



UNIVERSITY OF DELAWARE DEPARTMENT OF PHYSICAL THERAPY
ALUMNI NEWSLETTER

Volume 14,
 Spring 2013

Editors: Xiang Gao, DPT Class of 2013
 Chang Min Lee & Heather Theiss, DPT Class of 2014

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MESSAGE FROM THE CHAIR



Greetings once again to all of our wonderful alumni and friends,

This past year is a blur. So much has happened; I am not sure where to begin. First, we were

chosen through a national nomination process as one of four exemplar sites participating in a national study of physical therapist education. The study, "Physical Therapist Education for the 21st Century (PTE-21): Innovation and Excellence in Physical Therapist Academic and Clinical Education," is funded by the American Physical Therapy Association. We had a great site visit last month and look forward to continuing to work with the team to shape the direction of physical therapist education for the nation.

We have also been incredibly busy preparing for our move to UD's new, 272-acre, Science Technology and Advanced Research (STAR) campus. The new STAR campus is the site of the former Chrysler Assembly Plant acquired by UD in late 2009. PT will be the first complete academic department to move onto this new campus. This move will give us the opportunity to grow our entire department, including our class size. We are very excited about our new facilities and have already begun reaching out to alumni and friends to help us secure the funding that will be needed to purchase state-of-the-art classroom and training facilities for our students. You will be hearing more about this shortly.

We have also welcomed several new members to

our Department and have been searching to fill either new or vacant positions. We have a new faculty member, Dr. Susanne Morton, joining us in September. Dr. Morton is currently at the University of Iowa and we are most excited to welcome her to UD. We are also in the process of searching for an additional Director of Clinical Education, a newly created position of Associate Director of the DPT Program, and a new Chair for the Department. As many you have heard, I have decided to step down as Chair, after 15 wonderful years in the position. Please know I am not leaving UD or the PT Department. This is certainly an exciting time of growth and positive change in the Department.

Once again I would like to conclude my message by thanking Cyndi Haley and our DPT students Chang Min Lee, Heather Theiss, and Xiang Gao for all of their hard work in putting together this wonderful newsletter. Also, one final time, I would like to express my sincere appreciation and gratitude to the many alumni and friends who help to support our Department. Your generosity is much appreciated.

Best wishes,

Stuart Binder-Macleod

Stuart A. Binder-Macleod, PT, PhD, FAPTA
 Edward L. Ratledge Professor and Chair

Calendar of Events

APTA Annual Conference	June 26-29, 2013–Salt Lake City, UT
APTA Student Conclave	October 24-26, 2013– Louisville, KY
UDPT Class of 2013 Graduation	January 11, 2014
Combined Sections Meeting	February 3-6, 2014-Las Vegas, NV
Alumni Weekend May 31-June 2, 2013	
Visit www.udel.edu/PT for more details on events	
Emergency First Responder/CPR Re-certification courses on June 1st.	

WANT TO SAVE TREES AND DEPARTMENT MONEY? If you would like to read the Alumni Newsletter on-line instead of receiving the printed publication, e-mail Ms. Cyndi Haley (chaley@udel.edu) your name and email address and request to be added to the alumni e-mail list. We will e-mail you a web link for the newsletter each time it is completed. Thanks!

CLASS OF 2012 GRADUATION



Congratulations DPT Class of 2012!

Listed Alphabetically: Emily Therese Ardolino, Eleanor Martha Bachman, Kelly Elizabeth Barlow, Rebecca Anne Beeby, Kristin Michele Beste, Donna Lydston Blease, Christina Marie Bobco, Rachel Ilene Braman, Michael James Campion, Kerry Grace Cheadle, Sunghwan Choi, Peter Charles Coyle, Steven R. Feldman, John Barrington Fischer, Sarah Catherine Flynn, Daniel Matthew Goldstein, Rebecca Anne Huesman, Amanda Marie Kingston, Christina Berdos Ragonesi, John Gaspare Rino, Matthew Kirk Ryan, Michael Thomas Schmelzer, Meaghan Rae Schober, Beth Ann Schroeder, Mark Joseph Szaroleta, Connor Rahilly Whitesel.

Message from Daniel M. Goldstein, PT, DPT, President of the Class of 2012:

To the UDPT faculty, staff, and students:

It is amazing to think that only 2.5 short years ago the Class of 2012 began their PT careers in McKinly Lab and now we are beginning the next chapter in the working world. We could not be more proud to represent all that we have left back in Newark, DE. Thank you to all the faculty and staff that have shaped all of us into clinicians that improve lives on a daily basis. We would not be able to progress the quality of life for our patients without your guidance, wisdom, and most importantly your devotion to the profession of physical therapy. To the current students, learn from every day, lecture, clinical rotation, and relationship you shape during your time in 333 MKL and the clinic. You will use every ounce of your PT training once you are a licensed PT.

Once again, from the Class of 2012, thank you for all that you do and we cannot wait to see how UDPT grows in both the near, and distant, future!

Graduation Awards:

- Faculty Award: to **Peter Coyle** for demonstrating exemplary personal qualities deemed most valuable to the

PT profession, including integrity, cooperation, initiative and leadership.

- Chair's Award: to **Rebecca Beeby** for special contributions of time and effort to improving the UDPT program and helping the faculty and director fulfill the missions of education, scholarship, and service.
- Scholarship Award: to **Sarah Flynn** for a high level of scholastic achievement in the UDPT program as demonstrated by the highest grade point average in the class.

To Community Members & Alumni:

- Cossoy Award: to **Richard Williams** for extraordinary contributions to the UDPT program from outside the department.
- Cathy Doetzer Kohlenstein Clinical Educators Award: to **Krystal Lighty and Alex Kobb** for outstanding contributions to the clinical education of UD students.
- Alumni Award: to **Airelle Hunter Giordano** who made outstanding contributions to the Physical Therapy Department.

- Cathy Doetzer Kohlenstein Scholarship to **Parker Drumm** awarded to a second year student to assist with funding for clinical education expenses.
- Charles S. Barker, Sr. Scholarship to **Jerry Choi** awarded to a second year student who has successfully balanced academics and family related responsibilities.
- Paul Mettler Military Service Award to **Jeremy Rosenberg** awarded to a student with current or previous military service, or whose life in their Physical Therapy Program, has been directly impacted by a first generation family member serving their country.

To UD Physical Therapy Residents:

- Certificate of Completion of the Orthopedic Residency was presented to **H. Richard Beeson, III**.
- Certificate of Completion of the Sports Residency was presented to **Michael Akinbola**.

CLASS OF 2012 GRADUATION

A Memorable Graduation



Class of 2012 celebrate the completion of their degree at their hooding and graduation ceremony held at Clayton Hall.

On January 5, 2013, families and friends gathered in Clayton Hall to celebrate the tremendous achievements of the 29 members of the UDPT Class of 2012.

The graduation ceremony began with a warm welcome by Dr. Binder-Macleod, chairman of the Physical Therapy department, followed by the class of 2012 speakers and the class gift presentation. Other highlights included the class slide show, award and scholarship presentations, and the address to the graduating class given this year by Dr. Cole Galloway. The same professor who introduced these 29 eager pupils to the UDPT program on their very first day of classes, Dr. Galloway stood two and a half years later in front of the class of 2012 to officially welcome them into the profession as Doctors of Physical Therapy. Dr. Galloway's speech was a perfect harmony of inspiration, reflection, humor, and accounts from personal life experience from his years in the field of physical therapy. After congratulating the students on their hard-earned accomplishments, he gave the class of 2012 some advice to take with them into their professional careers: keep your professional priorities, maximize your learning, seek out mentoring and become a mentor, and continue to set and pursue professional goals. His words will surely guide the graduates through their lives not only as professionals, but also as individuals.



Dr. Galloway welcomes the class to the PT profession with his inspirational speech.

Vice Provost Dr. Charles Riordan, Associate Provost Dr. Mary Martin, Dean Kathleen Matt and the physical therapy faculty hooded and presented the UDPT Class of 2012. Clinical residents were also recognized and awarded certificates in recognition of their year plus of learning and hard work for the PT department. All enjoyed a recessional and reception following the closing remarks by Dr. Binder-Macleod and the conclusion of the graduation ceremony.



The 2012 University of Delaware Physical Therapy Program Graduation was the most attended by alumni, award winners, friends, family, students, and faculty.

CLASS OF 2012 GRADUATION

Departmental Scholarships

The University of Delaware Physical Therapy Department is pleased to offer several different scholarship opportunities to our students each year. We are extremely grateful to the donors and benefactors who make this possible. Below are the highlights of the awards that we are able to offer to our students.

Paul Mettler Military Service Award

In honor of Paul Mettler's distinguished service to his country and to the University of Delaware Physical Therapy Program, an award has been created in his name. The Paul Mettler Military Service Award is granted to a student with current or previous military service OR whose life during their participation in the physical therapy program has been directly impacted by a first generation family member serving their country. There is no limit to the number of individuals that may share this award in a single year. As many of you are aware, Dr. Mettler retired after 23 years of service to the Physical Therapy Department. At the University of Delaware alone, Dr Mettler has contributed to the development of over 800 new physical therapists. In his quasi-military style of teaching, he commanded his troops and translated his vast knowledge of Anatomy, Neuroanatomy, Cardiac Rehabilitation



Jeremy Rosenberg receives the Paul Mettler Service Award from Dr. Stuart Binder-Macleod

and even Clinical Management to the masses of physical therapy students. The department is forever grateful to Paul for his exemplary leadership and we know many students also appreciate his contributions to their education and professional development. Please consider giving a gift to the Department in Paul's name to support the things that meant so much to Paul. You can designate the Paul Mettler Military Service Award on your donation and we will send him an acknowledgement of receipt of your gift in his honor. In lieu of a party for his departure, Paul's only request was that those impacted by service to their country be recognized and an award bearing his name seemed fitting. Please give generously and remember Paul and all those who served their country on Veteran's Day.

Cathy Doetzer Kohlenstein Scholarship

This scholarship is funded by a generous endowment recently established by the family of Cathy Doetzer Kohlenstein, to celebrate her life and to create a legacy for her three sons and future generations.

Ms. Kohlenstein was a graduate of the UD MPT program, and was an outstanding clinician, clinical instructor to many UD students, and advocate for our profession.

Sadly, in 2002, Cathy was taken from the world far too early after a courageous two year battle with Leukemia.

This scholarship will be presented each year to a 2nd year DPT student to assist with the funding of his or her clinical education expenses. The recipient is chosen based upon his or her future professional goals, how previous and planned clinical education experiences relate to these

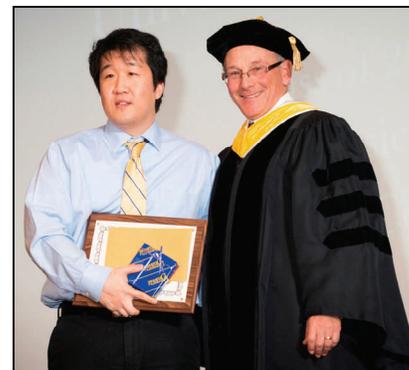
goals, and how the funds from this generous endowment will enable or enhance their clinical education experience.



Cathy Doetzer Kohlenstein Scholarship Award winner Parker Drumm is pictured after receiving the award with Cathy's family.

Charles S. Barker, Sr. Scholarship

This award is given to a second year student who has successfully balanced academics and family related responsibilities.



Jerry Choi, pictured with Dr. Binder-Macleod, is recognized for his ability to balance the rigors of the DPT program and family life.

If you are interested in supporting a DPT scholarship please contact Dr. Stuart Binder-Macleod at sbinder@udel.edu.

DEPARTMENT NEWS



Update on Our Move to the Science Technology & Advanced Research (STAR) Campus

Many of you will remember that in last year's newsletter we announced our anticipated approval by the University of Delaware's Board of Trustees for our move to the Science, Technology and Advanced Research (STAR) Campus. I am most pleased to report that things have moved along at breakneck speed. We anticipate moving onto the site of the old Chrysler Administration Building sometime in December of 2013 or January of 2014.

We have worked very closely with the developer, Delle Donne & Associates, Inc., and believe that we will have beautiful new facilities for our expanded clinics, classrooms, and research laboratories. We have also submitted our application to the Commission on Accreditation of Physical Therapy Education (CAPTE) for the growth of our DPT class size from 36 to 60 students per year.

As some of you may already

know, we have recently begun a campaign to raise funds that are needed to create state-of-the-art Physical Therapy student classrooms on the STAR Campus. If you have not yet heard from us, we will be contacting you in the near future with additional information.

Finally, during the upcoming 2013 University of Delaware Alumni Weekend (May 31-June 2, 2013), you will have an opportu-

nity to view the progress on the development site of the STAR campus as we are offering a bus tour of the facility on Saturday, June 1st at 10:00 am. Please go to www.udel.edu/alumniweekend to register and view all of the PT department alumni weekend activities. We would love to see you!

Written by
Dr. Stuart Binder-Macleod

Help Support the UD Physical Therapy Program!

With your support, the Physical Therapy program will be able to provide even more resources and opportunities for our students. For example, pairs of student will have high-low tables and interactive technology to allow them to learn hands on patient care and treatment application. Your support will also allow the University to increase its class size from 36 to 60, accommodating the increasing demand for Physical Therapists.

Making a gift is simple. Just visit www.udel.edu/makeagift to use our secure, online giving form. Please be sure to allocate your gift to the "Physical Therapy" in the "Other" box.

Many companies match gifts of their employees. This is a great way to double or even triple your gift! Check with your company's Human Resources Department or visit our online database at www.matchinggifts.com/ud to find out if your employer matches gifts.

For more information, please contact the Office of Annual Giving at annualgiving@udel.edu or toll-free at 866-535-4504. You may send in checks to Office of Annual Giving, University of Delaware, 83 E Main Street, 3rd Floor, Newark, DE 19716. Be sure to note "Physical Therapy" in the note section of your check to assure your gift is designated correctly.

Thank you for your generous support!!

UDPT HAPPENINGS

Dr. Karla Bell Receives Signe Brunnstrom Award for



Karla A. Bell, PT, DPT, OCS, was awarded the Signe Brunnstrom award for Clinical Education from the American Physical Therapy Association. Karla was instrumental in the clinics transition to the current electronic medical record software and has served as both the clinic CCCE and director of the Orthopedic Residency program for the past several years. In her nomination letter for the award,

a colleague wrote, " Karla has committed her career path to the quality instruction of student physical therapists at both the entry level and advanced residency level". Karla has recently decided to embark on a new challenge and has transitioned to the Clinical Education team as a Director of Clinical Education in the PT department. She will be

missed in the clinic; however, she is excited about enhancing her knowledge and skills in the clinical education realm.

Written by **Tara Jo Manal, PT, DPT, OCS, SCS Director of Clinical Services**

Dr. Lynn Snyder-Mackler Receives Helen J. Hislop Award for Outstanding Contribution to Professional Literature



Lynn Snyder-Mackler, PT, ATC, ScD, SCS, FAPTA, has conducted groundbreaking research on functional recovery from anterior cruciate ligament injury and total knee replacement, which has changed physical therapy clinical practice for patients with these diagnoses. She has more than 150 peer-

reviewed publications and considered an authoritative figure in her areas of investigation.

Dr. Snyder-Mackler is presently Alumni Distinguished Professor in the Department of Physical

Therapy, Athletics representative and past director of the Interdisciplinary program in Biomechanics and Movement Science at the University of Delaware. She has held academic roles in Department of Orthopaedics, Thomas Jefferson University College of Medicine, Philadelphia; Rothman Institute, Philadelphia; Department of Physical Therapy, SSSH, Allegheny University of the Health Sciences, Philadelphia; and Neuromuscular Research Center, Boston University. Snyder-Mackler received her ScD in Applied Anatomy and Physiology from Boston University, MS in Organizational Behavior and Certificate in Physical Therapy from the University of Pennsylvania, and BA in Quantitative Studies from Johns Hopkins University, Baltimore.

Dr. Snyder-Mackler has been investigating func-

tional recovery from knee injury for more than 30 years. Her publications have had a significant impact on clinical practice and research related to physical therapy and rehabilitation of the knee. Early in her career, she demonstrated the benefits of neuromuscular electrical stimulation (NMES) for improving quadriceps strength and kinematics of the knee after anterior cruciate ligament reconstruction. Her future studies went on to further elucidate the role of the quadriceps after knee injury and the potential benefits of incorporating NMES into the rehabilitation of patients with knee injury.

Adapted from **APTA**

Airelle Hunter-Giordano, PT, DPT, SCS, OCS, CSCS - Recipient of the 2012 Alumni Award



Airelle Hunter-Giordano accepting the Alumni Award from Dr. Manal at UDPT Graduation 2012

Airelle Hunter-Giordano graduated from the University of Delaware with her Masters degree in physical therapy in 2003, She stayed at the University of Delaware to complete a Sports Residency and later obtained her Doctorate degree in physical therapy from Temple University in 2007. Airelle is a Board Certified Clinical Specialist in both Sports and Orthopedics. In addition Airelle is on the Program Services Council of the

American Board of Physical Therapy Residency and Fellowship Education, is Vice Chair of the Sports Residency SIG and is an APTA Credentialed Clinical Instructor Emergency First Responder Trainer. She has also been extensively involved in the clinical and didactic education in the University of Delaware Physical Therapy Department. Currently Airelle serves as the Associate Director of Clinical Services and is the Director of the Sports Physical Therapy Residency Program.

Airelle Hunter Giordano received 2 honors this year. She received the Department of Physical Therapy Alumni award for a UD graduate who has made an outstanding contribution to the PT department. In the 10 years since her graduation from the MPT program, Airelle has authored 4 chapters and written 4 articles, lectured 30 national and international presentations, and served the profession through multiple leadership and committee roles. As a department there is nothing more you can hope for than the success of your graduates in their pursuit of professional excellence, however, when they make the commitment to dedicate

this passion back to the program- it is truly special. Airelle has dedicated her career to the pursuit of excellence in sports medicine, the training of residents and the support and encouragement of the DPT program and students. The Sports Section of the APTA also took notice of Airelle's achievements and awarded her the Sports Section's Lynn Wallace Clinical Education award this year at Combined Sections Meeting. This award recognizes an individual in the Sports Section who has dedicated their expertise to the advancement of clinical training in Sports Physical Therapy. In a letter of support one colleague wrote "she has cultivated an environment of clinical excellence and continuously gives up her time to educate young professionals in the clinic and on the field." Airelle is truly deserving of this recognition and we are very pleased to have her leadership and guidance as Associate Director of the Clinical Services and Director of the Sports Residency Training.

Written by **Tara Jo Manal, PT, DPT, OCS, SCS Director of Clinical Services**

UDPT HAPPENINGS

UD Department of Physical Therapy chosen for national study



UD's DPT program provides students with a rich clinical and research environment while also offering undergraduates the opportunity to gain valuable experience in the clinic and the lab.

The University of Delaware's Department of Physical Therapy has been chosen through a national nomination process as one of four exemplar sites participating in a national study of physical therapist education.

The study, "Physical Therapist Education for the 21st Century (PTE-21): Innovation and Excellence in Physical Therapist Academic and Clinical Education," is funded by the American Physical Therapy Association.

The four clinical and academic sites were chosen for their innovation and excellence in physical therapist education.

UD's program was reviewed by a

five-person research team on March 11th and 12th, 2013. Gail Jensen, professor at Creighton University Medical Center in Omaha, Neb., is the lead researcher on the project. The goals of the study are:

1. To identify exemplar cases for the study and develop research methods and instruments
2. To identify which educational patterns and practices (curricular characteristics) are present in the exemplar cases and appear to result in the development of physical therapists who are prepared to meet the demands of a changing society and health care system

3. To identify the elements of DPT educational patterns and practices (organizational characteristics) that will continue to support the successful education of physical therapists in the presence of patients

4. To begin the process of identifying those parameters that are worthy of replication because they have the likelihood of leading to more effective and efficient delivery of physical therapist education and to identify professional and key stakeholder responses to the curricular and organizational characteristics.

The findings from the four initial sites will identify elements of excellence and innovation in physical therapist education and provide preliminary evidence for a larger national survey study involving more institutions.

"We're really proud to be part of this exciting research," said department chair Stuart Binder-Macleod. "Our students benefit tremendously from our strong research foundation, which allows us to provide evidence-based care for the patients in our clinics. The clinics, in turn, provide a valuable learning environment for our students. I think one of the keys to our successful DPT program is that everything – from the classroom to the clinic to the lab – is linked and integrated."

About UD Physical Therapy

UD's physical therapy program was recently ranked second in the nation

by *U.S. News and World Report*. The department boasts a 100 percent job placement rate for its graduates. Research funding totals almost \$19 million, with the bulk of the support coming from the National Institutes of Health and the National Science Foundation. The research addresses a broad array of issues from pediatric mobility and lower back pain to knee injuries and stroke rehabilitation. The doctorate in physical therapy (DPT) program is complemented by the interdisciplinary Biomechanics and Movement Science (BIOMS) program, with many students earning both DPT and Ph.D. degrees.

About APTA

The American Physical Therapy Association (APTA) is an individual membership professional organization representing more than 80,000 member physical therapists (PTs), physical therapist assistants (PTAs) and students of physical therapy. APTA seeks to improve the health and quality of life of individuals in society by advancing physical therapist practice, education, and research, and by increasing the awareness and understanding of physical therapy's role in the nation's health care system.

Excerpts taken from an article by **Diane Kukich** & input from **Ellen Wruble Hakim, PT, DScPT, MS, CWS, FACCWS, Director of Doctorate in Physical Therapy Program**
Photo by **Ambre Alexander**

Setting the Stage for Better Health Care



In UD's novel Health Care Theater Program, nursing student Elizabeth Morris and physical therapy student Jerry Choi attend to a "patient" played by theatre student Zachary Jackson.

UD's standardized patient Health Care Theater Program (HCTP), a collaboration between the College of Health Sciences and the Department of Theatre, is a unique way to prepare students for their roles as health care professionals. With this approach, individuals are trained to portray patients and family members so that students can practice such skills as taking medical histories and doing physical exams.

UD's distinctive twist on the traditional standardized patient concept is that the actors are not professionals – they're undergraduate theatre minors.

The resulting scenarios develop in a very dynamic way, with the health sciences and theatre students interacting with each other and providing feedback in an unscripted give-and-take.

"We believe that UD is the only school in the country taking this approach," says Allan Carlsen, undergraduate adviser and coordinator in the theatre

UD HAPPENINGS

Setting the Stage.....continued

department. "A few other institutions are using graduate theatre students as standardized patients, but our theatre minors are critical to the approach we're taking and the results we're seeing."

Dr. Kathy Matt, Dean of the College of Health Sciences, points out that the program also offers a critical opportunity for the students to learn how to work together. While the program has so far included just nursing and physical therapy students from the health sciences side, plans are to phase in other disciplines, including athletic training, medical technology, exercise science and nutrition.

"The next generation of health care professionals and leaders will be required to work in teams," Matt says. "Our standardized patients program provides that experience, with the patient as an integral partner."

The addition of family members further complicates the dynamic and enhances the realism of the scenarios.

The UD team has also contributed to the development of a set of interactive videos to teach communication skills to health care professionals across the country. Produced and marketed by the F.A. Davis Company in Philadelphia, the videos were filmed on the UD campus, with theatre minors playing roles in more than 20 scenes.

The scripts were written by Cynthia Diefenbeck, who has a doctorate in clinical psychology and is a member of the UD nursing faculty, and Kyle Phillips, who holds degrees in both theatre and nursing.

UD's clinical partners have recently become interested in the HCTP as well. Nemours/A.I. duPont Hospital for Children is planning to implement the approach in training first-year pediatric emergency fellows, and Christiana Care Health System is applying it with third- and fourth-year medical residents.

"Standardized patients will provide our clinicians with unique educational interventions and allow for direct feedback that will enhance interpersonal and communication skills," says Dr. Maria Diaz of the Division of Emergency Medicine at Nemours/A.I. duPont Hospital for Children.

At Christiana Care, Dr. Tabassum Salam has been involved in the education of physicians-in-training and medical students for over 10 years. "I am very excited to have a novel modality with which to teach them communication skills and the art of working in multidisciplinary teams," he says. "The simulated scenarios will make the clinical cases feel very real for the learners, and they will get to practice skills that just cannot be taught in a traditional classroom format."

The program is still so new that little data has been collected at this point. However, evaluations indicate that the approach is "eye opening" and "revolutionary."

"I think the HCTP exemplifies the transformative experience that we believe our students should have at the University of Delaware," Carlsen says.

Article by **Diane Kukich**

RESEARCH

Focus on Developing Rehab Approach for Older Adults with Chronic Low Back Pain



Gregory Hicks uses a rehabilitative ultrasound imaging device with patient Jerold Schultz. He is assisted by Megan Sions and Christopher Schmoyer.

All low back pain is not created equal, and Gregory Hicks would like to find a way to better individualize care and improve clinical outcomes for older adults suffering from this debilitating condition.

Hicks, associate professor in the University of Delaware's Department of

Physical Therapy, has been awarded a five-year, \$2.35-million grant from the National Institutes of Health to develop a comprehensive, standardized rehabilitation approach that is specifically designed to reduce pain and optimize function.

According to Hicks, low back pain is the most frequently reported musculoskeletal problem among older adults.

"In this age group, from 60 to 85 years, low back pain has been associated with a host of negative consequences, including increases in mobility limitations, disability, and the use of healthcare resources," he says. "Although it's a risk factor for functional decline in the elderly, the majority of research studies addressing this condition exclude people over the age of 60, so clinicians have minimal evidence upon which to base their treatment decisions."

Hicks and his research team will carry out a study of 250 people in this age group with a new or recent onset of low back pain to determine whether the presence or absence of certain risk factors can predict the development of chronic low back pain (LBP) and greater LBP-related disability among older adults, including declines in physical function and societal participation.

"We hope to lay the groundwork for developing a therapeutic algorithm for evaluation and treatment of LBP, specifically for older adults, to focus on prevention of chronic LBP and development of functional limitations and disability associated with LBP," Hicks says.

Article by **Diane Kukich**
Photo by **Kathy F. Atkinson**

RESEARCH

DPT/PhD NIH Funded Training Program: Student Spotlight - Dr. Louis Awad



As many of you may know, our Department has been fortunate to receive funding from the National Center for Medical Rehabilitation Research of the NIH to support a predoctoral training program that funds outstanding students during their last year training within our DPT program and up to four years of PhD training within our interdisciplinary graduate program in Biomechanics and Movement Sciences (BIOMS). Dr. Binder-Macleod has been the director of this training grant since it was first funded in 1996. The program funds four students per year and there are 11 graduates of the program; all graduates currently hold faculty positions in PT programs. Trainees receive tuition scholarships, a yearly stipend of ~\$22,032, and additional funds for travel to professional meetings. All students admitted to the DPT program are eligible to apply for admission into this special program if they are US citizens or permanent residents.

This year we would like to highlight one of current trainees within this newsletter. This year we are highlighting Dr. Louis Awad. Louis graduated from Rutgers University in 2008, where he majored in Exercise Science & Sports Studies. During his time at Rutgers Louis also worked as a sports coach and trainer and implemented fitness programs. His immense interest in sports

biomechanics and research is what motivated him to pursue the combined DPT/PhD program at the University of Delaware.

Louis completed his DPT degree from the University of Delaware in 2012. Louis reports that the transition from DPT to PhD was a smooth process as he was able to complete a third of the PhD coursework as well as publish some of his research during the DPT phase of his training. After rotating through several labs and having experienced the aftermath of strokes in family members, Louis became interested in stroke rehabilitation and decided to work in Dr. Binder-Macleod's lab. Louis notes that the grant offers him unrestricted freedom to work on any available project under his advisor's guidance. Louis says the training grant has brought him many opportunities and expanded his scope of interest. He is now working on three projects of his choice and is able to allocate his time according to his needs. For Louis, working on multiple projects added exposure to different equipments and broadened his perspectives.

Louis strongly recommends anyone who's interested in the field of PT to consider research. "As physical therapists we are in a special position and we can make tremendous contribution to the body of knowledge as the experts of rehabilitation."

UD INTEGRATED CLINICAL EXPERIENCE UPDATES

Clinical Services & S&O/NOA Update



The UD Sports Ortho (S&O) and Neurologic and Older Adult (NOA) clinics have been bustling with activity. We have trained over 88 DPT students in this past year alongside colleagues participating in externships or independent studies from Athletic training and Health and Exercise Science. Over 200 undergraduates with an interest in physical therapy as a profession also participate in aide opportunities in the clinics supporting our student therapist in providing first line care for their patients. The clinic has successfully migrated over to electronic medical record (EMR) and the DPT students adapted more quickly than the full time staff! We had many chal-

lenges integrating our best practice guidelines along with the research needs of our clinical trials into an EMR system but things are finally settling down. We partnered with a developing EMR system and were a Beta test site as they were very interested in the integration of this product into an academic program, we soon were assigned our own personal liaison since we were so "helpful" and provided so much daily and significant feedback. Lesson learned for them I think, be careful what you ask for! But we have been able to begin to integrate the software into the academic program so students can use the system even before arriving in the clinic which certainly improves

the learning curve and reduces frustration.

The clinic staff has also been busy looking at plans and trying to design the new clinical space in the building on STAR campus where we will be relocating in January 2014. It is really hard to believe that next year at this time we will have moved. McKinly has been the home of the clinic since its beginning and although we are very excited that we will have windows and no leaks- it is bittersweet to leave this building in the heart of main campus. We are busy putting in all the needed one-way mirrors and assuring line of site for all our student therapists but are confident the new space will energize the whole crew. Moving won't make the long hours charting and preparing for patients any shorter for our students but we sure hope it makes them more comfortable doing so...this photo taken from the student note writing area the other day says it all- the UD DPT students work hard in their integrated clinical experiences and need more space to do great things in clinical practice! I hope you are able to join us in June for the

Alumni weekend- to say goodbye to McKinly lab- next year it will be time to say hello to STAR!

Written by **Tara Jo Manal, PT, DPT, OCS, SCS Director of Clinical Services**



If anyone doubts we need more space for our students who go through long days and nights - see what I just found in the clinic writing area...

UD INTEGRATED CLINICAL EXPERIENCE UPDATES

Pediatric Clinic

Over the past year the Pediatric Clinic has provided services to many children and their families. Patient populations include children with cerebral palsy, spina bifida, idiopathic toe walking, torticollis, and developmental delay. Families and their children are provided services in a family friendly atmosphere and are encouraged to be active participants in their child's therapy from evaluation through discharge planning. Opportunities for participation in research with Dr. Cole Galloway's Go Baby Go Project as well as clinical education for 2nd year DPT students during their pediatric

integrated clinical experience continues to be offered through the pediatric clinic. Two new projects this year have included use of a stand up "Power wheels" car and beginning work on a home harness system for use in a family's home. If you have any questions about the pediatric clinic please feel free to contact us at [\(302\) 831-8893](tel:3028318893).

Written by **Tracy Stoner, PT, DPT, PCS**
Pediatric Physical Therapist



Multiple Sclerosis Assessment Clinic

The University of Delaware MS Assessment Clinic continues to provide free, multi-disciplinary evaluations to persons battling Multiple Sclerosis. After performing a complete neurological and musculoskeletal evaluation, second-year Physical Therapy students provide each

participant with an individualized home program. The clinic welcomes referrals from community practitioners who have patients/clients who would benefit from participating in the clinic.

If you have a client who

has MS and would benefit from participation in the MS Assessment Clinic, please have them contact the MS Society at [302-655-5610 x114](tel:3026555610)

Written by
Cathy Ciolek, PT, DPT, GCS



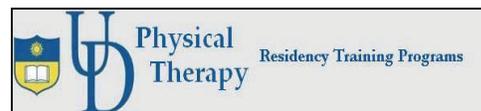
Residency & Fellowship Training Programs

The University of Delaware now has 4 credentialed Physical Therapy Residency Training Programs. The most recently credentialed program, the UD John Hopkins Neurologic Residency Training Program received credentialed status this fall. The Neurologic Residency joins the ranks with Sports, Orthopedic and Geriatric programs. Programs are credentialed through a process of paper review of credentialing standards coupled with a site evaluation by a team of 3 site visitors. The recommendations of the reviewers are appraised and approved by the Board of Residency and Fellowship education of the APTA. The programs then provide annual reports on the programs progress and repeat the process for re-

credentialed status every 5 years. The geriatric program has reached this milestone and we are awaiting our onsite re-credential visit later this spring. Our own residency faculty participates in residency program review teams in order to contribute to the promotion of residency training nationwide and have performed numerous site visits over the last few years. We look forward to welcoming our colleagues here to see all that UD Residency has to offer our future clinical specialists. We are currently in the planning stages of our first Fellowship in Manual Physical Therapy set to launch in 2014 and we are exploring models of Residency and Fellowship training that can be more

widely accessed by our alumni who are unable to participate in a full time "in residence" program. If you are interested in alternative models of residency and fellowship training beyond the classic full-time in residence option, please e-mail Tara Manal, Director of Residency Training at tarajo@udel.edu we welcome your insight and we will continue to update you as the exploration of these options unfolds.

Written by **Tara Jo Manal, PT, DPT, OCS,**
SCS Director of Clinical Services



DPT STUDENT NEWS

Class of 2013

Written by Danielle Cherry, SPT

As another Spring season quickly approaches, the UDPT Class of 2013 cannot help but begin to look back on the past two years and see how far we have come. With our final semester of classes coming to a close very soon, it is hard to believe how little time we have left on our UD campus that has been our home since that first summer in 2011. In this last full semester, we have begun to integrate didactic knowledge to a pediatric population, learning the administrative aspects of the profession of Physical Therapy, and truly delve into the complex world of evaluation and treatment of spine. Many of our classmates are also only weeks away from completing their final Integrated Clinical Experience in either Sports and Orthopedics, Neurologic and Older Adult, or Pediatrics.

Our time at UDPT is coming to a close, but not before we enjoy our final PT Prom this April, Advanced Seminar, our final three full-time affiliations, and ultimately the light at the end of the tunnel, graduation in January 2014! We wish the Class of 2012 good luck in their first year as DPTs, the Class of 2014 in their second year of PT school, and a warm welcome to the Class of 2015! We hope your experiences are as rich and rewarding as ours have been!

Danielle Cherry, President UDPT
Class of 2013



Class of 2014

Written by Jacob Holler, SPT

The class of 2014 is happy to bid adieu to the winter weather and welcome spring back to Newark. Along with nicer weather we are excited to welcome the class of 2015 and are excited to meet them when they begin their classes in July while our class joins the class of 2013 in our emergency first responder course.

This semester we are taking on an exciting course load including Clinical Neuroscience, Electrotherapy, Applied Physiology, and Research Methods that challenges us to learn and apply that learning to clinical applications and problem solving. In addition to the challenging course load, some of our classmates have been taking on their first Integrated Clinical Experiences (ICEs). While balancing the responsibilities of active patient treatment and classes is difficult they handle the challenge with grace and are invaluable resources to others in the class by relating our classroom experiences

to their clinical experiences.

The last eight months have been challenging but rewarding for our class. It is staggering to look back at what we've learned since July and exciting to think about how much more we will learn in our remaining time here. We are eager to join the class of 2013 at PT prom in April to celebrate the past year. We would like to thank the 2nd years for all of their guidance and mentorship so far. They provide an amazing example and set the bar very high for how we will treat the incoming class this summer. We would also like to thank the faculty and staff who work tirelessly to make sure we have everything we need to enjoy success in our time here.

Jacob Holler, President UDPT
Class of 2014



Exploring the Magic of Motion-Physical therapy student develops program for Girl Scouts

As a Girl Scout, Jazmine Tooles participated in activities like self-defense classes and mock space shuttle missions, so it's not surprising that she chose the organization as a way to teach young girls about the field of physical therapy.

Now a student in the University of Delaware's doctor of physical therapy (DPT) program, Tooles and her colleagues in the class of 2013 recently hosted a workshop called "Explore the Magic of Motion" for Girl Scouts ranging from 6th to 12th grade.

Tooles also created three Scout badges and had them approved by Girl Scouts USA last fall.

The Magic of Motion badge teaches 6th to 8th graders how to be physically active and demonstrates the role exercise plays in healing the body and maintaining health. It also invites girls to investigate professions that use exercise for healing.

The Healing through Motion badge teaches 9th and 10th graders how physical therapy improves the quality of life for many people and encourages girls to promote healthy living through exercise as physical therapists.

The Healing People, Changing Lives badge is a career-oriented patch that teaches 11th and 12th graders about the profession of physical therapy and the steps involved in becoming a physical therapist.

"Jazmine did an amazing job designing these new Girl Scout badges, and she developed a great program for the 40 girls who attended the workshop," says Laura Schmitt, associate director of clinical education in UD's physical therapy department.



Jazmine (center) and UDPT Class of 2013 educating young girls about the profession of PT and promoting healthy living.



The workshop used four stations — "Technology that Treats," "Muscles and Machines," "Follow Your Heart," and "Stress Strategies" — to teach the participants many of the principles incorporated into the badges. The scouts also toured UD's PT Clinic, made their own stress balls, and created information cards about stress management so they could promote wellness to family and friends.

"The event stemmed from an idea sparked at an American Physical Therapy Association conference I attended in 2011," Tooles says. "A prominent topic was how physical therapy professionals could better promote the field and show that it entails much more than just giving massages. As we brainstormed in small groups, I reflected on the many experiences I had as a Girl Scout. That's when I decided that creating Girl Scout badges would be a great avenue for promoting the profession to young girls and their parents."

Tooles hopes to see the program continue at UD after she graduates in December. Her bigger dream is for it to be shared with other physical therapy programs around the nation.

"I think the Girl Scouts is a great way to reach girls who are beginning to think about not only what they want to pursue in college but also how to gain control of their own health," Tooles says.

UD's DPT curriculum includes a service learning requirement that comprises four categories: diversity, promoting the profession, promoting primary and secondary prevention in health and wellness, and volunteerism.

Article by **Diane Kukich**

2012 community Service

Over the past year both DPT classes have continued UDPT's tradition of community service and were involved in a number of community service opportunities:

- Volunteered for UDPT booth at the Community fair
- Volunteered for Sandy Relief effort in Atlantic City, NJ through the Missions of North America Disaster Response and Cornerstone Presbyterian Church
- Wrote letters and made care packages for soldiers serving overseas through Operation Gratitude
- Rang the bells at Christmas for the Salvation Army
- Volunteer as the youth director at a local church



Students volunteer to help raise health awareness at Relay for Life .

- Completed Bike to the Bay for MS
- Attended the 5k race for Scott Mackler to benefit the ALS foundation
- Volunteer at Weaver Fever 3v3 Basketball Tournament to Raise money for American Cancer Society
- Volunteer at relay for life at UD taking BP and HR measurements
- Volunteer at PT and Girl Scout event
- Educated high school students on the role of physical therapy in health care, what PTs do, different opportunities to practice PT, how to apply to PT school, and walked them through how a knee evaluation is performed

ALUMNI UPDATES

Remembering Dr. Kenneth W. Seaman, PT, DPT, CPT



Dr. Kenneth W. Seaman, age 62, passed away in his home in Newark on Tuesday, January 22, 2013. Ken was born in Queens, NY on September 25, 1950.

He was an instructor and academic coordinator of clinical education in the Physical

Therapy Program at the University of Delaware for over 20 years. He had great passion for volunteering and outreach, which earned him the Jefferson Award in 2002 for his exemplary service to the community. Dr. Seaman also received the Volunteer of the Year Award from the MS Society of Delaware in 2002. One of Dr. Seaman's contributions to the MS Society of Delaware is the MS assessment Clinic which he

started and directed within the Department of Physical Therapy at the University of Delaware.

Dr. Seaman was a physical fitness enthusiast and inspired others to participate with him. He enjoyed running races and triathlons, surfing at the beach, and hiking in Fair Hill State Park with his daughters. He will be missed by all who knew him at UD.



Please join us for several special events we are holding for the University of Delaware Physical Therapy Alumni during University of Delaware's Alumni Weekend this year. We have several exciting opportunities planned for you to get together with old friends, renew certifications or meet new colleagues from previous and upcoming classes. A chance to network or to reminisce in one of our last years at McKinly Lab before the big move to the Science, Technology, and Advanced Research Campus (STAR), which will be located on the site of the former Chrysler Plant.

Schedule for UDPT Events for Alumni Weekend:

Friday, May 31

- **College of Health Sciences Alumni Reception:** Daugherty Hall (inside Trabant) 6-8 pm
- **Physical Therapy Alumni Reception:** Come and greet your fellow classmates and old friends! Light refreshments before attendees head out to join the fun at Mug Night - **053 McKinly Lab. 7:30-8:45 pm**
Please register if you are able to attend at www.udel.edu/alumniweekend

Saturday, June 1

- **Physical Therapy Alumni Breakfast:** Enjoy breakfast with fellow PT alumni and friends. **9:00-10:30 am**
- **Physical Therapy Alumni Tour of STAR Campus:** Join a tour of the progress being made on the new Science, Technology and Advanced Research (STAR) Campus, which will be the future home of the Physical Therapy Program in January 2014. The tour leaves promptly at 11:45 a.m. from 333 McKinly Lab. **11:45 am-12:45 pm**

Please register if you are able to attend at www.udel.edu/alumniweekend

- **CPR Recertification & Emergency First Response Re-certification (3hrs).** UDPT Clinic **053 McKinly. 11am-2pm**
Please register if you are able to attend at http://www.udel.edu/PT/About%20Us/efr_cert_use.html



Alumni News

Congratulations to all of our graduates for their personal and professional accomplishments!



Class of 1976

Pam Kobyra has been working with Franklin County Board of Developmental Disabilities in OH, serving their 2-5 yo classes. Her youngest of 4 children will graduate from high school in June.

Class of 1983

Gail Detjen earned her DPT in 2010 from Utica College. After 30 years of PT practice, she decided to go to seminary and hopes to incorporate faith into PT practice upon graduation.

Class of 1987

Rindy (Lund) Walton is currently working as a PT in home health care in Cincinnati, OH. She spends her free time kayaking, backpacking, rock-climbing, working out, and anything else that comes along!

Class of 1990

Nicole (Wollman) Tews is back at school working on a transitional doctorate at Temple University. She received her OCS recertification a couple of years ago. She currently works for St. Luke's Physical Therapy in an outpatient office and is in charge of their student program. She lives with her husband and son Alex (11) in Northampton, PA.

Class of 1993

Tricia (Delp) Ireland got married to Fred Ireland on September 28, 2012.

Class of 1994

Jeffrey Konin has a new job and a new career! He now works as the Director of Athletics at Eastern Connecticut State University.

Julie (Minton) Knolmayer has gone back to



work part-time for the National Rehabilitation Network in Germantown, MD

Class of 1996

Erin (Platnick) Negrea welcomed baby Beno Ethan on March 27, 2012. She lives in Parkland, FL and works part time in outpatient orthopedics.

Class of 1999

Susan (Robert) Dinlocker has been staying busy with three kids and working as a home health physical therapist, which she loves!

Rebecca Shatz is currently in Barbados in the West Indies and just opened her own physical therapy practice, Caribbean Bodies in Balance. She is a certified lymphedema therapist.

Class of 2001

Katie Rickards has been working for Dynamic Physical Therapy for 10 years and was recently promoted to a Regional Director position in 2012. Her promotion involves management of 5 clinics in Sussex County.

ALUMNI UPDATES

Class of 2002

Stephanie (Sakai) Hernley has been working at Healthsouth Desert Canyon Rehab Hospital in Las Vegas for the last 4 years. Prior to rehab, she worked in outpatient for a hospital system and then at a private practice. She has become Neuro-IFRAH and NDT certified and has been the CCCE for the rehab facility for PT and OT students. She is currently working on the STAR program certification for oncology. Katie and her husband Joel are expecting their first child, a baby girl, on April 1st.



Stephanie (Kuehne) Wilson and her husband welcomed the arrival of a baby girl on September 26, 2012.



Mackenzie (Landers) Reimer married Robert Reimer (class of 2010) on June 15, 2012 in Winchester, VA. They currently live in Spartanburg, SC where Mackenzie works in outpatient pediatrics and Rob works in outpatient orthopedics.

Class of 2003

Steve Oh is a wound consultant for Genesis Rehab Services in PA. He received his CWS in 2005 and an acupuncture license in 2010. He owns a private practice located in Exton, PA, which he began in 2011.



Class of 2007

Tim Rementer completed his DPT last spring 2012 from Temple University. He is now working as Clinic Director for Physiotherapy Associates in New Holland, PA.

Lauren (Emerson) Grieder and her husband Jeff have a 3 year old daughter named Caroline and are expecting another baby in mid-April 2013. She is currently working at Premier Physical Therapy and Sports Performance in Middletown, DE.

Jen (Papandrea) Snyder is a Pediatric PT in Early Intervention and lives in Enola, PA with her husband and two children, Gavin (2) and Taryn (2 mo.).



Brooke (Darby) Nersten has been working at outpatient orthopedic facilities since graduation. She currently works at Metro Physical Therapy and lives in Long Island with her husband and dog.

Melissa (Ronan) Wojnas and her husband John are pleased to announce the birth of their children Sean Richard, Alexa Therese, and Eli Patrick, who were all born on May 9, 2012.



Class of 2004

Mary (Veysey) Saari received her OCS in 2010 and is currently on maternity leave with her first child, Alexandra, born October 12, 2012.

Janelle Cannon-Antonio was married to Dominic Antonio on April 21, 2012.

Class of 2006

Ben Keeton just completed his 5th year working at Jackson Clinics, a physical therapy clinic in Northern VA. He is the Director of Clinical Operations for the company. He lives with his wife, Christina, and daughter, Isabel Sofia (17 mo.). They recently moved to a new home in Herndon, VA.

Class of 2010

Andrea (Newman) Cziprusz married Gabriel Cziprusz on August 11, 2012.



Amanda (Gongaware) Wu married Daniel Wu (class of 2010) on July 28, 2012.

Class of 2011

Jaclyn (Reifschneider) Polk was married to her husband Devin on September 29, 2012. The couple lives in Reston, VA, and Jaclyn works for Physiotherapy Associates in Herndon, VA.



Griff Randle came back to University of Delaware to complete a residency in orthopedics. He got engaged last December.

Kristy (Baxter) Malin got married on September 22, 2012 to Jason Malin. The couple lives together in Middletown, DE.

Class of 2012

Connor Whitesel is working at a Drayer PT Institute clinic in York, PA. He is waiting to hear back about an application to work as a PT in the Navy. He is to be married at the end of May, 2013.

Christina Bobco is working at Sullivan Physical Therapy, a clinic practicing exclusively in women's and men's health. She lives in Austin, TX and is to be married in March, 2014.

Congratulations to the following UD Alumni who received American Board of Physical Therapy Specialist (ABPTS) Certifications in the year 2012:

Pediatric Physical Therapy

Linda Pagnotto-Hammit, PT, DPT, PCS (1983)

Sports Physical Therapy

Jennifer Flug-Atwood, PT, DPT, OCS, SCS (2008)

Orthopaedic Physical Therapy

Anna Shovestul, PT, DPT, OCS (2010)

Mike Swoboda, PT, DPT, OCS (2001)

Ann Dennison, PT, DPT, OCS (recertification) (1987)

Residency Completion

Michael Akinbola, PT, DPT (2011) - UD Sports Residency Program

H. Richard Beeson, III, PT, DPT (2011) - UD Orthopedics Residency Program

Ari Kaplan PT, DPT (2008) - ABPTS sports residency program

Leslie O'Neill PT, DPT (2011) - neurologic PT residency program

Other Certifications

Julie Lisowski SIPT, (1979) - Drexel certificate, Advanced Practice in Pediatrics

2012 HONOR ROLL OF DONORS

We gratefully acknowledge the following alumni and friends for their financial contributions and the encouragement their support represents. This Honor Roll includes gifts contributed to the Department and recorded throughout the 2012 calendar year.

Every effort has been made to assure accuracy of this report. Please notify our Department of any errors or omissions, and please accept our apologies for any discrepancies. For information on how to make a contribution, please contact Cyndi Haley with the Physical Therapy Department at chaley@udel.edu or call 302-831-4576.



Thank You!!!

Doug Adams	Amy Enriken	Dexter and Aida Pasterak
Randee Allen	Ginger Fisher	Meredith Perny
Angelo & Mary Cali Family Foundation	Marty and Tara Fontenot	Traci Peterson
Katie and Todd Ballinger	George and Jacqueline	Michelle Prettyman
George Barrett	Adriene Greenfield	Christa Reineke
Elizabeth and Adam Bauske	Tom and Sue Guerin	Timothy Rementer
Harold Beeson	Karren Helsel-Spry	Jen Rogofsky
Karla A. Bell	Jane Hollingsworth	William Romani
Joshua Billings	Marybeth and Jeffrey Hummel	Mark and Adrienne Rosman
Stuart & Catriona Binder-Macleod	Diane and Bob Keighley	Laura Schmitt
Jennifer Binkley	Alan and Rose Kipp	Lisa & Myron Schwarcz
Mr. & Mrs. Louis Bond	Catherine Kipp	Amrita Singh
Glenn and Dorothy Brown	Julie Knolmayer	Carolyn Smith
John and Amanda Cali	JoAnne Kreis	Jerry & Georgia Stauffer
Mr. & Mrs. Thomas Cambell	Peggy Kroen	Chuck and Tracy Stoner
Carmen & Julie Campanelli	Jeff & Karyn Lang	Pammal & Susan Suresh
Janelle Cannon-Antonio	Jennifer Lapsley	Meghan Swenck
Susan Cecere	Steven Lawrence	Mike and Cathy Tevald
Gregory Cecere	Mr. & Mrs. Joseph Laws	Jessie VanSwearingen
Terese Chmielewski	Samuel and Jennifer Lee	Madeline Versteeg
Annamaria Concanon	Kurt & Tara Manal	Steve and Sue Ward
Susan Cook	Robert Maxwell	Tom Welcher
Nancy Coto	Sandra and Scott Mishic	Paul and Peg Wellborn
Carolyn Cotter	Ann Morrison	Claudia Williams
Stacy Czerwinski	Elizabeth Neary	Henry Wright
Mr. & Mrs. James DeLeo	Nekita Nesmith	ATI—PRO Physical Therapy
Christine Dierickx	Kathy Nusbickel	UNIDEL Foundation
Kathleen Dorsett	Kevin and Kathy O'Connor	
Marc and Abigail Douek	Kim Pasquale	

Interested in making a donation for the 2013 year?

For all donors: If you would like to make a gift in support of our program, you may do so online by going to www.udel.edu/makeagift and please consider designating your donation to the **Physical Therapy Department**. To make a pledge, pay by credit card or mail in a check after filling out the form online. Your financial support provides many opportunities for students to benefit from a quality education. For further information, please contact www.udel.edu/makeagift or call the Office of Annual Giving on 302-831-4654.

How Can You Help Advance Physical Therapy Research?

The UDPT program is currently recruiting individuals to participate in treatment interventions funded by the National Institutes of Health.

Current research is focusing on:

Stroke

Low Back pain

Cerebral Palsy

Total Knee Replacement

Total Hip Replacement

Post-op ACL

We value your ongoing support of the UDPT department!

The UDPT program strives to produce evidence-based practice through innovative research. As alumni, I hope that you all continue to value the influence that research has on how you treat your patients

If you have patients who are willing to participate in our research and want to learn more, please contact Martha Callahan (mcall@udel.edu or 302-831-6202). Studies are free of charge and some studies offer monetary compensation for those who qualify.

FACULTY: AWARDS, DEGREES CONFERRED, GRANTS & PUBLICATIONS IN 2012

Research Faculty



STUART BINDER-MACLEOD, PT, PhD, FAPTA, (Medical College of Virginia), Edward L. Ratledge Professor and Chair of Physical Therapy: Effects of electrical stimulation parameters on muscle performance.

Laboratory Overview

The main focus of Dr. Binder-Macleod's laboratory is the translation of basic science discoveries in the activation of human skeletal muscles with electrical stimulation to the rehabilitation of individuals with CNS dysfunction. Dr. Binder-Macleod's laboratory is currently involved in a number of exciting collaborations involving the improvement of walking function in individuals following a stroke and improving participation in kids with cerebral palsy. Dr. Binder-Macleod's laboratory continues to attract research and product development funding from NIH and other sources.

Publications

Knarr BA, Ramsay JW, Buchanan TS, Higginson JS, Binder-Macleod SA. Muscle volume as a predictor of maximum force generating ability in the plantar flexors post-stroke. *Muscle Nerve*. 2013 Mar 14. doi: 10.1002/mus.23835.

Knarr BA, Kesar TM, Reisman DS, Binder-Macleod SA, Higginson JS. Changes in the activation and function of the ankle plantar flexor muscles due to gait retraining in chronic stroke survivors. *J Neuroeng Reh bil*. 2013 Jan 31;10:12. doi: 10.1186/1743-0003-10-12.

Knarr BA, Reisman DS, Binder-Macleod SA, Higginson JS. Understanding compensatory strategies for muscle weakness during gait by simulating activation deficits seen post-stroke. *Gait Posture*. 2012 Dec 26. pii: S0966-6362(12)00453-5. doi: 10.1016/j.gaitpost.2012.11.027.

Knarr BA, Higginson JS, Binder-Macleod SA. Validation of an adjustment equation for the burst superimposition technique in subjects post-stroke. *Muscle Nerve*. 2012 Aug;46(2):267-9. doi: 10.1002/mus.23431.

Awad LN, Kesar TM, Reisman D, Binder-Macleod SA. Effects of repeated treadmill testing and electrical stimulation on post-stroke gait kinematics. *Gait Posture*. 2013 Jan;37(1):67-71. doi: 10.1016/j.gaitpost.2012.06.001. Epub 2012 Jul 15.

Flynn S, Knarr BA, Perumal R, Kesar TM, Binder-Macleod SA. Using sub-maximal contractions to predict the maximum force-generating ability of muscles. *Muscle Nerve*. 2012 Jun;45(6):849-58. doi: 10.1002/mus.23254.

Sions JM, Tyrell CM, Knarr BA, Jancosko A, Binder-Macleod SA. Age- and stroke-related skeletal muscle changes: a review for the geriatric clinician. *J Geriatr Phys Ther*. 2012 Jul-Sep;35(3):155-61. doi: 10.1519/JPT.0b013e318236db92.

Grants

NIH - SBIR - R44 HD065388-02 (Hartman, customKynetics, PI; Binder-Macleod, UD subcontract PI) - FastFES Neural Prosthesis for Stroke Ambulation and Rehabilitation - 1/01/13 - 6/30/14 (phase 2). This FastTrack SBIR proposal aims to disseminate a Functional Electrical Stimulation (FES) technology for stroke ambulation and neuromotor rehabilitation. The Phase I project will prove concept feasibility and the Phase II project will involve significant engineering efforts to develop the commercialization-ready system and will include a validation study at UD.

NIH - SBIR - R44 HD62065-02 (Hartman, customKynetics, PI; Binder-Macleod, UD subcontract PI) - Active Distributed Electrode Array Network for Electrical Stimulation Therapy - 7/01/11 - 6/30/13 (phases 1&2) This FastTrack SBIR proposal aims to develop and test Active Distributed Electrode Array (ADEA) technology that offers two novel features that address problems related to network architecture and end-user program-

Awards, Degrees, Grants & Publications Continued

mability. The University of Delaware will serve as the clinical

Delaware Health Sciences Alliance – Pilot Grant Award - Relationships Between Cortical Motor Organization And Response To Exercise Interventions In Children With Cerebral Palsy (with Samuel Lee (UD), Trisha Kesar (UD), Freeman Miller (Nemours), Susan Duff (TJU), and Kert Anzilotti (CCHS)) An 18-month pilot grant commencing November 2010 (\$75,000). NCE to April 2013.

National Institutes of Health – NINR – R01 - Fast Treadmill Training/Functional Electrical Stimulation to Improve Walking National Institutes of Health - A five-year grant commencing September, 2007 (\$2,800,000). NCE to June, 2013.

Presentations

Kesar TM, Binder-Macleod SA, Reisman DS. Training Characteristics Influence the Magnitude of Motor Learning during Post-Stroke Gait Rehabilitation. Neural Control of Movement (NCM) Society Conference, Puerto Rico, 2011.

Kesar T. M., Reisman D.S., Roos M, Perumal R, Farquhar W.B., Binder-Macleod S. Novel locomotor training improves gait performance, activity, and participation in individuals with chronic stroke. Combined Sections Meeting of the American Physical Therapy Association, February, 2011.

Danks K, Roos M, Reisman DS, Binder-Macleod S. Determining an optimal duration of locomotor training to maximize functional improvements post stroke. Combined Sections Meeting of the American Physical Therapy Association, February, 2011.

Roos, M; Reisman, D; Rudolph, K; Binder-Macleod, S. A Novel Way to Analyze Step Activity in People Post-Stroke. Combined Sections Meeting of the American Physical Therapy Association, February, 2011.



JAMES (COLE) GALLOWAY,

PT, PhD, (Arizona), Associate Professor: Development of infant motor behaviors, neuromotor development of reaching and novel early interventions for infants under 6 months.

Laboratory Overview

Current projects in the Infant Behavior Lab include Brain-Behavior relationships in infants born preterm (Michele Lobo, PT, PhD project leader), Babies Driving Robots and Babies Driving Racecars (pediatric power mobility, Hsiang han Huang, ScD, OT and Christina Ragonesi project leaders), Clinical Assessment of Pediatric Movement and Behavior using Kinect System (Melynda Schreiber, project leader), Pediatric Upper Extremity Exoskeleton (Elena Kokkoni, project leader) and Advanced Body Weight Support Development.

Publications

GADIN E, LOBO MA, SEM K, PAUL DA, STEINER KV, MACKLEY A, ANZILOTTI A, GALLOWAY JC (2012) Volumetric MRI and MRS and Early Motor Development in Premature Infants. *Pediatric Physical Therapy* 24: 38-44

LEE HM, GALLOWAY JC (2012) Early intensive postural and movement training advances head control in very young infants. *Physical Therapy*. 92:935-947

RAGONESI C, GALLOWAY JC (2012) Short-term, Early Intensive Power Mobility Training: Case Report of an Infant at Risk for Cerebral Palsy. *Pediatric Physical Therapy* 24: 141-148.

HUANG HH, GALLOWAY JC (2012) Modified Ride-on Toy Cars for Early Power Mobility: A Technical Report. *Pediatric Physical Therapy* 24:149-154.

DUSING SC, THACKER L, STERGIU N, GALLOWAY JC (2012) Early Complexity Supports Development of Motor Behaviors in the First Months of Life. *Developmental Psychobiology*. DOI 10.1002/dev.21045.

BHAT AN, GALLOWAY JC, LANDA RJ (2012) Relationship between early motor delay and later communication delay in infants at risk for autism. *Infant Behaviour and Development*. IBAD 35 838- 846

LOBO MA, GALLOWAY JC (2012) The onset of reaching significantly impacts how infants explore both objects and their bodies. *Infant Behavior and Development*. 36: 14- 2

DUSING SC, LOBO MA, LEE HM, GALLOWAY JC (2012) Intervention for Late Preterm in the First Weeks of Life: A Case Series Report. *Pediatric Physical Therapy*

Presentations

"Babies Gone Wild", representative of National Science Foundation at US Science and Engineering Festival, 2012

"Modified Ride-on Toy Cars for Early Power Mobility: A Technical Report" with Hsiang han Huang AACPD, 2012

"Babies Gone Wild: Creative Solutions for Early Mobility, Socialization and Beyond!", Salt Lake City Shriners Children's Hospital, Oct 2012

"Babies, Robots & Race Cars: Adapting a car to meet a child's mobility needs", Utah Physical Therapy Association State Conference, Oct. 2012

Babies, Robots & Race Cars: Adapting a car to meet a child's mobility needs", Rehabilitation Institute of Chicago, Jan. 2013



GREGORY HICKS, PT, MPT, PhD (University of Pittsburgh),

Assistant Professor: Interventions for low back pain, rehabilitation strategies focused on trunk muscle function, and understanding factors that impact body composition and physical function in older adults.

Laboratory Overview

Dr. Hick's lab primarily focuses on the goal of improving physical function in older adults with musculoskeletal conditions. This line of work has organically evolved to focus on two specific populations: older adults with low back pain (LBP) and older adults who have sustained a hip fracture. Ongoing projects in Dr. Hick's lab focus on understanding the course and consequence of low back pain in older adults with an eye towards developing interventions specific to this population.

Publications

Hicks GE, Shardell MD, Alley DE, Miller RR, Bandinelli S, Guralnik JM, Lauretani F, Simonsick EM, Ferrucci L. Absolute strength and loss of strength as predictors of mobility decline in older adults: The InCHIANTI study. *J Gerontol A Biol Sci Med Sci*. 2012 Jan;67(1):66-73.. PMID: 21546582

Hicks GE, Benvenuti B, Fiaschi V, Lombardi B, Segenni L, Stuart M, Pretzer-Aboff I, Gianfranco G, Macchi C. Adherence to a community-based exercise program is a strong predictor of improved back pain status in older adults: An observational study. *Clin J Pain*. 2012 Mar-Apr;28(3):195-203. PMID:21750458

Katzman W, Cawthon P, Hicks GE, Vittinghoff E, Shepherd J, Cauley JA, Harris TB, Simonsick EM, Strotmeyer E, Womak C, Kado DM. The relationship between spinal muscle composition and prevalence of hyperkyphosis in healthy community-dwelling older men and women. *J Gerontol A Biol Sci Med Sci*. 2012 Feb;67(2):191-5. PMID: 21878482

Shardell M, Alley DE, Miller RR, Hicks GE, Magaziner J. Comparing re-

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ports from hip-fracture patients and their proxies: implications on evaluating sex differences in disability and depressive symptoms. *J Aging Health*. 2012 Apr;24(3):367-83. PMID: 22210805

Shardell M, D'Adamo C, Alley DE, Miller RR, Hicks GE, Milaneschi Y, Semba RD, Cherubini A, Bandinelli S, Ferrucci L. Serum 25-Hydroxyvitamin D, Transitions between Frailty States, and Mortality among Older Adults: The Invecchiare in Chianti Study. *J Amer Geriatr Soc*. 2012 Feb;60(2):256-64. PMID:22283177

D'Adamo CR, Miller RR, Shardell MD, Orwig DL, Hochberg MC, Ferrucci L, Semba RD, Yu-Yahiro JA, Magaziner J, Hicks GE. Higher serum concentrations of dietary antioxidants are associated with lower levels of inflammatory biomarkers during the year after hip fracture. *Clin Nutr*. 2012 Oct;31(5):659-65. PMID: 22365613

Shardell M, Simonsick EM, Hicks GE, Resnick B, Ferrucci L, Magaziner J. Sensitivity Analysis for Nonignorable Missingness and Outcome Misclassification from Proxy Reports in Aging Research. *Epidemiology*. 2013 Mar;24(2):215-23. PMID:23348065

Grants

1R01AG041202-01 (G. Hicks) 6/01/12–6/31/17 3.6 calendar (30%) NIA. Chronic Low Back Pain in Older Adults: The Role of Co-Existing Hip Impairments. The purpose of this project is to examine the impact of co-existing clinical and radiographic hip impairments on spinal pain and functional limitations in older adults with chronic low back pain. Role on Project: Principal Investigator

No number (G. Hicks) 2012-2013 Academic Year. University of Delaware, President's Diversity Initiative Award. \$40,000. Development of the ADaPT Program (Advancing Diversity in Physical Therapy). A jointly sponsored program between the Departments of Physical Therapy and Kinesiology & Applied Physiology to develop a mentoring program, undergraduate research program and a new bridge course in anatomy as a means of attracting a more diverse group of students into the College of Health Sciences and the nationally ranked doctoral program in physical therapy. Role on Project: Principal Investigator

No Number (PI: G. Hicks) 11/08 - present. University of Delaware \$20,000, funding to supplement ongoing project Cross College Cluster in Aging Initiative Research on Aging Grant "Mechanisms of Disability in Older Adults with Chronic Low Back Pain." Role: Principle Investigator

No Number (G. Hicks) 12/01/10-06/30/12. University of Delaware Research Foundation, Inc. \$45,000. The Effectiveness of Hip-Focused Treatment for Older Adults with Chronic Low Back Pain. The purpose of this project is to examine the effectiveness of typical spine-focused physical therapy augmented by manual therapy and exercise focused on the hip, to reduce pain and improve functional capacity of older adults with chronic low back pain. This work will serve to collect pilot data for future randomized trials on this topic. Role: Principle Investigator

2R01 AR048212-06 (L. Snyder-Mackler) 12/01/10–11/30/15 0.60 calendar (5%) NIAMS. Can Neuromuscular Training Alter Movement Patterns? The goal of this application is to continue to examine outcomes of specialized neuromuscular and muscle strength training that may prevent post-traumatic osteoarthritis (OA), to obtain preliminary information about who has the potential to develop early signs of OA, and develop strategies to prevent structural changes in the joints of these individuals. Role on Project: Co-Investigator

4R37 AG009901-05 (J. Magaziner) 8/1/11 - 6/30/16 0.60 calendar (5%) NIA \$4,781,737 - Direct \$7,205,844 - Total Cost. Effects of Multi-Modal Exercise Intervention Post Hip Fracture. The primary goals proposed for this study are: (1) to study some of the key mechanisms on the pathway to changes in community ambulation in response to a

Multi-modal Exercise Intervention (MMEI); and (2) test, in a preliminary manner through a pilot/feasibility study of a different sample of patients, the additional benefit of adding a protein supplement following MMEI sessions to determine if there are important changes in bone, muscle, inflammation, and function. Role on Project: Co-Investigator

Presentations

Sions JM, Hicks GE. Criterion Validity of Rehabilitative Ultrasound Imaging for the Paraspinal Muscles in Older Adults. Presented at the Combined Sections Meeting of the American Physical Therapy Association, February 2012.

Velasco T, Sions JM, Hicks GE. Hip Manual Therapy for Older Adults with a Primary Complaint of Chronic Low Back Pain and Co-Existing Hip Impairments: A Case Series. Presented at the Combined Sections Meeting of the American Physical Therapy Association, February 2012.

Hicks GE, Sions JM, Velasco T, Shardell M. Hip Impairments and Function in Older Adults with Chronic Low Back Pain: The Delaware Spine Studies. *Gerontological Society of America*; San Diego, CA. November 2012.

Bean JF, Anderson DE, Latham N, Penscheng NI, Leveille SG, Hicks GE, Bouxsein ML, Jette AM. Two clinical measures that may be useful in evaluating trunk muscle composition and physiology among older primary care patients. *International Conference on Sarcopenia Research*; Orlando, FL. December 2012.

Hicks GE. Multidisciplinary Clinical Skills Workshop: Assistive Devices. *American Geriatrics Society Annual Meeting*, May 2012.

Hicks GE. Focusing on Physical Function in Older Adults with Chronic Low Back Pain. *Boston Research Outcomes Center Research Seminar Series*, Boston University School of Public Health, Boston, MA, May 2012.

Hicks GE. Developing a New Perspective on Pain Management for Older Adults with Chronic Low Back Pain. *Christiana Care Center on Outcomes Research*, Newark, DE, September 2012.

Hicks GE. The Role of Physical Function in the Management of Older Adults with Chronic Low Back Pain. *Georgia Health Sciences University*, Augusta, GA, November 2012.



SAMUEL LEE, PT, MPT, PhD (Delaware), Research Assistant Professor: Use of electrical stimulation to activate paralyzed or weakened muscles to improve function of individuals with central nervous system injury.

Laboratory Overview

Dr. Lee's lab is currently focused on two major projects. The first is entitled "Functional Electrical Stimulation Assisted Cycling to improve Fitness and Strength in Children with Cerebral Palsy", and its purpose is to promote fitness, strength, and overall health with an introduction to a form of cycling exercise that could be used both for training and as recreation. The second is entitled "Functional Electrical Stimulation for Reducing Crouch Gait in Cerebral Palsy". This is a new project that will develop and clinically test an feedback controlled FES system for helping individuals with CP and crouch gait to walk more erect and more efficiently. The system and subsequent clinical testing are designed to promote physical fitness and motor learning of efficient walking patterns. Our hope is to develop the work into a larger scale clinical trial at some future time.

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Publications

Harrington AT, McRae CGA, Lee SCK. Evaluation of functional electrical stimulation to assist cycling in four adolescents with spastic cerebral palsy. *Int J Pediatr*. 2012, 2012:504387, Epub May 22.

Pierce SR, Prosser LA, Lee SC, Lauer RT. The relationship between spasticity and muscle volume of the knee extensors in children with diplegic cerebral palsy. *Pediatric Physical Therapy* 2012, 24(2):177-182.

Harrington AT, Lee SCK. Fitness and Exercise: Essential components for Health and maximizing function in individuals with cerebral palsy. Submitted to *Dev Med*, In Review.

Grants

2012-2015, Shriners Hospitals for Children Grant #71011-PHI: Fes to Improve Crouch Gait in CP. PI - Lee (2012-2015; 4 years direct) \$957,718).

2010-2015, National Institutes of Health. NICHD/NINR: R01HD062588 FES-Assisted Cycling to Improve Fitness and Strength In Children with CP. PI - Lee. \$2,913,039 (5 years direct and indirects).

Presentations

FES-Assisted Cycling To Improve Fitness And Strength In Children With Cerebral Palsy. Kennedy Krieger Institute, Baltimore, MD, January 26th, 2012.

Allamby M, Cherry D, Gao X, Paolantonio E, Trosch L, Lee SCK. The use of EMG biofeedback as treatment for facial paralysis secondary to Bell's Palsy. APTA Combined Sections Meeting, San Diego, CA, January 2013.

Lee SCK, George SZ, Binder-Macleod SA, Chmielewski TL, Lewek MD, Moreau N, Prosser LA. The "Business" of Research and Negotiating Your Faculty Position. APTA Combined Sections Meeting, San Diego, California, January 2013.

Johnston TE, Backus D, Bickel CS, Lee SCK, McCully K. Functional Electrical Stimulation: Health and Fitness Benefits for People with Spinal Cord Injury. APTA Combined Sections Meeting, San Diego, California, January 2013.

Award

"Researcher of the Month," College of Health Sciences, University of Delaware, January 2012.



David S. Logerstedt, PT, PhD, (Delaware) MPT, MA, SCS, Research Assistant Professor, Interim Director of Sports Residency Program

Laboratory overview

Dr. Logerstedt's lab is investigating performance-based and patient-reported outcomes after ACL and articular cartilage injuries. His team is evaluating mechanistic outcomes after knee injuries and developing novel interventions to treat patients with knee injuries. He is working with a team of collaborators to develop web-based applications to profile patients with knee injuries.

Publications

Logerstedt D, Lynch A, Axe MJ, Snyder-Mackler L. Pre-operative quadriceps strength predicts IKDC2000 scores 6months after anterior cruciate ligament reconstruction. *Knee*. 2012 Sep 26. pii: S0968-0160(12)00135-4. doi: 10.1016/j.knee.2012.07.011

Logerstedt D, Grindem H, Lynch A, Eitzen I, Engebretsen L, Risberg MA, Axe MJ, Snyder-Mackler L. Single-legged hop tests as predictors of

self-reported knee function after anterior cruciate ligament reconstruction: the Delaware-Oslo ACL cohort study. *Am J Sports Med*. 2012 Oct;40(10):2348-56. Epub 2012 Aug 27.

Lynch AD, Logerstedt DS, Axe MJ, Snyder-Mackler L. Quadriceps activation failure after anterior cruciate ligament rupture is not mediated by knee joint effusion. *J Orthop Sports Phys Ther*. 2012 Jun;42(6):502-10. doi: 10.2519/jospt.2012.3793. Epub 2012 Apr 20.

Adams D, Logerstedt DS, Hunter-Giordano A, Axe MJ, Snyder-Mackler L. Current concepts for anterior cruciate ligament reconstruction: a criterion-based rehabilitation progression. *J Orthop Sports Phys Ther*. 2012;42(7):601-14. doi: 10.2519/jospt.2012.3871. Epub 2012 Mar 8.

Mithoefer K, Hambly K, Logerstedt D, Ricci M, Silvers H, Della Villa S. Current concepts for rehabilitation and return to sport after knee articular cartilage repair in the athlete. *J Orthop Sports Phys Ther*. 2012 Mar;42(3):254-73. doi: 10.2519/jospt.2012.3665.

Logerstedt D, Lynch A, Axe MJ, Snyder-Mackler L. Symmetry restoration and functional recovery before and after anterior cruciate ligament reconstruction. *Knee Surg Sports Traumatol Arthrosc*. 2012 Feb 21.

Presentations

Flowers P, Zeni J, McClelland J, Logerstedt D, Snyder-Mackler L. Novel Intervention Improves Contralateral Knee Function Post-Total Knee Arthroplasty. Poster presentation. ORS Meeting 2012, San Francisco. February 3, 2012.

Di Stasi SL, Logerstedt D, Snyder-Mackler L. Abnormal gait mechanics persist in athletes with normal knee function up to 2 years after ACL reconstruction. Platform presentation. CSM Meeting 2012, Chicago. February 9, 2012. *J Orthop Sports Phys Ther* 42(1):A47, 2012.

Logerstedt D, Di Stasi S, Axe MJ, Snyder-Mackler L. Self-reported knee function detected by return to sport criteria after ACL reconstruction. Platform presentation. CSM Meeting 2012, Chicago. February 11, 2012. *J Orthop Sports Phys Ther* 42(1):A56, 2012.

Nawasrah Z, White K, Logerstedt D, Snyder-Mackler L. Sex Differences with Functional Performance Measures from Baseline to 12 Months after ACL reconstruction (ACLR). Poster Presentation. 9th Annual Biomechanics Research Symposium. April 23, 2012.

Logerstedt D, Zeni J, Snyder-Mackler L. Disease severity and sex differences in patients with knee osteoarthritis. Poster presentation. OARSI annual meeting 2012. Barcelona, Spain. April 26-29, 2012.

Zeni J, Logerstedt D, Flowers P, Abujaber S, Snyder-Mackler L. Rehabilitation to reduce secondary osteoarthritis after total knee arthroplasty. Poster presentation. OARSI annual meeting 2012. Barcelona, Spain. April 26-29, 2012.

Logerstedt D, Di Stasi S, Lynch A, Axe M, Snyder-Mackler L. Patient-reported knee function identified by return to sport criteria after ACL reconstruction. Oral presentation. 15th ESSKA 2012. Geneva, Switzerland. May 3, 2012.

Logerstedt D, Zeni J, Snyder-Mackler L. Functional performance and patient-reported knee function one year after total knee arthroplasty. Oral presentation. 15th ESSKA 2012. Geneva, Switzerland. May 2, 2012.

Lynch A, Logerstedt D, Grindem H, Eitzen I, Axe MJ, Engebretsen L, Risberg MA, Snyder-Mackler L. Professional consensus regarding success after ACL injury does not correspond to published literature. Oral presentation. 15th ESSKA 2012. Geneva, Switzerland. May 2012.

Lynch A, Logerstedt D, Grindem H, Eitzen I, Axe MJ, Engebretsen L, Risberg MA, Snyder-Mackler L. Only minor differences exist between outcome criteria used by North American and European orthopedic

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surgeons when discussing ACL injuries. Poster presentation. 15th ESSKA 2012. Geneva, Switzerland. May 2012.

Logerstedt D, Grindem H, Lynch A, Snyder-Mackler L, Risberg MA, Axe MJ, Engenbretsen L. Single-legged hop tests as predictors of self-reported knee function after ACL reconstruction: UD-NAR International ACL Cohort. Podium presentation. AOSSM annual Meeting 2012, Baltimore, MD. July 13, 2012.

Zeni JA, Logerstedt DS, Hicks G, Snyder-Mackler. Developing an Orthopaedic Research Agenda for Early Investigators. 2013 Combined Sections Meeting. San Diego, CA. Feb 2013.

Zeni JA, Logerstedt DS, Snyder-Mackler L, Stevens-Lapsley J, Baker E. Hot off the Press: Incorporating Evidence-Based Practice into the Continuum of Care after Total Joint Replacement. 2013 Combined Sections Meeting. San Diego, CA. Feb 2013.



DARCY REISMAN, PT, PhD, (Delaware), Research Assistant Professor, Academic Director of Neurologic and Older Adult Clinic: Understanding the mechanisms of movement dysfunction following stroke, as well as how and why different treatments improve this dysfunction.

Laboratory Overview

The Reisman lab continues to be busy investigating recovery from stroke. We continue to work on our grants that started last spring, one looking at motor learning after stroke and the role of Brain-derived neurotrophic factor in the process of learning and the other examining the use of step activity monitoring in combination with high intensity gait training for improving overall activity post-stroke. We are always looking for PT's who would like to join the lab as PhD students. If you are interested contact Darcy Reisman.

Publications

Reisman DS, McLean H, Keller J, Danks KA, Bastian AJ. Repeated Split-Belt Treadmill Training Improves Poststroke Step Length Asymmetry. *Neurorehabil Neural Repair*. 2013 Feb 7. [Epub ahead of print]

Knarr BA, Kesar TM, Reisman DS, Binder-Macleod SA, Higginson JS. Changes in the activation and function of the ankle plantar flexor muscles due to gait retraining in chronic stroke survivors. *J Neuroeng Rehabil*. 2013 Jan 31;10:12. doi: 10.1186/1743-0003-10-12

Vashista V, Agrawal N, Shaharudin S, Reisman DS, Agrawal SK. Force adaptation in human walking with symmetrically applied downward forces on the pelvis. *Conf Proc IEEE Eng Med Biol Soc*. 2012 Aug;2012:3312-5. doi: 10.1109/EMBC.2012.6346673.

Knarr BA, Reisman DS, Binder-Macleod SA, Higginson JS. Understanding compensatory strategies for muscle weakness during gait by simulating activation deficits seen post-stroke. *Gait Posture*. 2012 Dec 26. doi:pii: S0966-6362(12)00453-5. 10.1016/j.gaitpost.2012.11.027.

Roos MA, Rudolph KS, Reisman DS. The structure of walking activity in people after stroke compared with older adults without disability: a cross-sectional study. *Phys Ther*. 2012 Sep;92(9):1141-7.

Altman AR, Reisman DS, Higginson JS, Davis IS. Kinematic comparison of split-belt and single-belt treadmill walking and the effects of accommodation. *Gait Posture*. 2012 Feb;35(2):287-91.

Grants

NIH 1R01NR010786-01 (PI: Binder-Macleod) 9/12/2007-5/31/2012 5% effort, \$2,231,992 Fast Treadmill Training and Functional Electrical Stimulation (FastFES) to Improve Walking Post-stroke

NIH IR01NS055383-01A2 (PI: Jill Higginson) 4/1/08-11/30/12, \$214,461/yr Muscle Morphology, Strength and Compensatory Strategies Following Stroke

5 P20 RR016472-12 Delaware INBRE (PI: Darcy Reisman, Mentor: Stuart Binder-Macleod); 3/1/2012-2/28/2014; \$154,285; Motor Learning After Stroke

1R21HD071042-01A1 Interventions to Improve Physical Activity after Stroke \$420,750; Funding Period: 4/1/2012-3/31/2014. Principal Investigator: Darcy Reisman, Co-Investigator: William Farquhar.

Presentations

Ressler P, Danks K, Roos M, Ciampa J, Reisman D. Using the physical activity scale for individuals with physical disability in persons with chronic stroke. Combined Sections Meeting of the American Physical Therapy Association, January 2013.

Fulk GD, Danks K, Nirider C, Reisman D. Accuracy of body worn sensors in detecting walking activity. Combined Sections Meeting of the American Physical Therapy Association, January 2013.

Palmer JA, Binder-Macleod SA, Wright T, Reisman D. Spatiotemporal gait asymmetry, walking efficiency and speed after stroke. Combined Sections Meeting of the American Physical Therapy Association, January 2013.

Kesar TM, Reisman D, Binder-Macleod SA. Does one session of gait rehabilitation improve post-stroke walking performance? Combined Sections Meeting of the American Physical Therapy Association, January 2013.

Roos M, Rudolph K, Reisman DS. Regardless of walking speed capacity, daily walking duration and intensity is decreased after stroke. Combined Sections Meeting of the American Physical Therapy Association, February, 2012.

Roos M, Reisman DS, Hicks G, Binder-Macleod S, Rudolph K. Modification of the four square step test and its reliability and validity in people post-stroke. Combined Sections Meeting of the American Physical Therapy Association, February, 2012.

Tyrell CM, Reisman DS. Locomotor learning is slowed after stroke. Combined Sections Meeting of the American Physical Therapy Association, February, 2012.

Danks K, Roos M, Reisman DS. A step activity monitoring program improves real world walking activity post stroke. Combined Sections Meeting of the American Physical Therapy Association, February, 2012.

"Writing with the Editors", Moderator. Combined Sections Meeting of the American Physical Therapy Association, January, 2013.

"Physical Therapy in Stroke Rehabilitation". Delaware Stroke Initiative Annual Conference, October, 2012.

"Locomotor Learning after Stroke", University of Illinois-Chicago, Department of Physical Therapy, April, 2012.

"Designing Gait Training Interventions for Individuals with Stroke: Rationale and Clinical Decision-Making for Assistance, Trial and Error Practice and Error Augmentation", Rehabilitation Institute of Chicago, April, 2012.

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"Writing with the Editors", Moderator. Combined Sections Meeting of the American Physical Therapy Association, February, 2012.

"Current Concepts in Post-Stroke Gait Rehabilitation", Combined Sections Meeting of the American Physical Therapy Association, February, 2012.



JOHN SCHOLZ, PT, PhD, (Connecticut), FAPTA, Professor: Study of basic processes of motor coordination and control, including movement dysfunction in patients with problems affecting the central nervous system.

Laboratory Overview

The motor control laboratory, under the direction of Dr. Scholz, studies basic problems of human movement coordination, emphasizing the control of reaching tasks and postural control, with a special interest in the recovery of motor function of stroke survivors, including walking ability.

Publications

Mattos D, Kuhl J, Scholz JP, Latash ML. (2013). Motor Equivalence (ME) During Reaching: Is ME Observable at the Muscle Level?. *Motor Control*. 2013 Jan 31.

Solnik S, Pazin N, Coelho CJ, Rosenbaum DA, Scholz JP, Zatsiorsky VM, Latash ML. (2013) End-state comfort and joint configuration variance during reaching. *Exp Brain Res*. 2013 Jan 4.

Willy RW, Scholz JP, Davis IS. (2012). Mirror gait retraining for the treatment of patellofemoral pain in female runners. *Clin Biomech (Bristol, Avon)*. 2012 Dec;27(10):1045-51. doi: 10.1016/j.clinbiomech.2012.07.011. Epub 2012 Aug 20.

Kao P-C, Srivastava S, Agrawal SK, Scholz JP (2012). Effect of robotic performance-based error-augmentation versus error-reduction training on the gait pattern of healthy individuals, *Gait & Posture*, 37(1): 113-120.

Scholz JP, Park ES, Jeka JJ, Schöner G, Kiemel T (2012). How visual information links to the multijoint coordination of quiet standing, *Experimental Brain Research*, 222(3): 229-39.

Park ES, Scholz JP, Schöner G (2012). Functional synergies underlying the control of posture during changes in head orientation, *PLoS One*, 7(8): e41583; doi: 10.1371/journal.pone.0041583

Hsu W-L, Scholz JP (2012). Motor abundance supports multi-tasking while standing. *Human Movement Science*, 31(4): 844-862

Grants

BCS-0957920. National Science Foundation. (P.I.; Scholz, John Jeka, University of Maryland). June 15, 2010 - June 14, 2012. Linking Information about Self-motion to Multi-joint Coordination of Upright Stance.

3P20RR016472-09S4 National Center for Research Resources (INBRE Program). (PI: Scholz, Agrawal, Higginson) 09/09-08/11. A Wearable Exoskeleton for Functional Arm Training of Stroke Survivors

NIH 2R01HD38582-06A1 (PI: Sunil Agrawal) 7/2008-6/2012. Robotic exoskeletons, FES, and Biomechanics: Treating Movement Disorders

NIH 2286-UD-DHHS-5032 (PT: Mark Latash) 2/2002-1/2010. Organization of a Simple Synergy

Presentations

Srivastava S, Kao P-C, Scholz JP. Coordination of leg muscles related to footpath stabilization during over ground walking post-stroke. 23rd Annual Meeting of the Society for the Neural Control of Movement, San Juan, Puerto Rico, April 16-21, 2013

Scholz JP. Use of the Uncontrolled Manifold Approach to address variability, self-motion and motor-equivalence: What are the differences? *Progress in Motor Control IX*. McGill University School of Physical & Occupational Therapy, Montreal, Canada, July 13-16, 2013.

Park E, Scholz JP. Use of the Uncontrolled Manifold Approach to address variability, self-motion and motor-equivalence: What are the differences? *Progress in Motor Control IX*. McGill University School of Physical & Occupational Therapy, Montreal, Canada, July 13-16, 2013.

Park E, Hwang S, Jeka JJ, Scholz JP. Effects of constraining neck motion on control of the center of mass with and without a visual perturbation. 42nd Annual Meeting of the Society for Neuroscience, New Orleans, LA, October 13-17, 2012, Poster 274.25/KK7.

Mattos DJS, Scholz JP, Kuhl J, Latash, ML. Is motor equivalence during reaching observable at the muscle level? 42nd Annual Meeting of the Society for Neuroscience, New Orleans, LA, October 13-17, 2012, Poster 886.12/HH19.

Gera G, Scholz JP. Post-stroke trunk muscle coordination during bimanual upward and downward reaching. 42nd Annual Meeting of the Society for Neuroscience, New Orleans, LA, October 13-17, 2012, Poster 680.17/OO4.

Solnik S, Coelho CJ, Pazin N, Latash M, Rosenbaum DA, Scholz JP, Zatsiorsky VM. Subjective comfort and multi-joint synergies in a pointing task. 42nd Annual Meeting of the Society for Neuroscience, New Orleans, LA, October 13-17, 2012, Poster 791.08/VV6.



LYNN SNYDER-MACKLER, PT, ScD, (Boston University), SCS, ATC, FAPTA, Alumni Distinguished Professor: Examination of rehabilitation protocols following ACL reconstruction, examining rehabilitation following ACL injury, osteoarthritis, high tibial osteotomy, and total knee Arthroplasty.

Laboratory Overview

Lynn Snyder-Mackler, PT, ScD, FAPTA, Alumni Distinguished Professor of Physical Therapy at the University of Delaware, has spent the past two decades developing evidence-based approaches to the rehabilitation of knee injuries. Her laboratory has developed into the premier research laboratory that is internationally recognized for the mechanistic and clinical outcomes after anterior cruciate ligament injury, knee osteoarthritis, and total knee arthroplasty. The lab is also involved with interventional clinical trials designed to optimize treatment after knee injuries. Her laboratory has collaborations with Dr. Thomas Buchanan's lab in Mechanical Engineering and Dr. May Arna Risberg's lab at Oslo University Hospital in Norway. Dr. Snyder-Mackler's accomplishments recently have been recognized with a prestigious MERIT (Method to Extend Research in Time) Award for the National Institutes of Health.

Publications

Logerstedt D, Lynch A, Axe MJ, Snyder-Mackler L. Symmetry restoration and functional recovery before and after anterior cruciate ligament reconstruction. *Knee Surg Sports Traumatol Arthrosc*. 2012 Feb 21. [Epub ahead of print] PubMed PMID: 22349604; PubMed Central

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PMCID: PMC3381049.

McClelland J, Zeni J, Haley RM, Snyder-Mackler L. Functional and biomechanical outcomes after using biofeedback for retraining symmetrical movement patterns after total knee arthroplasty: a case report. *J Orthop Sports Phys Ther.* 2012 Feb;42(2):135-44. Epub 2012 Feb 1. PubMed PMID: 22333656.

Lynch AD, Logerstedt DS, Axe MJ, Snyder-Mackler L. Quadriceps activation failure after anterior cruciate ligament rupture is not mediated by knee joint effusion. *J Orthop Sports Phys Ther.* 2012 Jun;42(6):502-10. Epub 2012 Apr 20. PubMed PMID: 22523081.

Bade MJ, Wolfe P, Zeni JA, Stevens-Lapsley JE, Snyder-Mackler L. Predicting poor physical performance after total knee arthroplasty. *J Orthop Res.* 2012 Apr 26. doi: 10.1002/jor.22140. [Epub ahead of print] PubMed PMID: 22539338.

Adams D, Logerstedt DS, Hunter-Giordano A, Axe MJ, Snyder-Mackler L. Current concepts for anterior cruciate ligament reconstruction: a criterion-based rehabilitation progression. *J Orthop Sports Phys Ther.* 2012;42(7):601-14. Epub 2012 Mar 8. PubMed PMID: 22402434.

Gardinier ES, Manal K, Buchanan TS, Snyder-Mackler L. Gait and neuromuscular asymmetries after acute anterior cruciate ligament rupture. *Med Sci Sports Exerc.* 2012 Aug;44(8):1490-6. PubMed PMID: 22330021; PubMed Central PMCID: PMC3399054.

Marmon, Adam; Zeni Jr, Joseph; Snyder-Mackler, L. Perception and Presentation of Function in Patients with Unilateral Versus Bilateral Knee Osteoarthritis. *Arth Care Res* (in press)

Grindem H, Eitzen I, Moksnes H, Snyder-Mackler L, Risberg MA. A pair-matched comparison of return to pivoting sports at 1 year in anterior cruciate ligament-injured patients after a nonoperative versus an operative treatment course. *Am J Sports Med.* 2012 Nov;40(11):2509-16. doi: 10.1177/0363546512458424. Epub 2012 Sep 7. PubMed PMID: 22962290.

Di Stasi SL, Hartigan EH, Snyder-Mackler L. Unilateral stance strategies of athletes with ACL deficiency. *J Appl Biomech.* 2012 Aug;28(4):374-86. PubMed PMID: 22983931.

Hartigan EH, Zeni J Jr, Di Stasi S, Axe MJ, Snyder-Mackler L. Preoperative predictors for noncopers to pass return to sports criteria after ACL reconstruction. *J Appl Biomech.* 2012 Aug;28(4):366-73.

Della Villa S, Boldrini L, Ricci M, Danelon F, Snyder-Mackler L, Nanni G, Roi GS. Clinical Outcomes and Return-to-Sports Participation of 50 Soccer Players After Anterior Cruciate Ligament Reconstruction Through a Sport-Specific Rehabilitation Protocol. *Sports Health.* 2012 Jan;4(1):17-24. PubMed PMID: 23016064; PubMed Central PMCID: PMC3435892

Alnahdi AH, Zeni JA, Snyder-Mackler L. Muscle impairments in patients with knee osteoarthritis. *Sports Health.* 2012 Jul;4(4):284-92. PubMed PMID: 23016099; PubMed Central PMCID: PMC3435919.

Logerstedt D, Lynch A, Axe MJ, Snyder-Mackler L. Pre-operative quadriceps strength predicts IKDC2000 scores 6 months after anterior cruciate ligament reconstruction. *Knee.* 2012 Sep 26. doi:pii: S0968-0160(12)00135-4. 10.1016/j.knee.2012.07.011. [Epub ahead of print] PubMed PMID: 23022031; PubMed Central PMCID: PMC3535501.

Yoshida Y, Zeni J, Snyder-Mackler L. Do patients achieve normal gait patterns 3 years after total knee arthroplasty? *J Orthop Sports Phys Ther.* 2012;42(12):1039-49. doi: 10.2519/jospt.2012.3763. Epub 2012 Oct 22. PubMed PMID: 23090437.

Gardinier ES, Manal K, Buchanan TS, Snyder-Mackler L. Altered loading

in the injured knee after ACL rupture. *J Orthop Res.* 2012 Oct 23. doi:10.1002/jor.22249. [Epub ahead of print] PubMed PMID: 23097309.

Marmon AR, McClelland JA, Stevens-Lapsley JE, Snyder-Mackler L. Single Step Test for Unilateral Limb Ability Following Total Knee Arthroplasty. *J Orthop Sports Phys Ther.* 2012 Nov 16. [Epub ahead of print] PubMed PMID: 23160309.

McGinnis K, Snyder-Mackler L, Flowers P, Zeni J. Dynamic joint stiffness and co-contraction in subjects after total knee arthroplasty. *Clin Biomech (Bristol, Avon).* 2012 Dec 5. doi:pii: S0268-0033(12)00264-1. 10.1016/j.clinbiomech.2012.11.008. PubMed PMID: 23219062.

Grants

NIH R01 HD37985 (PI) 3/01/01 -6/30/17 Dynamic Stability in the Anterior Cruciate Ligament Injured Knee

NIH 1 R01 AR048212-01A1 (PI) Can Neuromuscular Training Alter Movement Patterns? 01-Jan 2005-30 Nov 2016

4R44HD068054-02 (Delaware PI) Contact PI Greenwald, Richard M Dynamic Perturbation Training System For ACL Rehabilitation 1 APR 2011- 28-FEB-2013

P30 GM103333 01 7793 (PI) Clinical Research Core 1 AUG 2012 -31 JUL 2017 NIGMS

Award

Ron Peyton Award for distinguished contribution to the specialty of Sports Physical Therapy, 2012

NIH Method to Extend Research in Time (MERIT) Award NICHD 2012

American Physical Therapy Association Helen Hislop Award for Scientific Writing - 2012



JOSEPH ZENI, JR., PT, PhD (Delaware), Assistant Professor.

Laboratory Overview

Dr. Zeni's lab has developed an innovative rehabilitation strategy to manage the persistent movement asymmetries after total knee replacement. This rehabilitation approach includes using biofeedback during functional retraining and therapeutic exercises to promote symmetry between the limbs. Results from this pilot study are looking promising! We have also begun to enroll subjects into our Total Hip Outcome study that we are performing in collaboration with the physicians from Christiana Care's Center for Advanced Joint Replacement. Dr. Zeni's lab hopes to identify the particular biomechanical and clinical impairments that affect functional outcomes and develop specific interventions that reduce these impairments and maximize function.

Publications

McGinnis K, Snyder-Mackler L, Flowers P, Zeni J. Dynamic joint stiffness and co-contraction in subjects after total knee arthroplasty. *Clin Biomech (Bristol, Avon).* 2012 Dec 5. pii: S0268-0033(12)00264-1. doi: 10.1016/j.clinbiomech.2012.11.008.

Yoshida Y, Zeni J, Snyder-Mackler L. Do patients achieve normal gait patterns 3 years after total knee arthroplasty? *J Orthop Sports Phys Ther.* 2012 Dec;42(12):1039-49. doi: 10.2519/jospt.2012.3763. Epub

Awards, Degrees, Grants & Publications Continued

2012 Oct 22.

Alnahdi AH, Zeni JA, Snyder-Mackler L. Muscle impairments in patients with knee osteoarthritis. *Sports Health*. 2012 Jul;4(4):284-92.

Hartigan EH, Zeni J Jr, Di Stasi S, Axe MJ, Snyder-Mackler L. Preoperative predictors for noncopers to pass return to sports criteria after ACL reconstruction. *J Appl Biomech*. 2012 Aug;28(4):366-73.

Marmon AR, Zeni JA Jr, Snyder-Mackler L. Perception and presentation of function in patients with unilateral versus bilateral knee osteoarthritis. *Arthritis Care Res (Hoboken)*. 2013 Mar;65(3):406-13. doi: 10.1002/acr.21825.

Bade MJ, Wolfe P, Zeni JA, Stevens-Lapsley JE, Snyder-Mackler L. Predicting poor physical performance after total knee arthroplasty. *J Orthop Res*. 2012 Nov;30(11):1805-10. doi: 10.1002/jor.22140. Epub 2012 Apr 26.

Knarr BA, Zeni JA Jr, Higginson JS. Comparison of electromyography and joint moment as indicators of co-contraction. *J Electromyogr Kinesiol*. 2012 Aug;22(4):607-11. doi: 10.1016/j.jelekin.2012.02.001. Epub 2012 Feb 29.

McClelland J, Zeni J, Haley RM, Snyder-Mackler L. Functional and biomechanical outcomes after using biofeedback for retraining symmetrical movement patterns after total knee arthroplasty: a case report. *J Orthop Sports Phys Ther*. 2012 Feb;42(2):135-44. doi: 10.2519/jospt.2012.3773. Epub 2012 Feb 1.

Nazarian DG, Zeni JA Jr. Management of a pelvic mass following a worn uncemented total hip arthroplasty. *J Arthroplasty*. 2012 Feb;27(2):323.e17-20. doi: 10.1016/j.arth.2011.03.023. Epub 2011 May 8.

Presentations

Alnahdi AH, Zeni J, Snyder-Mackler L. The effect of progressive strengthening programs on sit to stand mechanics after unilateral total knee arthroplasty: Preliminary results of a randomized clinical trial. APTA Combined Sections Meeting 2012

Flowers P, Zeni J, McClelland J, Logerstedt D, Snyder-Mackler L. Novel Intervention Improves Contralateral Knee Function Post-Total Knee Arthroplasty. Poster presentation. ORS Meeting 2012, San Francisco. February 3, 2012.

Logersedt D, Zeni J, Snyder-Mackler L. Disease severity and sex differences in patients with knee osteoarthritis. Poster presentation. OARSI annual meeting 2012. Barcelona, Spain. April 26-29, 2012.

Logersedt D, Zeni J, Snyder-Mackler L. Functional performance and patient-reported knee function one year after total knee arthroplasty. Oral presentation. 15th ESSKA 2012. Geneva, Switzerland. May 2, 2012.

Zeni J, Logerstedt D, Abujaber S, Flowers P, Pozzi F, Snyder-Mackler L. Rehabilitation to reduce secondary osteoarthritis after total knee arthroplasty. OARSI Annual Meeting, Barcelona 2012

Alnahdi A, Zeni J, Snyder-Mackler L. The Effect of Progressive Strengthening Programs on Function and Gait Mechanics after Unilateral Total Knee Arthroplasty: A Randomized Clinical Trial. OARSI Meeting 2012, Barcelona, Spain. April 26-29, 2012.

Alnahdi A, Zeni J, Snyder-Mackler L. Quadriceps Inhibition and Physical Function After Unilateral Total Knee Arthroplasty. ESSKA Meeting 2012, Geneva, Switzerland. May 2-5, 2012.

Alnahdi A, Zeni J, Snyder-Mackler L. Hip Abductors Strength: Reliability and Association With Physical Function after Unilateral Total Knee Arthroplasty. ESSKA Meeting 2012, Geneva, Switzerland. May 2-5, 2012.

Pozzi F, Alnahdi A, Snyder-Mackler L, Zeni J. Loading patterns during a step-up-and-over task in individuals following total knee arthroplasty. Poster presentation at the 36th Annual Meeting at of the American Society of Biomechanics (ASB); Gainesville, FL, USA. Proceedings of the 36th Annual ASB Meeting August 2012

Pozzi F, Zeni J, Cheadle K, Snyder-Mackler L. Functional outcomes following a novel rehabilitation protocol to promote symmetrical loading after total knee arthroplasty. Accepted as platform presentation at the American Physical Therapy Association, Combined Section Meeting, Jan 2013; San Diego, CA, USA.

Pozzi F, Alnahdi A, Snyder-Mackler L, Zeni J. Functional status and biomechanical symmetry during a step up and over task six months after total knee arthroplasty. Submitted to the bi-annual meeting of the International Society of Arthroscopy, Knee Surgery and Orthopaedic Sports Medicine (ISAKOS), May 2013; Toronto, Canada.

Flowers P, Abujaber S, Pozzi F, Snyder-Mackler L, Zeni J. Biofeedback to promote movement symmetry after TKA: A pilot and feasibility study. Delaware Orthopaedic Symposium. October 27, 2012; Newark DE

Abujaber S, Pozzi F, Marmon A, Aukamp C, Rombach S, Snyder-Mackler L, Zeni J. Outcomes after total knee arthroplasty: Community partnership between the University of Delaware and Christiana Care Health System. Delaware Orthopaedic Symposium. October 27, 2012; Newark DE

Zeni J, Axe M, Snyder-Mackler L. Effect of intra-articular hyaluronic acid injection on perceived functional performance: Comparison of two formulations. Delaware Orthopaedic Symposium. October 27, 2012; Newark DE

Pozzi F, Flowers P, Abujaber S, Zeni J. Total hip replacement outcome study: Community partnership between the University of Delaware and Christiana Care Center for Advanced Joint Replacement. Delaware Orthopaedic Symposium. October 27, 2012; Newark DE

How to do it in Your Practice: Private Practice Perspective. Annual Meeting AOSM, San Diego, CA 2011 Jul.

Alnahdi A, McClelland A, Zeni J, Snyder-Mackler L: Quadriceps Strength and Gait after Unilateral Total Knee Arthroplasty. Annual Meeting Orthopaedic Research Society. 2011 Long Beach, CA.

De Stasi S, Snyder-Mackler L: Differing Gait Patterns Between ACL Reconstructed Athletes Who Do and Do Not Pass Return to Sport Criteria. Annual Meeting Orthopaedic Research Society. 2011 Long Beach, CA.

MacLeod T, Snyder-Mackler L, Axe M, Buchanan T: Muscle and Tendon Morphology after Reconstruction of the Anterior Cruciate Ligament: the Effect of Graft Harvest. Annual Meeting Orthopaedic Research Society. 2011 Long Beach, CA.

Awards, Degrees, Grants & Publications Continued

Professional Faculty



KARLA BELL, PT, DPT, MS, OCS, GCS
Director of Clinical Education, Physical Therapist,
Assistant Professor.



CATHY CIOLEK, PT, DPT, GCS, (Ithaca),
Director of Clinical Education, Assistant Professor



AIRELLE HUNTER-GIORDANO, PT, DPT, SCS, OCS, CSCS
(Delaware), Associate Director of Clinical Services Sports
Residency, Director, Sports and Orthopedic Clinical Services,
Assistant Professor.



GRACE KEENAN ADEMPSKI, PT, DPT, GCS, NCS,
Physical Therapist, Assistant Professor



TARA JO MANAL, PT, DPT, OCS, SCS, (Delaware), Director
of Clinical Services, Physical Therapy Clinics,
Associate Professor



ANGELA SMITH, PT, DPT, OCS, SCS, ATC, Physical Therapist,
Assistant Professor.



LAURA SCHMITT, PT, DPT, OCS, SCS, ATC, (Temple),
Director of Clinical Education, Assistant Professor



ELLEN WRUBLE HAKIM, PT, DScPT, MS, CWS, FACCWS,
Director, Doctorate in Physical Therapy Program,
Associate Professor

Professional Awards and Publications

Awards

Bell, Karla. Recipient of APTA's *Signe Brunnstrom Award for Excellence in Clinical Education*, 2012

Hunter-Giordano A. Recipient of the UDPT Alumni Award, 2012

Publications

Adams D., Logerstedt D., Hunter-Giordano A., Axe MJ., Snyder-Mackler L. Current Concepts for Anterior Cruciate Ligament Reconstruction: A Criterion-Based Rehabilitation Progression. July 2012, Vol 42; 7. *JOSPT*.

Presentations

Ademski, Grace K. Johns Hopkins and University of Delaware Neurologic Residency program was credentialed by the APTA Poster Presentation at CSM 2013: Partnering to Enhance Feasibility and Success of a Residency Program

Bell KA. *PTNOW.Org: A Resource To Bridge The Academy And Clinical Practice*. Panel Member. Educational Leadership Conference – APTA 2012.

Manal TJ, Bell KA, Schmitt LA, Hakim Wruble E. *The Clinical Classroom: Collaborating to Deliver a Curriculum Without Walls*. Platform Presentation. Educational Leadership Conference 2012.

Bell KA. *PTNow is in Beta! Help Us Set the Direction for Accessing and Using Best Evidence*. Panel Member. APTA Annual Conference in Tampa, FL 2012.

Bell KA, Larkin S, Manal TJ, Wruble Hakim E. *Implementation of a Clinical Decision-Making Algorithm For Clinical Instructors To Determine Student Progression In A Clinical Experience*. APTA Annual Conference in Tampa, FL 2012.

Bell KA, Beeson R, Manal TJ. *A Case Demonstrating Physical Therapist Role in Primary Medical Management for Missed Diagnosis of Distal Radial Fracture/Subluxation*. APTA Annual Conference in Tampa, FL 2012. Shovestul AO, **Bell KA, Manal TJ.** "Primary Care Role of an Outpatient Physical Therapist for a Medically Complex Patient With Fear Avoidant Beliefs". APTA CSM 2012.

Faila M., **Hunter-Giordano A.** "The Role of a point stimulator in outpatient physical therapy in a patient with suspected peripheral neuropathy". Platform presentation in Electrotherapy Section APTA Combined Sections Meeting 2012

Let's Keep in Touch!

We will continue to include a page in the Newsletter that highlights the Alumni updates we receive throughout the year. To be included: weddings, births, academic achievements, and also deaths. In addition, all alumni information received will be entered online, and organized by graduating year.

We would like to hear from you and share your news with other alumni! Please mail this completed form to: Cyndi Haley, 301 McKinly Lab, University of Delaware, Physical Therapy Department, Newark, DE 19716, or fax to (302-831-4234). You may also e-mail us your news at: www.udel.edu/PT/alumni/updatenews.html

Photos are encouraged.

FULL NAME: _____

first

middle

(maiden)

last

DEGREE/YEAR: _____ CHECK HERE IF THIS IS A NEW ADDRESS

HOME ADDRESS: _____

CITY/STATE/ZIP: _____

TELEPHONE: _____ EMAIL: _____

HERE'S MY NEWS:



University of Delaware
Department of
Physical Therapy

301 MCKINLY LAB
NEWARK, DE 19716

Phone: 302-831-8521
Fax: 302-831-4234
www.udel.edu/PT

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