



University of Iowa Physical Therapy and Rehabilitation Science

Alumni Newsletter Winter 2012

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Note from the Chair

The Physical Therapy and Rehabilitation Science Graduate Program has been blessed with another outstanding year. Our faculty members are dedicated clinical educators and scientists who embrace our mission to advance the health of humankind. Through our faculty members' clinical teaching skills and commitment to advancing new knowledge in physical therapy, our students are artfully mentored to meet the challenges facing healthcare today. To quote a well known phrase, it "takes a village" to truly offer a first class education today. Fortunately, we have that village through a family of dedicated professionals from both within the community and outside of the community. This newsletter captures a "snapshot" of some of those who make it possible for us to achieve our goals. Thank you all who contribute to our mission each and every day.

Rich Shields PT, PhD, FAPTA

2010 and 2011 Graduating Classes

The Program conferred the DPT degree upon 36 students in both the 2010 and 2011 Commencement ceremonies. Several members of each class were recognized for scholarships and awards:

Class of 2010



2010 Scholarship and Award Recipients:

- Alumni Award: Megan Weber
- Tracy Dahl Memorial Scholarships: Carrie DeSotel, Detlef Maltas
- Frank Hazelton Memorial Scholarships: Julia Veltri, Megan Weber
- Mary Lou Fairchild Clinical Excellence Award: Elaine Houska
- Collin's Pediatric Award: Megan Ivey
- ILEND Traineeships: Megan Ivey, Megan Weber
- Mentor Scholarships: Rebecca Birkhofer, Jill Ferris, Aaron Heffernan, Heidi Holle

The Outstanding Instructor Award was presented to Kathleen Andersen, MS for her contributions in the Human Anatomy course.

Class of 2011



2011 Scholarship and Award Recipients:

- Alumni Award: Samuel Arentson, Brittany Keyes
- Tracy Dahl Memorial Scholarships: Caitlin Larsen, Joseph Nelson, Kirsten Robertshaw
- Frank Hazelton Memorial Scholarships: Caitlin Larsen, Shane Nissen
- Mary Lou Fairchild Clinical Excellence Award: Angela Hanson
- Collin's Pediatric Award: Katie Hare
- Experiential Research Scholar: Angela Hanson
- ILEND Traineeships: Katie Hare, Jessica Jungers
- Mentor Scholarships: Samuel Arentson, Amanda Kakac, Caitlin Larsen, Kirsten Robertshaw
- Neuroscience Award: Amanda Emrick

The Outstanding Instructor Award was presented to Bruce A. Miller, PT, MA, for his exceptional teaching in the Surface Anatomy course.

Award Celebrates Biderman's Legacy



Amanda Emrick, DPT and Judy Biderman

In 2011, Judy Biderman retired as our Program Assistant after an illustrious 50-year career. Through four Directors, several changes of location and for nearly 2,000 students, Judy was the Program's "face" and its most reliable presence.

To commemorate and celebrate Judy's career, the Program has created the Judy Biderman Professionalism Award, to be conferred annually at the Doctor of Physical Therapy Commencement ceremony.

The award is given to the graduating DPT student who best exemplifies the principles of professionalism on which Judy built her career. Amanda Emrick, DPT received the award at the Program's December 2011 Commencement. Like Judy, Amanda demonstrated a commitment to teamwork, great care in her craft and a spirit of generosity and collegiality during her time in the Program.

It is our Program's hope that through this award, future students will benefit from Judy's professional legacy, just as she inspired our first 2,000 graduates.

McCoid Establishes Scholarship in Honor of Late Wife



David and Marilyn McCoid

Marilyn McCoid had a passion for her family, music, the arts, and being a physical therapist. That's why it was so meaningful for her husband David McCoid, an attorney and Iowa alum of Mount Pleasant, Iowa, to establish the Marilyn M. McCoid Scholarship in Physical Therapy. "I wanted to honor her memory through something that would last. It's nice that there will be a permanent record of her within the Physical Therapy and Rehabilitation Science Department," David said.

Marilyn grew up in Michigan, but the stars aligned for her to attend the University of Iowa to pursue her goal of becoming a physical therapist. It was here that she met her future husband, played in the pep band, and earned her certificate in Physical Therapy in 1964. Marilyn worked at the hospital in Mount Pleasant and as a traveling physical therapist.

"David understands the impact of private support and the importance of scholarship support for our students. We are so grateful for all that he has done and I know that Marilyn would be pleased as well," said Dr. Richard K. Shields, Professor and Chair of the department.

David McCoid supports many areas of the University and has also established a scholarship within the College of Liberal Arts and Sciences. He understands the high cost of education today and would like to see more scholarships given by alumni for Physical Therapy students. "I hope that my gift in honor of Marilyn will spur other alumni to give as well," David said.

For more information on making a gift to the Physical Therapy and Rehabilitation Science Graduate programs please contact [Lindsay Hora](#), Assistant Director of Development, Roy J. and Lucille A. Carver College of Medicine/University of Iowa Hospitals and Clinics, The University of Iowa Foundation, at (319) 467-3617.

Alumni Spotlight: Susie Nakagawa, PT



Susie Nakagawa and her gardens

Iowa PT alumni have achieved distinction in clinical practice, education, and many other facets of our profession. In this section we highlight the accomplishments of Iowa graduates who changed the world of physical therapy.

Susie Nakagawa is a California native whose brief time in Iowa helped launch a 40-year career in physical therapy. We spoke recently with her about her perspective on the way our profession has changed...and on her secrets for a happy retirement.

Like many Americans of Japanese descent, Ms. Nakagawa's family experienced resettlement to an internment camp during World War II. During her time at an Arkansas camp, Ms. Nakagawa became determined to seek higher education after the war. A friend told her that physical therapists were in great demand because of the polio epidemic. She applied to PT programs in Missouri and Iowa and eventually chose The University of Iowa as the starting point for her career.

Ms. Nakagawa moved into the nurses' quarters in the Westlawn building and vividly remembers using the hospital tunnels to evade Iowa's winter weather. She studied under the guidance of Olive Farr, our department's first chairperson, and remembers that Dr. Arthur Steindler was still practicing at the Children's Hospital. Ms. Nakagawa completed her coursework in 1947 and left Iowa with a Certificate in Physical Therapy.

Returning home to California, Ms. Nakagawa became something of a jack of all trades as a clinician. She initially treated patients for three orthopaedic surgeons in Bakersfield and then transferred to a polio facility in Fresno. Even after development of the Salk vaccine, she treated many adults and children with post-polio paralysis. She also treated patients with head injury, spinal cord injury and a range of orthopaedic diagnoses, and recalls that the development of hypertension drugs dramatically reduced the incidence of stroke in her practice.

After 40 years on the job, Ms. Nakagawa retired to the San Joaquin Valley to care for her mother and to become, as she puts it, a "backyard farmer." She has enjoyed 25 years of retirement and shows no signs of slowing down. She notes that like Iowa, her part of the country is heavily agricultural. Her father was involved in raising grapes for raisins, and she has some grape vines among her many fruit trees and vegetable gardens. She enjoys raising food for her own use and to share with her friends and neighbors.

Her secret to a happy retirement? She says: "Don't do anything that you don't want to do!"

We applaud Ms. Nakagawa for demonstrating what our profession knows so well: that physical activity is key for a long, fulfilling life. We thank her for her long service to the profession and for allowing us to share her story. She very much hopes that her 1947 classmates will get in touch! If you would like to pass along a greeting to Ms. Nakagawa, please [contact our department](#).

Soderberg Receives Foundation Award



Foundation President Bill Boissonnault, Dr. Loretta Knutson, and Dr. Gary Soderberg

Professor Emeritus Gary L. Soderberg, PT, PhD, FAPTA and his wife, Loretta Knutson, PT, PhD, PCS were recently honored with the Spirit of Philanthropy Award from the Foundation for Physical Therapy. The Foundation bestows this award annually to donors who exhibit outstanding support for research in Physical Therapy.

Dr. Soderberg was the Director of Iowa's Graduate Program in Physical Therapy and Rehabilitation Science from 1984 to 1992. He is currently an Emeritus Professor with the Program. Dr. Soderberg previously served as President of the American Physical Therapy Association (APTA) Section on Research.

Towne Invested as Catherine Worthingham Fellow



Peter and Linda Towne

Iowa alumnus Peter A. Towne, PT was recently recognized by the American Physical Therapy Association with the Catherine Worthingham Fellow Award (FAPTA). The FAPTA designation is APTA's highest honor and recognizes individuals who make important and sustained contributions to the profession of physical therapy.

Towne received a Certificate in Physical Therapy from the University of Iowa in 1958. He practiced in hospital settings before establishing his own private practice in 1978. He co-founded the Ohio Physical Therapy Network in 1992 to foster growth and development of private practice in that state.

Beyond Ohio's borders, Towne has presented testimony to Congress on behalf of the APTA, served in the APTA's Private Practice Section, and served on the APTA Board of Directors. He served terms as Vice Chair and Chair of the International Private Practitioners' Association, World Confederation of Physical Therapy and has served as a Trustee for the Foundation for Physical Therapy. In 2000 he was chosen as the Small Business Person of the Year by the National Republican Congressional Committee. He is a past recipient of the Charles M. Magistro Distinguished Service Award.

Iowa connections run deep in the Towne family. Peter Towne's wife Linda (Laudenback) Towne graduated from Iowa in 1971. She taught at the Northwestern University PT program and later became an integral part of Mr. Towne's Ohio private practice. Towne's sister Judith (Towne) Jennings graduated from Iowa in 1968 and works as a pediatric PT, lecturing nationally as a spokesperson for "Tummy Time".

On behalf of the Physical Therapy and Rehabilitation Science Department, we extend our heartfelt congratulations to Peter Towne for receiving this prestigious award.

Shields Receives Magistro Award



Foundation President Bill Boissonnault, Dr. Richard Shields, and Mr. Charles Magistro

The Foundation for Physical Therapy recently recognized Richard K. Shields, PT, PhD, FAPTA, Professor and Director of Iowa's PT Program, with the 2011 Charles M. Magistro Distinguished Service Award. Charles Magistro, PT, FAPTA served as the first Foundation chairman in 1979 and has been a keen supporter of the Foundation throughout its history.

The Foundation presents this award to individuals who demonstrate outstanding service to the Foundation and commitment to research in Physical Therapy. Dr. Shields began his academic career as a recipient of a Doctoral Training Research grant from the Foundation. He later served as chair of the Foundation's Scientific Review Committee and the Board of Trustees. Most recently he concluded a three-year term as Foundation president,

helping to develop new bylaws to refine the Foundation's governance structure and relationship with the APTA.

Sluka Recognized for Research



Dr. Kathleen Sluka

Professor Kathleen Sluka, PT, PhD, was honored with the Frederick W.L. Kerr Basic Science Research Award from the American Pain Society. This award recognizes individual excellence and achievement in pain scholarship.

Dr. Sluka joined Iowa's faculty in 1996. She was promoted to Associate Professor in 2001 and to full Professor in 2005. As director of the Neurobiology of Pain Laboratory, her research focuses on the neurobiology of musculoskeletal pain and the mechanisms and effectiveness of nonpharmacological pain treatments commonly used by physical therapists. She teaches the Pain Mechanisms and Treatment course in the DPT curriculum and the Mechanisms of Pain Transmission course in the PhD curriculum.

Dr. Sluka has made broad-ranging contributions to the field of pain research and clinical practice, including more than 130 peer-reviewed research articles and a textbook, *Pain Mechanisms and Management for the Physical Therapist*. She has served on the council for the International Association for the Study of Pain and on the board of the American Pain Society.

Frey Law Promoted with Tenure



Dr. Laura Frey Law

Laura Frey Law, PhD, PT, MS has achieved Tenure status from the Carver College of Medicine. She is an Associate Professor and director of the Neuromuscular Biomechanics Laboratory.

Her research focuses on the effects of pain and fatigue on motor function, with an emphasis on orthopedic conditions, experimental pain paradigms, muscle activation strategies and reflex responses. In addition, she has expertise in mathematical modeling of muscle fatigue and contributed to the Digital Human -Arm Model with the Virtual Soldier Research Project.

She teaches several courses in the DPT and PhD curricula and has received funding from the National Institutes of Health and several engineering grants.

Williams Receives PhD



Dr. David Williams

David Williams, MPT, ATC, CSCS received the PhD degree from the Program in May, 2011.

Dr. Williams' dissertation was entitled "The Study of Voluntary Activation and Force Production Relationships and Responses to Varied Isometric Strength Training Parameters during Fatiguing and Non-Fatiguing Test Protocols". His PhD advisor was Dr. H. John Yack.

Dave is the President and Director of Performance Therapies in Coralville, IA and teaches Progressive Functional Exercise and the three-course Musculoskeletal Therapeutics series in Iowa's DPT curriculum. Congratulations Dave on a job well done!

Obituary

It is with sadness that we report the death of Dr. Richard P. Di Fabio, PT, PhD.

Dr. Di Fabio passed away Friday, Dec 9th 2011 after a prolonged and private battle with a progressive illness. "Dr. D" was on faculty at the University of Minnesota's Program in Physical Therapy for over 20 years, having previously served as Director at the University of Wisconsin, Madison. He was a graduate of the State University of New York (SUNY) - Syracuse, with a Bachelor's degree in Physical Therapy and SUNY -Cortland with a Master's in Health Education. He completed his PhD at the University of Iowa in 1982.

He was passionate about research and mentoring his students, but even more so about his family, wife Betsy and two daughters, Danielle and Diana. While the physical therapy community mourns his loss, Dr. Di Fabio's spirit will live on in his scientific contributions and through his family.

Thank You to Our Adjunct Faculty

Our DPT students benefit immeasurably from interactions with expert clinicians in Iowa City and the surrounding areas. These individuals provide a critical link for our students between the classroom, clinic, and "real world" healthcare issues. We extend our sincere gratitude to those who offer their services to our students:

Lisa M. Ainsworth, DPT- St. Luke's Hospital, Cedar Rapids, IA
Kathryn Bewyer Albrecht, MPT - Mary Greeley Rehab & Wellness, Ames, IA
Bryon T. Ballantyne, PT, PhD - St. Ambrose University, Davenport, IA
Rhonda Barr, PT, MA, CCS - UIHC, Iowa City, IA
Marcie Becker, DPT- Williamsburg, IA
Sarah Bengston, DPT - St. Luke's Hospital, Cedar Rapids, IA
Michelle Borgwardt, DPT - UIHC, Iowa City, IA
Christopher Brink, DPT - Rockwell Collins, Cedar Rapids, IA
Kelly Michaels Brouwer, DPT- Performance Therapies, P.C., Coralville, IA
Molly Camacho, MPT, AT, CSCS - Performance Therapies, P.C, Coralville, IA
Leslie Carpenter, PT - Progressive Rehab Associates, Iowa City, IA
Nicholas Cooper, DPT - UIHC, Iowa City, IA
Wendy Craft, MPT, NCS - UIHC, Iowa City, IA

(continued...)

Adjunct Faculty, continued:

Pamela Duffy, PT, PhD, OCS - Wellmark BCBS of Iowa, Des Moines, IA
Matt Ehler, PT, ATC - Progressive Rehab Associates, Iowa City, IA
Kim E. Eppen, MPT, MA, PhD - UIHC, Iowa City, IA
Richard E. Evans, PT, OCS - UIHC, Iowa City, IA
Jerry F. Gillon, PT, OCS, ATC - Linn County PT, Cedar Rapids, IA
Jaclyn Hall, DPT - St. Luke's Hospital, Cedar Rapids, IA
Scott Harms, DPT, AT, CSCS - Performance Therapies, P.C. , Coralville, IA
James B. Holte, PT, OCS, CSCS - Midwest PT, Coralville, IA
Melanie House, DPT, NCS - UIHC, Iowa City, IA
Masaki Iguchi, MA, PhD - Tsukuba University, Japan
Alexas Ihrig, DPT - UIHC, Iowa City, IA
Judy Jicinsky, BS, PT - Performance Therapies, P.C., Cedar Rapids, IA
Patrick L. Johnston, MPT - VA Medical Center, Iowa City, IA
Carol J. Kelderman, DPT - Work Systems Rehab, Oskaloosa, IA
Janine Kelly, PT, CCS - UIHC, Iowa City, IA
Lisabeth L. Kestel, DPT, MBA, SCS, ATC - UIHC, Iowa City, IA
Jill Kilkenny, MS, PT - Physiotherapy Associates, Cedar Rapids, IA
Paul Kraushaar, PT - Muscatine Physical Therapy, Muscatine, IA
Tami Lansing, MPT - UIHC, Iowa City, IA
Ken C. Leo, PT, MA - UIHC, Iowa City, IA
Joseph A. Leone, MA, PT - St. Luke's Hospital, Cedar Rapids, IA
Shannon Miers, MPT, ATC, PCS, SCS - UIHC, Iowa City, IA
Bruce A. Miller, PT, MA - UIHC, Iowa City, IA
Joy Miller, ATC, MPT - UIHC, Iowa City, IA
Shelley Mockler, MPT, PT - UIHC CDD, Iowa City, IA
Jacob Moore, DPT, CSCS - Performance Therapies, P.C., Coralville, IA
Michael Reiling, PT, MPT, ATC, CSCS - Ability Physical Therapy, Marion, IA
Elayne O. Sexsmith, MBA - UIHC CDD, Iowa City, IA
Michael Shaffer, MPT, PT, OCS, ATC - UIHC, Iowa City, IA
Mary L. Shepherd, PT - UIHC, Iowa City, IA
Kolleen C. Shields, PT, MA - UIHC, Iowa City, IA
Donald G. Shurr, MA, PT, CPO - American Prosthetics, UIHC, Iowa City, IA
Jamie M. Smelser, PharmD - UIHC, Iowa City, IA
Sue Sohrweide, PT - Gillette Children's Hospital, St. Paul, MN
Sherry Steffen, MPT - Performance Therapies, P.C., Cedar Rapids, IA
Patrick Swancutt, DPT, ATC, CSCS - Performance Therapies, P.C., Coralville, IA
Blake Tiedtke, DPT, CSCS - Performance Therapies, P.C., Cedar Rapids, IA
Barbara Van Gorp, DPT, OCS, CSCS - UIHC, Iowa City, IA
Elizabeth Vermeer, DPT - Pella Regional Healthcare, Pella, IA

All-Alumni Reunion - Save the Date!



Mark your calendars! This year's All Alumni Reunion will be held Friday, October 5th, 2012 at the Marriott Coralville Hotel and Conference Center. Iowa faculty members Dr. Kathleen Sluka and Dr. Laura Frey Law will conduct a continuing education course on the biology of pain and its impact on physical therapy practice. A reception will be held after the course. Registration information will follow this summer- we hope to see you in October!

Faculty Publications for 2011

- Adams CM, Suneja M, Dudley-Javoroski S, Shields RK. Altered mRNA expression after long-term soleus electrical stimulation training in humans with paralysis. *Muscle Nerve*. 2011 Jan; 43(1):65-75.
- Avin KG, Frey Law LA. Age-related differences in muscle fatigue vary by contraction type: A meta-analysis. *Phys Ther* 2011 Aug; 91(8):1153-65.
- Chang SH, Dudley-Javoroski S, Shields RK. Gravitational force modulates muscle activity during mechanical oscillation of the tibia in humans. *J Electromyogr Kinesiol*. 2011 Oct; 21(5):847-53.
- Chang SH, Tseng SC, McHenry CL, Littmann AE, Suneja M, Shields RK. Limb segment vibration modulates spinal reflex excitability and muscle mRNA expression after spinal cord injury. *Clin Neurophysiol* 2011 (Epub). PMID: 21963319.
- Chang YJ, Shields RK. Doublet electrical stimulation enhances torque production in people with spinal cord injury. *Neurorehabil Neural Repair*. 2011 June; 25(5):423-32.
- Dannecker EA, Sluka KA. Pressure and activity-related allodynia in delayed-onset muscle pain. *Clinical J Pain*. 2011 Jan; 27(1):42-7.
- de Resende MA, da Silva LFS, Sato K, Arendt-Nielsen, Sluka KA. Blockade of opioid receptors in the SRD, but not the RVM, prevents analgesia produced by DNIC in rats with muscle inflammation. *J Pain* 2011 Feb 16; 12(6):687-97.
- Dudley-Javoroski S, Littmann AE, Chang SH, McHenry CL, Shields RK. Enhancing muscle force and femur compressive loads via feedback-controlled stimulation of paralyzed quadriceps in humans. *Arch Phys Med Rehabil*. 2011 Feb; 92(2):242-9.
- Dudley-Javoroski S, Saha PK, Liang G, Li C, Gao Z, Shields RK. High dose compressive loads attenuate bone mineral loss in humans with spinal cord injury. *Osteoporosis International* 2012 (Epub); PMID: 22187008.
- Frey Law LA, Krishnan C, Avin KG. Modeling nonlinear errors in surface electromyography due to baseline noise: a new methodology. *J Biomechanics* 2011 Jan 4; 44(1):202-205.
- Frey Law LA, Krishnan C, Avin KG. Author's Response to Letter in regards to 'Modeling nonlinear errors in surface electromyography due to baseline noise: A new methodology'. *J Biomechanics*. 2011; 44(8):1637-1638.
- Gautam M, Benson CJ, Sluka KA. Increased response of muscle sensory neurons to decreases in PH after muscle inflammation. *Neuroscience* 2010 Oct. 27; 170(3):893-900.
- Gautam M, Benson CJ, Ranier JD, Light AR, Sluka KA. ASICs do not play a role in maintaining hyperalgesia induced by repeated intramuscular acid injections. *Pain Res Treat* 2012;2012:817347.
- Goldstein MS, Scalzitti DA, Craik RL, Dunn DL, Irion JM, Irrgang J, Kolobe TH, McDonough CM, Shields RK. The revised research agenda for physical therapy. *Phys Ther*. 2011 Feb; 91(2):165-74.
- Goldstein MS, Scalzitti DA, Bohmert JA, Brennan GP, Craik RL, Delitto A, Field-Fote EC, Magistro CM, Powers CM, Shields RK. Vitalizing practice through research and research through practice: The outcomes of a conference to enhance the delivery of care. *Phys Ther* 2011 Aug; 91(8):1275-1284.
- Harris-Love ML, Morton SM, Perez MA, Cohen LG. Mechanisms of short-term training-induced reaching improvement in severely hemiparetic stroke patients: a TMS study. *Neurorehabil & Neural Repair* 2011 June; 25(5):398-411.

(continued...)

Faculty Publications, continued:

Hoeger Bement M, Vance CGT, Sluka KA. Managing Wound Related Pain. In: Kloth, Luther C (ed.) Wound Healing: Alternatives in Management, 4th Edition. FA Davis Publishers, in Press.

Iguchi M, Shields RK. Prior heat stress effects fatigue recovery of the elbow flexor muscles. *Muscle Nerve* 2011 Jul; 44(1):115-25.

Iguchi M, Shields RK. Cortical and segmental excitability during fatiguing contractions of the soleus muscle in humans. *Clin Neurophysio.* 2011 Jul 28. [Epub ahead of print].

Krishnan C, Williams GN. Factors explaining chronic knee extensor strength deficits after ACL reconstruction. *J Orthop Res* 2011; 29(5):633-40.

Krishnan C, Allen EJ, Williams GN. Effect of knee position on quadriceps muscle force steadiness and activation strategies. *Muscle Nerve* 2011 Apr; 43(4):563-73.

Kunkel SD, Suneja M, Ebert SM, Bongers KS, Fox DK, Malmberg SE, Alipour F, Shields RK, Adams CM. mRNA expression signatures of human skeletal muscle atrophy identify a natural compound that increases muscle mass. *Cell Metab* 2011 Jun 8; 13(6):627-38.

Liebano RE, Rakel B, Vance CG, Walsh DM, Sluka KA. An investigation of the development of analgesic tolerance to TENS in humans. *Pain.* 2011 Feb; 152(2):335-42.

Littmann AE, Iguchi M, Madhavan S, Kolarik JL, Shields RK. Dynamic position sense impairment is independent of perceived knee function in women with ACL reconstruction. *J Sport Rehabil* 2011 Dec (Epub). PMID: 22100530.

Madhavan S, Shields RK. Neuromuscular responses in individuals with anterior cruciate ligament repair. *Clin Neurophysiol* 2011 May; 122(5):997-1004.

Moran F, Leonard T, Hawthorne S, Hughes CM, McCrum-Gardner E, Johnson MI, Rakel BA, Sluka KA, Walsh DM. Hypoalgesia in response to transcutaneous electrical nerve stimulation (TENS) depends on stimulation intensity. *J Pain.* 2011 Aug; 12(8):929-35.

Pantaleão MA, Laurino MF, Gallego NL, Cabral CM, Rakel B, Vance C, Sluka KA, Walsh DM, Liebano RE. Adjusting pulse amplitude during transcutaneous electrical nerve stimulation (TENS) application produces greater hypoalgesia. *J Pain* 2011 May; 12(5):581-90.

Pedersen DR, Klocke NF, Thedens DR, Martin JA, Williams GN, Amendola A. Integrating cartilage-specific T1rho MRI into knee clinic diagnostic imaging. *Iowa Orthop J* 2011; 31:99-109.

Rao S, Dietz F, Yack HJ. Kinematics and kinetics during gait in symptomatic and asymptomatic limbs of children with myelomeningocele. *J Pediatr Orthop* 2012 Jan;32(1):106-12

Sass K, Frank L, Thiele A, Newton AD, Bork B, Hartung S, & Rosenbaum M. Physical therapy clinical educators' perspectives on students achieving entry-level clinical performance. *Journal of Physical Therapy Education*, In Press, 2011.

Savin DN, Tseng S, Morton SM. A bilateral adaptation during locomotion following a unilaterally-applied resistance to swing in non-disabled adults. *J Neurophysiol*, 2010 Dec; 104:3600-3611.

Shields RK, Dudley-Javoroski S, Oza PD. Low-frequency H-reflex depression in trained human soleus after spinal cord injury. *Neurosci Lett.* 2011 Jul 20; 499(2):88-92.

(continued...)

Faculty Publications, continued:

Sluka KA, Danielson J, Rasmussen L, Dasilva LF. Exercise-induced pain requires NMDA receptor activation in the medullary raphe nuclei. *Med Sci Sports Exerc.* 2011 Jul 25 [Epub ahead of print].

Stefanik JJ, Roemer FW, Zumwalt AC, Zhu Y, Gross KD, Lynch JA, Frey-Law LA, Lewis CE, Guermazi A, Powers CM, Felson DT. Association between measures of trochlear morphology and structural features of patellofemoral joint osteoarthritis on MRI: The MOST Study. *J Orthop Res* 2012 Jan;30(1):1-8.

Teran-Yengle P, Birkhofer R, Webber MA, Patton K, Thatcher E, Yack HJ. Efficacy of gait training with real-time biofeedback in correcting knee hyperextension patterns in young women. *J Orthop Sports Phys Ther* 2011 Oct (in press). PMID: 22030469.

Tonelli SM, Rakel BA, Cooper NA, Angstrom WL, Sluka KA. Women with knee osteoarthritis have more pain and poorer function than men, but similar physical activity prior to total knee replacement. *Biol Sex Differ* 2011 Nov 10;2:12.

Vasudevan EVL, Torres-Oviedo G, Morton SM, Yang JF, Bastian AJ. Younger is not always better: Development of locomotor adaptation from childhood to adulthood. *J Neurosci* 2011 Feb 23; 31(8):3055-65.

Walder RY, Gautam M, Wilson SP, Benson CJ, and Sluka KA. Selective targeting of ASIC3 using miRNAs inhibits primary and secondary hyperalgesia following muscle inflammation. *Pain* 2011 Aug 13 [Epub ahead of print].

Wilken J, Rao S, Saltzman C, Yack HJ. The effect of arch height on kinematic coupling during walking. *Clin Biomech (Bristol, Avon)* 2011 Mar; 26(3):318-23.

Wilken J, Rao S, Estin M, Saltzman CL, Yack HJ. A new device for assessing ankle dorsiflexion motion: Reliability and validity. *J Orthop Sports Phys Ther* 2011 April; 41(4):274-80.

Williams GN: Chronic Lateral Ankle Instability. In Brotzman & Manske(ed): *Clinical Orthopaedic Rehabilitation*. In Press.

Williams GN: Syndesmosis Injuries of the Ankle. In Brotzman & Manske(ed): *Clinical Orthopaedic Rehabilitation*. In Press.

Research Grant Support (Principal Investigators)

In the past year, Physical Therapy and Rehabilitation Science Faculty members received over \$3 million in research grants as principal investigators from the National Institutes of Health and private foundations. Congratulations to all faculty members for their ground-breaking work in discovering new knowledge in physical therapy and rehabilitation science.

Laura Frey Law, PhD, PT, Associate Professor
NIH - K01 Research Training Award: "Genetic and Trait Influences on Pain Heterogeneity"
\$487,358

Susanne M. Morton, PhD, PT, Assistant Professor
NIH - K-01 Research Training Award: "Effect of Contralateral Leg on Motor Output Post Stroke"
\$355,054

Susanne M. Morton, PhD, PT, Assistant Professor
NIH - R21: "Acquisition and Retention of Locomotor Adaptations after Stroke"
\$377,638

(continued...)

Faculty Principal Investigators, continued...

Richard K. Shields, PhD, PT, Professor
NIH-R01: "Neuro-Musculoskeletal Plasticity after SCI"
\$1,587,090

Richard K. Shields, PhD, PT, Professor
NIH-R01: "Mechanical Stress And Skeletal Plasticity After Spinal Cord Injury In Humans"
\$1,556,250

Richard K. Shields, PhD, PT, Professor
VA-Merit: "Novel Intervention To Influence Muscle Plasticity In Veterans With SCI"
\$750,000

Richard K. Shields, PhD, PT, Professor
The Craig H. Neilsen Foundation: "Molecular Changes to Electrical and Mechanical Stress on Post-SCI Muscle and Bone"
\$248,992

Kathleen A. Sluka, PhD, PT, Professor
NIH-R01: "Role Of ASIC3 In The Etiology Of Fibromyalgia"
\$1,948,947

Kathleen A. Sluka, PhD, PT, Professor
NIH -ARRA Supplement: "Role Of ASIC3 In The Etiology Of Fibromyalgia"
\$893,569

Glenn N. Williams, PhD, PT, Assistant Professor
DJO, Inc: "Effect of High Intensity Voluntary Exercise and NMES on Quadriceps Muscles after Arthroscopic Partial Meniscectomy", \$136,382

Contact Us



*Graduate Program in Physical Therapy
& Rehabilitation Science*

Physical Therapy and Rehabilitation Science
1-252 Medical Education Bldg.
The University of Iowa
Iowa City, IA 52242

Phone: 319-335-9791

physical-therapy@uiowa.edu

Support Iowa Physical Therapy Education

