.
- **Scott PJ**. DRIVE Program Support for participation, and further development of the International Alliance for the study of Participation of Persons with Disabilities, \$15,000.
- **Patricia Scott, PhD, MPH, OT, FAOTA** convened a meeting of the International Alliance for the Study of Role Participation in Yokohama Japan, June 20, 2014.
- **Patricia Scott, PhD, MPH, OT, FAOTA** launched a website to Chronicle her work on the Role Checklist Version 2: Quality of Performance, www.RCV2QP.com.

Civic Engagement

- DPT students **Ron Harper, Renee Miracle, Clarice Richardson, Rachel Hiddle**, and **Scott Sigmund** represented the IU DPT Program at the second annual Butler Basketball camp for children with disabilities. **Dr. Peter Altenburger** coordinated the participation of the PT students with the Butler Basketball Program to provide a half day skills camp for children.
- **Gaylen Kelton, MD** with PA students and another faculty member participated in "Keep Indianapolis Beautiful" tree planting April 19, 2014.
- **Gaylen Kelton, MD** participated in AHEC Rural Care Summit, May 7, 2014.
- **Gaylen Kelton, MD** participated in Indiana Rural Health Assoc Annual Meeting, June 11, 2014.

External Awards and Appointments

- **Mary Beth Brown, PhD, PT, ATC** served as Chair and panelist of a "Medically Led Session" at the national meeting of the Pulmonary Hypertension Association, May 2014. The session was titled "Exercise for PH."
- **Tracy Dierks, PhD** was awarded a \$20,000 St. Vincent Physicians Society Fund Grant to study "Alter G training in high school long distance runners."
- **Thomas Fisher, PhD, OTR, CCM, FAOTA** was invited to serve on the Office of Research's COI Committee in June.
- **Robyn Fuchs, PhD** served as a grant reviewer for the Indiana Clinical and Translational Sciences Institute.
- **CJ Liu, DHS, OTR, CPRP** received Fellow Status from the Gerontological Society of America. She will be recognized in the annual scientific meeting.
- **Joyce Mac Kinnon, EdD, PT** appointment as Visiting Professor at the CUT in South Africa was renewed through 2016.
- **Rebecca Rebman, MS, PA-C** received a grant from Johnson & Johnson to supply Ethicon suture materials for the Class of 2015's suture workshop.
- **Patricia Scott, PhD, MPH, OT, FAOTA** has been appointed to represent the School of Health and Rehabilitation Sciences in the IUPUI Mentoring Academy.
- **Stuart Warden, PhD, PT, FACSM** was invited and agreed to serve on the editorial board of Bone Reports.
- The work of **Stuart Warden, PhD, PT, FACSM** and **Robyn Fuchs, PhD** on the lifelong skeletal benefits of exercise during growth and subsequent paper in the Proceedings of the National Academy of Sciences received wide multimedia attention, including written coverage in Science Magazine, Science News, LA Times, and NIH Matters, and live interviews on ABC Radio and Doctor Radio.