Update from the Physical Therapy Program Director

The Program in Physical Therapy has had another successful year. In June, we graduated our first class of 50 students, bringing the grand total to 1918 alumni. Of the 49 students who have taken the licensure exam thus far, all (100%) passed it on their first attempt, compared to 89% nationally. The applicant pool for our most recent matriculating class (Class of 2012) was once again very strong with a total of 196 completed applications (up from 168 the previous year). We admitted 50 students, including 43 from Minnesota and 7 from other states. The average GPA was 3.65. Sadly for us but commendably for Lisa Dorsey, PhD, PT, Lisa left our faculty to become an associate dean at St. Louis University, from where she hails. We are now searching for a new pediatric faculty member and interested people should contact Richard DiFabio, PhD, PT, chair of our search committee (difab001@umn.edu). Faculty scholarly productivity continues to be quite strong with 39 publications in scientific journals for 2009. Physical Therapy students participated in 9 poster presentations at national scientific meetings. An international presence continues to evolve in our clinical education program, with students undertaking clinical internships in three countries outside of the U.S. (Ecuador, Niger and Tanzania). Furthermore, service learning projects within our curriculum continue to emphasize direct engagement of diversity issues domestically and internationally, and our students embrace these efforts with outstanding interpersonal skill and enthusiasm. Lastly, our Program will receive its on-site accreditation review from representatives of the Commission on Accreditation in Physical Therapy Education in October of 2010. Faculty and staff are busily preparing for this important event that occurs once every 10 years. Overall, the Program is very healthy and is adding nicely to the strong reputation of the University of Minnesota.

Faculty & Staff Updates

2009 brought several changes in our faculty and staff. Lisa Dorsey, PhD, PT and family had the opportunity to return to their native home in St. Louis, Missouri in June. We certainly miss her both personally and professionally. We are currently engaged in a nationwide search for a tenure track faculty to teach the pediatric content and conduct research. Lisa says that she is enjoying being able to spend more time with her family, and she is also enjoying her new position as Associate Dean for Academic & Student Affairs in the Doisy College of Health Sciences at St. Louis University.

Lisa Dorsey’s departure brought about several other changes in faculty responsibilities in our Program. Becky Olson-Kellogg, PT, DPT, GCS was promoted into the Assistant Director role, previously held by Dr. Dorsey, and Jeanne Lojovich, PT, NCS resumed full responsibility of the Clinical Education Program, as the sole ACCE (Academic Coordinator of Clinical Education).

Daire Frank, who served as our DGS Assistant and Admissions Coordinator for 7 years took advantage of an early retirement opportunity. Retirement has not found Daire to be idle though, as she has already travelled to Denmark, spent many hours assisting in building their new log cabin in northern MN, and started a new business with her daughter (sewing & renting princess costumes to little girls for parties). We wish Daire well in all of her new ventures.

We welcome Liz Goebel into this same position. Liz came to us from the Carlson School of Management (8 years) here at the University. Her hobbies include gardening & reading. Of her 8 months here in her new position, Liz said she is enjoying learning more about the exciting profession of physical therapy, and is enjoying working with all of the friendly students, staff, and faculty. Welcome Liz!
The Program in Physical Therapy congratulates the DPT Class of 2009 who graduated on June 20, 2009. We wish all 50 of our graduates success as they embark on their respective careers! Please keep in touch!

Some Class Statistics:
- 12 of the class did their undergrad at the U of M and 24 other colleges were represented.
- 34 of the class were residents of MN; the others came from WI, ND, IA, AZ, NM, KS, CO, and Tanzania, E. Africa.
- The majority of undergrad majors were biology, exercise science/health fitness, and kinesiology.
- They graduated from our Program with an average cumulative GPA of 3.76.
- They represented our Program with strong involvement in the Phillips Neighborhood Clinic and Indian Health Services Diabetic Foot Clinic along with other service projects.
- Students did their internships nationwide and internationally, including Niger, California, Montana, and Colorado.

Welcome Class of 2012

On July 20, 2009 we welcomed the Class of 2012. There are 11 men and 39 women in the class ranging in age from 21–38. Nine students graduated from the U of M, and 33 other undergraduate colleges are represented. As in past years, the majority of students majored in exercise science, kinesiology, and biology, but there were also majors in psychology, mathematics, and finance. Most students are avid athletes and love the outdoors. One of our students is a professional discus thrower and has competed on many US teams, including the 2000 Olympic Team. We have some world travelers in the class. One student spent a month in Tanzania and climbed Mount Kilimanjaro while she was there. There are also some great cooks in the mix! They have put together a cookbook with some of their favorite recipes. The cookbook is on sale for $10.00.

The Class of 2011 Welcomes the Class of 2012

Katherine Ayer
Kara Beranek
Kurt Bickler
Kelsey Blom
Catherine Braden
Adam Burandt
Heather Calebaugh
Amy Carlson
Eric Dale
Alisa Darling
Danelle Donner
Brian Dooley
Brittany Dressler
Sarah Ellsworth
Layla Elmajri
Dana Gervais
Emily Henneman
Grant Hennington
Sally Hutson
Kjersti Johnson
Tara Kelly
Allison Klumpp
Matthew Koelewyn
Rachel Koenig
Laura Henry

Allison Kosir
Kristin Kuehl
Alyssa Kurkoski
Rachel Larson
Peter Larson
Wyatt LaVigne
Megan Liebaert
Devin Ludowese
Anna Messerly
Paige Neeser
Alison Pagliacceti
John Park
Jenna Pederson
Sarah Person
Hazen Plough
Dana Scheppmann
Kayla Schindler
Joseph Schoess
Carie Steil
Elizabeth Straub
Jill Swenson
Michelle Ugalde
Kaitlin Wagner
Matthew Weflen
Megan Westling
The Inter-professional Street Outreach Project (ISTOP) is an exciting new development allowing students in the Academic Health Center (AHC) the opportunity to provide basic health care to individuals experiencing homelessness in the Twin Cities. This year marks the first year physical therapy students have made available their services to this population, and hopefully as the need continues to grow, PT involvement will be firmly established at all of ISTOP’s affiliated sites. “Currently we’ve been volunteering once per month at a women’s shelter in St. Paul”, says Garrett Pfeiffer, a 2nd year student from Freeman, SD, “We are hoping that by this spring we will be able to double our availability at this particular location and by next year be ready to pass the torch on to the class of 2012 to keep the ball rolling and offer PT care at the other ISTOP sites as well.” In total, five 2nd year students have been working to construct a plan that will allow any individual staying at a designated shelter the chance to receive physical therapy at no cost. “The challenges” says Ashley Maas, a member of the 2nd year group, “are making sure we follow HIPPA guidelines when doing our documentation, ensuring quality care with the limited resources allowed on site, and that we really get our name out there so people understand what they should see us for.” Other behind the scenes logistics include finding licensed preceptors, scheduling, and having referrals ready at a moment’s notice. “It has been greatly rewarding and an exceptional learning experience for us!” says group members Missy Herron and Jonny Tanzi, “Dr. Anderson has gracefully stepped forward as one of our preceptors, which has allowed us the chance to apply the skills we are learning in her class to real patient evaluations and treatment sessions.” As the final member of the 2nd year group, I would like to acknowledge Kaley Kosak from the class of 2010 and a few of her classmates for their role as advocates within the AHC. They solidified PT involvement within ISTOP and prepared our class to maintain the forward progress of such a meaningful project.

-John Egge, Class of 2011

DPT Students in the AHC provide basic health care to individuals experiencing homelessness

DPT Student Awards Announced

**The Janice Steadland Fellowship Fund**
Catherine Andrews (09)

**Rudolf Ptak Endowed Fellowship in Physical Therapy**
Sarah Holt (10)
Donna Volodarsky (10)
Jared Bueche (10)
Kaley Kosak (10)

**Marguerite P. Gardner Fellowship**
Andy Wicks (11)
Sarah Fuller (10)

**The Sharp Family Fellowship**
Ashleigh Knutson (10)

**Eleanor McManmon Daly Scholarship**
Erinn Hanson (10)

**Beatrice E. and Hurdo Boody Scholarship**
Mary Rosebrough (09)

**Barbara Lee Graham Scholarship Fund**
Jenna Smith (10)

DPT Class of 2011 Community Projects

One of the purposes of the Clerkship III & IV courses are to familiarize DPT students with their role as health and wellness advocates as well as exposing them to health disparities encountered within urban, rural, and world health settings. Students presented their posters to a group of peers at a December 15, open house. Topics for their project included:

- **Incorporating Physical Examination into Abdou Moumout University of Niamey Medical School**
- **Helping Hands for Haiti**
- **Dominican Health Care: Rehab for the Republic**
- **Lending a Hand: Acquiring Educational Treatment Materials for Children and Adults in a Rural Ecuadorian Clinic**
- **Development of Physical Therapy Services at Women of Nations Shelter**
- **Family Education Diabetic Series**
- **HCMC Somali Project**
- **Diversity in Health Careers: Introducing the Field of Physical Therapy to High School Students**
- **Healthy Living in Leech Lake: Education for a Native American Community**
Student Poster Presentations:
“fMRi During Individuated Finger Movements” Emily Chapman, Teresa Kimberely, PhD, PT

“Clinic Measure of Gait Rythum: Reliability of the Audio Switch” Aaron McBroom, Maria Spencer, Melissa McCarthy, Richard Di Fabio, PhD, PT

“Auditory Discrimination Training at Preferred Cadence Improves Walking Coordination” Megan Martinson, Elizabeth Mraz, Richard Di Fabio, PhD, PT

“Effect of Repeated Sessions of rTMS Given During an Active Motor State in Patients with Focal Hand Dystonia” Erin Haberman, Jenna Smith, Teresa Kimberley, PhD, PT

“Effect of Aerobic Exercise on Cortical Activity Following Traumatic Brain Injury: A Pilot Study” Molly Schultz, Brandon Schomberg, Jeanne Lojovich

“Effects of Elevation Angle and Plane of Motional on Subacromial and Internal Impingement” Brett Peterson, Carol Nystrom, Tien Pham, Nicole Hybben, Paula Camargo, Vandana Rhadki, Jonathan Braman, Robert LaPrade, Paula Ludewig, PhD, PT

Platform Presentations:
Shoulder & Upper Extremity Platform Block
“Changes in Subacromial Space during Scapular Plane Abduction with Thoracic Extension, Scapular Retraction or Glenohumeral External Rotation” Nathan Martinex, Kaley Kosack, Ashleigh Knutson, Meleah Murphy, Paula Camargo, Vandana Phadke, Jonathan Braman, Robert LaPrade, Paula Ludewig, PhD, PT

“Does Repetitive Transcranial Magnetic Stimulation (rTMS)-Induced Inhibition of the Primary Motor Cortex Following Visuospatial Motor Skill Training Affect Performance?” Michael Borich, Mary Furlong, Dennis Holsman

Rehab Science Program Update

The Rehabilitation Science Doctoral (RSD) Program has grown considerably since its inception in 1997. We currently have 20 PhD students in the program who come from a variety of backgrounds including engineering, exercise science, medicine, and occupational, physical, speech and music therapies. This past year has seen a number of presentations and awards received by our PhD students. Sharyl Samargia was awarded the 2009 Minnesota Speech Language and Hearing Association Dissertation Award and presented at the Annual Society for Neuroscience meeting in Chicago. Michael Borich received a Dissertation Fellowship Award from the University of Minnesota, was named a Neuromuscular Plasticity and Rehabilitation Scholar from the University of Florida and presented at both the Society for Neuroscience meeting and the International Movement Disorders Society Meeting in Paris. Both Sharyl and Michael are mentored by Dr. Teresa Kimberley. Corey McGee received a $12,800 equipment grant from the Minnesota Medical Foundation for his thesis work dealing with hand grip forces in older women with arthritis. Corey is mentored by Dr. Virgil Mathiowetz. Bernadette Gillick received the PODS II Fellowship from the Foundation for Physical Therapy. Bernadette, Joan Deng and Wha Yoo, all students in Dr. Carey’s laboratory, presented posters at the Society for Neuroscience Meeting. Sarah Greising, was an invited presenter at the annual meeting of the Gerontological Society of America, received a Northland Chapter ACSM Abstract Award, and published an abstract in The Physiologist with her mentor, Dr. Dawn Lowe. Nupur Hajela, a student in Dr. Kukulka’s laboratory presented a poster at the Society for Neuroscience meeting.

2009 Graduate of the Rehab Science Program: Vandana Phadke (August 2009)
The University of Minnesota has established itself as an institution based upon a three-tier mission: to teach, to research, and to serve. As six partners in physical therapy, that mission was reinforced when we were given the opportunity to represent the University and apply our knowledge towards the citizens of the African nation of Niger. Our group consisted of three third year University of Minnesota Physical Therapy students, one clinical faculty member, one core faculty member, and the director of the University’s Physical Therapy Program. For three weeks we traveled through Niger, spending our time in the classroom, in the clinic, and amongst the people. As we educated eager minds in the clinic and classroom, and treated patients on the dirt floor of our doorstep, it became clear that our purpose as representatives of the University of Minnesota extends beyond the simple tasks of teaching, researching, and serving. Through the help of the people of Niger, we discovered what it truly means to live out the University’s mission.

The first tier of this mission – to teach – was best understood during our first week in the capital city of Niamey. Our focus in Niamey was to educate the fifth year medical students at the country’s only University. Our topic: physical therapy diagnoses and treatments; our time frame for educating: one week. To boil an entire profession down to thirty hours is not a simple task, and to deliver those lectures through a French translator only added complexity. However, there was something to learn from this situation: teaching another culture about your profession encourages you to fully understand the very heart and purpose of your medical work, and drives you to convey that purpose with genuine passion and enthusiasm. To educate these students required me to teach in such a way that challenged us to understand within ourselves what it truly means to practice physical therapy. The students’ open eagerness, continual questions, and enthusiastic participation stretched beyond what we anticipated; they reminded us what it means to learn. These medical students are the future of Niger medical care during a time where improved care is essential; to be given the opportunity to help guide and develop their educational path was truly rewarding.

Tier two of the mission highlights the importance of research in a learning environment. To research is to discover, and to discover is to recognize a truth that has always been in existence but hidden from view. Such discovery is not always confined to a lab. During our three weeks in Niger, a very clear truth was discovered: HOPE can exist in a nation whose physical and economic appearance often render it hopeless.

However, to find such Hope was not a simple task, and required research, discovery, and understanding of a culture and a people unique to our own. Niger currently resides as the third poorest nation in the world. Such status does not typically lend to the presence of optimal medical care. Throughout our trip we visited multiple clinics and hospitals, all displaying various levels of cleanliness and technology, but none of which would be considered remotely similar to that of an American clinic. Patient mattresses rarely had linens, let alone clean linens; mosquito nets with holes were the only barrier to catching malaria; and overflow inpatients were kept on mattresses lining the floors of dark hallways. Despite the physical state of the clinics, perhaps the greatest challenge throughout our treatment experience was the fact that so many of the severe prognoses we witnessed could have been prevented had the staff or the patient been given the knowledge and education of greater possibilities. An amputation could have been prevented if an appropriate dressing had covered a wound; function could have been regained in a limb if the patient only understood the symptoms being experienced; death could have been abated with knowledge of a simple tetanus vaccination every ten years.
With such constant severity of prognoses, it would be easy to get lost in the frustrations and enveloped in the magnitude of what surrounded us; every patient was a severe case. In such an environment, hope was something that could be easy to lose and hard to find. However, with a little “research” into understanding the culture and the people we were treating, we discovered that even in such a poor country, HOPE was still present. We discovered Hope in the gesture of the medical students when they provided us with cold cokes (a luxury in Niger) to say thank you for teaching them; we found Hope in the eagerness of a young nurse wanting to learn how to apply a stump wrap to a patient’s amputated limb; Hope was uncovered in the eyes of a child, as they shinned when we spent fifteen minutes of rehab with her, just because we cared. Ultimately, we discovered that the greatest tool for providing such HOPE—a Hope for the possibility of something greater in the future—lies not with money or supplies, but with education.

Therefore, we must use this discovery to inspire a desire to bring greater education to these people. The third tier of the mission – to serve – can be used to carry out such desires. While Niger may be considered poor, after spending three weeks with its people, it is clear that Niger is one of the richest countries in many aspects reaching far beyond economics and resources. It is this very richness that taught us that to serve is more than just to aide. The act of serving is not the superior aiding of the underprivileged by the privileged, but the development of a symbiotic relationship between two individuals based upon understanding, honor, and thanks. One cannot truly serve until you have researched, learned and understood the true needs of the people. Through the kindness, warmth, and eagerness of the people of Niger we have done that research, and that need is education. This medical experience developed a relationship between ourselves, the University, and the people of Niger, and thus now our service can truly begin. Though our trip has concluded, our efforts should not just because we set foot back on American soil. It is a part of our role in this relationship that we take the next step, a step of service through education. In doing so, we will honor our relationship with Niger as well as our role within the University of Minnesota as we look to carry out the final tier of its mission.
Dr. Jack Allison served as the Director of the Program in Physical Therapy at the University of Minnesota from 1978-1993. Following his untimely death in 1998 at the age of 68, a memorial lectureship was established in his name in 1999. The Program in Physical Therapy was very pleased to celebrate the 10 year anniversary of the Jack Allison Lectureship on Oct 10, 2009 with renowned lecturer, Dr. Shirley Sahrmann, PT, PhD, FAAPTA. Dr. Sahrmann is Professor of Physical Therapy/ Neurology/ Cell Biology and Physiology at Washington University School of Medicine, St. Louis, Missouri. She received her bachelor’s degree in Physical Therapy, masters and doctorate degrees in Neurobiology from Washington University. She is a Catherine Worthingham Fellow of the American Physical Therapy Association and is a recipient of the Association’s Marion Williams Research Award, the Lucy Blair Service Award, and the Kendall Practice Award, the Inaugural John H.P. Maley Lecture and Mary McMillan Lecture Awards. She has also received the Bowling-Erhard Orthopedic Clinical Practice Award from the Orthopedic Section of the APTA. Dr. Sahrmann's research interests are in development and validation of classification schemes for movement impairment syndromes as well as in exercise based interventions for these syndromes. After all her awards and accolades Dr. Sahrmann continues to maintain an active clinical practice specializing in patients with musculoskeletal pain syndromes.

The day long lecture at Coffman Memorial Union was entitled “Movement System Low Back Syndromes: Relationship to Relative Flexibility”. The event was well attended by local clinicians, students and faculty members. Dr. Sahrmann’s lecture included not only valuable information regarding the examination and assessment of the musculoskeletal system, but patient demonstration and treatment ideas as well. In addition, Dr. Sahrmann graciously presented a talk regarding the need for the classification of movement impairment syndromes in Physical Therapy with the second year DPT students at a pizza lunch the previous day. This event provoked a lively discussion between the participants who were very grateful to be able to meet Dr. Sahrmann and benefit from her experiences. The University of Minnesota Program in Physical Therapy thanks Dr. Sahrmann for her excellent presentations and her willingness to be our guest for this prestigious event.

In Fall 2008, Dr. Carey, Program Director, Jeanne Lojovich, ACCE, and Greg Santema, Clinical Instructor, traveled with third year students Kate Brown, Nick Thompson, and Jenna Koneczny to the Republic of Niger. While there they provided patient care, consultation, and instruction on physical rehabilitation to fifth year medical students. One of the significant clinical needs they witnessed was for updated wound management.

This January, the faculty team returned with a new group of students, and was joined by Pam Cole, MSPT, CWS, adjunct faculty. Pam teaches the Integument course in the second year of the professional program, in addition to her employment at the Park Nicollet Wound Clinic. Pam had been contemplating ways to help address wound-care needs throughout the world, and was excited to hear from Kate about this opportunity. “This is a service dream come true for me!” She enthusiastically began gathering supply donations and support from vendors, the Park Nicollet Wound Clinic, and her patients. While in Niger, she provided further training to the team on wound care so that they could be most effective when traveling to several sites within the country. Pam also provided a lecture on wound management at the Université Abdou Moumouni Medical School in Niamey. The PT Program is very pleased to have Pam’s contributions in the classroom and her participation with this exciting service project.

The Clinical Educator of the Year Award was established to recognize superior performance in teaching to our University of Minnesota DPT students. Recipients were nominated by students in a letter describing their clinical instructor’s technical skill, mentorship, teaching abilities and how the instructor went “above and beyond” to make their clinical experiences exceptional. The 2009 University of Minnesota Clinical Educators of the Year were recognized and honored during the luncheon at the Jack Allison Lectureship on October 10, 2009. The recipients were James W. Mattheson, from Minnesota Sport and Spine Rehabilitation, a private practice orthopedic clinic in Burnsville, MN and Blake Buetow from Sister Kenny Sports and PT in St. Paul. The University of Minnesota Program in Physical Therapy would like to thank both of these individuals on behalf of all the students they have mentored and for their continued excellence in the field of Physical Therapy education.

The Program in Physical Therapy is pleased to announce Elizabeth Fine as the recipient of the 2009 Faculty Service Award. This award is presented every year to a person recognized for their outstanding contributions to post baccalaureate, graduate, and/or professional education. Ms. Fine’s role as the subject librarian at the Biomedical Library and departmental liaison to the Program in Physical Therapy has been tremendously valuable in the educational process of our future physical therapy professionals. She readily adapted each library experience to specifically meet the needs of our DPT students for numerous classes and their research. The Program in Physical Therapy would like to thank Ms. Fine and congratulate her on her award.

Adjunct Faculty News

Clinic Educators of the Year

Faculty Service Award
Beginning in 2010, the University of Minnesota Alumni Association is looking to establish a stronger partnership with the Physical Therapy Program to further enrich current and future students’ U of M experience. Traditionally, the PT Program has put on the annual Jack Allison Lectureship and also a newsletter once per year. The U of M Alumni Association is challenging the PT Alumni Society, which is the specific section of the Association for PT alumni, to increase its paid membership and conduct more activities. Furthermore, they are emphasizing that such alumni activities be run not by the Program but by the PT Alumni Society. So, on behalf of the PT Alumni Society, I am urging several of you to come forward as volunteers to help establish this partnership with the larger U of M Alumni Association and a vibrant PT Alumni Society. This does not mean that all the work needs to be done by a few people. I am certain that if some leaders would volunteer, others would be glad to help out. Activities would center on increasing membership and promoting a vibrant camaraderie that ultimately would enhance the student experience. The details of how to accomplish this vision would be set by the new leadership. I urge you all to please consider this invitation. I believe it would be a fun and rewarding initiative. For further information, please contact me at carey007@umn.edu. Thanks.

Jim Carey, Program Director (Class of ’72)

Introducing: New Clinical Residency in Geriatric Physical Therapy

Our PT Program is beginning a Geriatric Clinical Residency in September 2010, and we are currently seeking applications. Clinical Residencies are growing in both number and demand across the country, as an option for post-professional training and clinical growth. Currently there are five other credentialed Geriatric Residencies in the United States. Our 12 month Geriatric Clinical Residency will provide residents extensive didactic education, clinical practice, and individual mentoring in the areas of geriatric physical therapy and issues related to aging. Clinical faculty in the residency are geriatric experts in a number of disciplines. New graduates and experienced clinicians are all encouraged to apply. Resident graduates will be prepared to sit for the GCS exam. Residents will earn a salary with benefits, and pay minimal tuition. On-site housing is also available. For an application (due March 31, 2010) or further information, please contact Residency Director, Becky Olson-Kellogg, PT, DPT, GCS at 612-624-6591 or olso0184@umn.edu.

Faculty Grants, Presentations, and Publications

Grants
The University of Minnesota Program in Physical Therapy is conducting two federally funded research studies on people with stroke. Both studies are exploring the use of external brain stimulation to help the brain reorganize in a way that promotes better recovery of hand function. One study is on adults and the other is on children 8-16 years of age. For more information, contact 612/626-6415. The Minneapolis Star Tribune did a short piece on our work in the January 13, 2010 edition: http://www.startribune.com/business/81259462.html

Glasoe, Ward M; Ludewig, Paula M; Pena, F; received a grant of $14,200 from the Minnesota Medical Foundation for the project, “Bunion and the First Metatarsal: Development of Treatment Strategies.”

Three year research grant from the Muscular Dystrophy Association titled, “A Bone-sparing Strategy for Muscular Dystrophies.” Lowe, Dawn, Nuckley, David J

Five year R01 grant from the NIH, titled, “Interaction of Estrogen, Age and Activity on Musculoskeletal Strength in Females.” Lowe, Dawn.

Journal Publication

Presentations
Paula Ludewig, PhD, PT was invited to present a keynote lecture and clinical seminar at the 3rd International Conference on Movement Dysfunction held in Edinburgh, Scotland October 30th-November 1st, 2009. The aim of this conference was to present the current available scientific and clinical knowledge on neuromusculoskeletal dysfunction, with a focus on rehabilitation, applying research and science to clinical practice. Dr. Ludewig’s talks were titled “Shoulder impingement: Biomechanical considerations in rehabilitation” and “Treatment of shoulder impingement: Targeted intervention strategies.”
The physical therapy profession has recognized the need for scientific research to develop the most effective diagnosis and treatment practices in rehabilitation, health promotion, and wellness. Students have the opportunity to work directly with faculty performing state of the art research. Each year second year students present their research at a poster day presentation. This event is held on campus and attended by faculty, and Program students.

“Improving Rhythm of Stepping with Auditory Discrimination Training: A Feasibility Study” Wangness, M., McLemore, S., Wright, M., Warneke, J., Di Fabio, R.

“Effects of Elevation Angle and Plane of Motion on the Subacromial Space” Hybben, N.M., Petersen, B., Nystrom, C., Pham, T., Camargo, P.R., Phadke, V., Braman, J.P., LaPrade, R.F., Ludewig, P.M.

“Changes in Subacromial Volume During Scapular Plane Abduction with Thoracic Extension, Scapular Retraction or Glenohumeral External Rotation” Martinez, N., Kosak, K.A., Knutson, A., Murphy, M.J., Phadke, V., Braman, J.P., LaPrade, R.F., Ludewig, P.M.

“IMRI During Individuated Finger Movements” Chapman, E., Glesne, J., Pickett, K., Kimberley, T.

“The Effects of Different Cueing on Simple vs. Choice Reaction Times During Step Initiation” Holt, S., Janus, L., Keller, S., K Kukulka, C.

“Cross-sectional Area and Fiber Type Changes in the Tibialis Anterior Fourteen Days Post Stroke in Rats” Beggs, D., Bliek, N., Hanson, E., Larson, A., Poganski, A., Ravenscroft, K., Richardson Blackwell, M., Snow, L., Thompson, L.

“Telerehabilitation to Promote Brain Reorganization and Improved Ankle Function in People with Stroke” Carey, J., Nuckley, D., Durfee, W., Deng, J., Rheude, B., Severson, A., Skluzacek, K., Spindler, K.

“Effect of Repeated Sessions of rTMS Given During an ‘Active Motor State’ in Patients with Focal Hand Dystonia” Haberman, E.M., Smith, J.C., Borich, M.R., Kimberley, T.J.


“Does rTMS-induced Inhibition of the Primary Motor Cortex Following Visuospatial Motor Skill Training Affect Performance?” Furlong, M., Holsman III, D., Borich, M., Kimberley, T.

“Contracture Properties of Lower Leg Muscles Due to Duchenne Muscular Dystrophy” Bueche, J., Conrad, M., Dittner, H., Emms, S., Flategraff, T., Fuller, S., Call, J., Baltgalvis, K., Dorsey, L., Lowe, D.


“Cross-sectional Area and Fiber Type Changes in the Soleus Fourteen Days Post Stroke in Rats” Beggs, D., Bliek, N., Hanson, E., Larson, A., Poganski, A., Ravenscroft, K., Richardson Blackwell, M., Snow, L., Thompson, L.
Call for Support

The Program in Physical Therapy at the University of Minnesota Medical School offers exceptional education and innovative research to design the physical therapy of tomorrow. We are Transforming Rehabilitation and Advancing Human Lives. From patient education, to national scientific meetings, to training med students in Niger, students and faculty are educating the world. The intellectual process of research not only creates new knowledge, it also increases students’ ability to think critically and methodically in making evidence-based clinical decisions.

The University of Minnesota Program in Physical Therapy seeks partners with a passion for exceptional education and innovative research. We request your help in raising $1,000,000 for student scholarships, student travel grants, an endowed professorship, research support, and the infrastructure for a faculty clinical practice.

Experienced staff members from the Minnesota Medical Foundation are prepared to help you identify the best way to support the Program in Physical Therapy at the University of Minnesota while meeting your own charitable objectives. To learn more about these opportunities, please contact: Michael Russell, Development Officer Minnesota Medical Foundation, 1-800-922-1663, 612-624-4429, m.russell@mmf.umn.edu.

To help support the future of Physical Therapy at the U of M, please fill out the form below, enclose your donation, and mail to:

Name: ____________________________
Address: __________________________
Phone Number: ____________________

We sincerely thank you for your continued support!