IMPACTS, the magazine of the School of Health and Rehabilitation Sciences, is published annually for alumni, friends, faculty, staff, and students.

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www.shrs.iupui.edu
Greetings from the Dean

Dear Friends,

In addition to sharing the highlights of our recent accomplishments, I am using this opportunity to invite you to partner with the school to achieve our capital campaign goals for the IUPUI IMPACT Campaign. In October 2010, IUPUI launched the public phase of the IMPACT Campaign to raise $1.25 billion to support four campus priorities - promote extraordinary student success, excel as a center for the health and life sciences, champion civic engagement, and thrive as an urban research campus.

An important feature of this campaign is that it offers donors an income matching gift program for endowed faculty chairs and undergraduate scholarships that support students participating in research, international service, service learning or experiential learning (RISE) opportunities. Chancellor Charles Bantz announced that endowment gifts received between July 1, 2010 and June 30, 2013 are eligible for the income match. Donors may fund an endowed chair at a minimum of $1.5 million and an undergraduate RISE scholarship for a gift of $20,000.

Our school’s faculty, students, and staff have created one of the most effective and highly regarded health professions schools in the nation. We view the IUPUI IMPACT Campaign as an opportunity to reach out to our friends to further confirm our collective commitment to excellence in research, scholarship, education, and patient care. The success of this capital campaign will strengthen the school’s resources for students and faculty and significantly enhance the school’s reputation. We selected support of student scholarships and fellowships as our first priority because we believe that anyone with talent, compassion, and dedication to benefit from a high quality health professions education should be able to pursue such an opportunity regardless of their economic situation.

To date, we are half way toward our goal due to generous gifts made during the silent phase of the IMPACT Campaign and recent successes in development which have laid a foundation for the school’s public phase of the campaign. We recently benefitted from three generous gifts: the Kent J. Pellerite PT Scholarship from James Pellerite, the Anita H. Slominski OT Fellowship from the Anita Slominski estate, and a gift to the Nutrition and Dietetics Department from the Arlene Wilson estate. I am deeply appreciative of these generous gifts and encourage other alumni, friends and supporters of the school to consider making their own legacy gifts. There are several options to participate in this campaign:

- naming the school
- naming a research or clinical practice laboratory
- naming a lecture series
- establishing an endowed chair or professorship
- sponsoring an annual ceremony and reception
- establishing scholarships and fellowships to support our talented students.

I invite you to discuss how you can be part of our school’s history. Together, we can explore the many giving opportunities that will align with your interests and giving capacity. Please contact me directly at 317-274-4702, aagho@iupui.edu or Dee Metaj, IU Foundation Vice President for Development at 317-274-3711, dmetaj@iupui.edu.

I know I can count on your dedication to the School of Health and Rehabilitation Sciences during this capital campaign and I believe our collective efforts will truly make an impact in the lives of our students, faculty and the future of our school.

Best Regards,

Augustine O. Agho, Ph.D.
Dean
The School’s New Undergraduate Program
Bachelor of Science in Health Sciences

In Fall 2010, the school announced that the Health Sciences Department would offer a new undergraduate program - the Bachelor of Science in Health Sciences Degree (BSHS). Since 2005, we have only offered graduate and/or professional degrees and opportunities for those interested in physical therapy, occupational therapy, nutrition and dietetics, and health sciences. Prior to the approval of the BSHS Degree, the school only offered three undergraduate certificate programs designed to provide practical work and service learning experience: Gerontology; Global Health and Rehabilitation Sciences; and Rehabilitation and Disabilities Studies. Students will continue to have the option of enrolling into these certificate programs in conjunction with the BSHS.

Students will benefit from the BSHS program because it prepares them for graduate school, and a career in health sciences. It also welcomes students who are seeking a new career choice or those who want to major in a health related field.

The future outlook for the BSHS is promising given that the program has experienced significant growth in student enrollment since its initial launch in Fall 2010. The department is excited to announce that there has been a high level of interest resulting in 151 newly admitted students for Fall 2011. In terms of future recruitment, the department plans to visit local high schools, participate in appropriate undergraduate recruitment campus events, implement an articulation agreement with Ivy Tech Community College, and also meet with health care organizations to discuss the BSHS program.

The Health Sciences Department is excited about this new program and is aggressively developing a strategy to increase student enrollment. Furthermore, the first learning community course will be held in Fall 2011; this course will be instructed by a collaborative team which includes the associate dean, a senior faculty member, and the academic advisor. The objective of the course is to ease the transition for a first time college student. Students will also have the opportunity to arrange a personalized learning program. Additionally, the BSHS program expects to host its first graduating class in Fall 2012, which will be a very rewarding experience for the students and their families. The undergraduate program hopes to maintain close bonds with the inaugural class in hopes that they will set the standard for a good alumni base and share their experience with prospective students.

The BSHS program is designed for:
- students preparing for entry and mid-level positions in health care organizations
- students planning graduate study in health professions programs
- licensed health care professionals seeking a baccalaureate degree

Three online programs allow students to earn separate certificates within the BSHS by graduation or as stand-alone certificates:
- Gerontology
- Global Health & Rehabilitation Sciences
- Rehabilitation & Disabilities Studies

BSHS academic advisor, Na’Cole Tilson, meets with a student to review transcripts and track academic progress.
For the last two years, the School of Health & Rehabilitation Sciences has been hard at work establishing a world-class physician assistant program that will complement other professional degree programs offered within the school. The proposal for the 27-month graduate program has been approved at various levels including the IU Board of Trustees and the Indiana Commission for Higher Education.

The IUPUI campus offers a unique environment to support the training of physician assistants. The IUPUI medical community includes the IU Schools of Medicine, Dentistry, and Nursing and several world-renowned medical centers in Indiana University Health, the IU Simon Cancer Center and Riley Hospital for Children.

The appointment of Gaylen M. Kelton, M.D., Clinical Professor and Founding Program Director, was a critical step toward the goal of starting the program. Prior to his appointment, Dr. Kelton served as a faculty member in the Department of Family Medicine in the IU School of Medicine for 14 years. During his tenure in the Department of Family Medicine, Dr. Kelton also served as the assistant chair of the department. He currently is the Director of IU Travel Medicine, providing pre- and post-travel consultation and country-specific advice to patients through Indiana University Health. This past year he traveled to care for patients in earthquake-ravaged Haiti and China, where he has delivered lectures in universities and consulted in teaching hospitals. He is highly involved with planning and implementing primary care education, research, and service and establishing a medical center in Honduras. Being a faculty advisor to the medical student-led alternative spring break trip to Honduras has prepared him for further involvement of IU students and residents during international rotations. He holds a Certificate in Travel Health and Medicine from University College London, and a Certificate in Travel Health from the International Society of Travel Medicine. He is a fellow of the American Academy of Family Physicians, a diplomate of the American Board of Family Medicine, and a recipient of the American Medical Association’s Physician Recognition Award.

Dr. Kelton is spearheading efforts to obtain provisional accreditation from the Accreditation Review Commission on Education for the Physician Assistant (ARC-PA), which will enable the program to enroll its charter class in May 2012. The site visit is scheduled for May 2011 and applications for admission will be considered after receiving approval from ARC-PA in September 2011. Successful applicants to this program would have a completed baccalaureate degree with a list of completed required prerequisites, as well as experience in a healthcare environment. For more information about admission to the program, please see our website at http://shrs.iupui.edu/health_sciences/degrees/physician_assistant.html.

PROPOSED PROGRAM INFORMATION
LENGTH/TOTAL CREDIT HOURS:
- 27 months/111 total credit hours
- 75 credit hours of didactic courses
- 36 credit hours of clinical rotations

PREREQUISITE COURSES:
- Biological Sciences w/lab (5 semesters): biology, human anatomy and physiology, microbiology
- Chemistry w/lab (3 semesters): chemistry, biochemistry
- Statistics or biostatistics (3 cr hrs)
- Psychology or sociology (3 cr hrs)
- Medical terminology (2 - 3 cr hrs)
- Health Promotion/Wellness/Nutrition or equivalent (3 cr hrs)
- English composition and communication or speech (6 cr hrs)

OTHER ADMISSION CRITERIA:
- Bachelor’s degree and minimum 3.0 cumulative GPA
- ‘C’ or higher on prerequisite course work
- 3 letters of reference
- Personal statement
- GRE or MCAT scores
- Admission applications and non-refundable application fee
- On campus interview
- 500 hours (paid or volunteer) direct patient experience in 2 health care settings
HEALTHY AFTER STROKE
ONGOING FACULTY COLLABORATION WITH VETERANS AFFAIRS

HEALTHY AFTER STROKE (strengthen, flexibility, and balance therapy after stroke) is a research collaboration between SHRS faculty and the Department of Veteran’s Affairs. It is funded by the Department of Veteran’s Affairs Quality Enhancement Research Initiative, and is an 8-week group yoga program for veterans with stroke designed to improve their balance and confidence to get out and about after stroke.

During the HEALTHY 8-week intervention, participants complete one hour yoga sessions twice a week with our registered yoga therapist - Nancy Schalk, R.Y.T. The primary focus is on balance improvement and a decrease in falls, so a large portion of the time is focused on flexibility and strength of the hips and ankles. All exercises begin in modified seated positions; over the following weeks the yoga postures become more challenging, and move quickly to standing workouts, using the wall for balance and stability. In the final weeks, workouts are performed seated, standing and lying. A significant amount of the time is spent on yoga postures that improve hip flexibility and overall strength, which is extremely important as it teaches how to get up from the floor in the event of a fall. Each class finishes with 10 minutes of total body relaxation; focus is placed on relaxing all areas of the body.

The HEALTHY study is approximately halfway complete, and already significant and encouraging improvements have been observed in participants who have completed the full 8-week intervention. It has been found that those who complete the intervention have significantly less fear of falling and increased quality of life. Many participants have also shown a change in their level of post-stroke disability and falls risk.

The most important aspect of HEALTHY is the time frame since a stroke incident - our program helps people who have experienced a stroke at least nine months prior, and in many cases 5 or 10 years after. This is unique as most stroke sufferers do not receive rehabilitative programming after the first six months of their stroke. Many participants have thanked us for making it available at no cost, as they have made gains and improvements when they previously believed that no further recovery could be made.

Several SHRS faculty are involved in the HEALTHY AFTER STROKE project - Department of Occupational Therapy faculty Dr. Arlene Schmid and Dr. Jeffrey Crabtree; Department of Physical Therapy faculty, Dr. Peter Altenburger and Dr. Tracy Dierks - as well as researchers from across both the IUPUI and Bloomington campuses. This study also funds Kristine Miller, PT, an alumna of the Department of Physical Therapy and current Health Sciences PhD student, as well as Amanda Gerwig, an undergraduate exercise science student. Additionally, several OT, PT, and Health Science students have had the opportunity to be involved through various research projects, assistantships, and fieldwork experiences.

Feedback from participating veterans has been very positive and encouraging:

- “Thank you for investing in our lives.”
- “This is better than all the therapy I got after my stroke.”
- “I have so much more confidence to do things I want to do.”
- “Even if you gain one thing, that one thing is very valuable - it has opened up a whole new way of thinking for me.”
- “I am so much less worried about falling.”
- “This is the best I have done since my stroke.”

These responses continue to fuel the drive for further research testing of yoga as an effective rehabilitation intervention for people with stroke.
Professor Valerie Strunk 2010 SHRS Excellence in Teaching Award

Professor Strunk is the recipient of the 2010 SHRS Excellence in Teaching Award for her role in developing and implementing the innovative Integrated Clinical Model as Director of Clinical Education in the PT Department. Professor Strunk also received the Emerging Leader Award from the INAPTA. She was the principal investigator on a funded internal grant and a co-investigator on another internally funded project. She co-authored one peer-reviewed journal publication, three published abstracts and participated in eight separate regional and national presentations - all demonstrating her excellence in teaching. Professor Strunk also offers clinical education workshops for PTs across the state.

Dr. Jeffrey Crabtree 2010 SHRS Excellence in Service Award

Dr. Crabtree is the recipient of the 2010 SHRS Excellence in Service Award for his sustained service to the school as Chair of the Promotion and Tenure Committee; under whose leadership the school’s promotion, tenure, and long-term contract guidelines for excellence were established. In addition, Dr. Crabtree provided dedicated service as the school faculty organization Vice President and President, was active in his professional organization and became a Certified Leader in The Chronic Disease Self-Management Program from Stanford University. In 2010 he published one peer-reviewed journal article as first author and presented several times in Japan.

Dr. Patricia Scott 2010 Indiana University Trustees Teaching Award

Dr. Scott is the recipient of the 2010 IU Trustees Teaching Award for demonstrating a sustained level of teaching excellence. She strives to establish a classroom environment where students develop necessary skills to defend practice decisions through scientific evidence. Dr. Scott challenges them to use creative thinking and to engage their peers and practicing clinicians to work through problems and find solutions. She also designed a way to work with IUPUI mobile technology by using an iPad as a vehicle for concept mapping to develop students’ ability to synthesize complex inter-related ideas.

Dr. Stuart Warden 2010 SHRS Research Excellence Award

Dr. Warden is the recipient of the 2010 SHRS Research Excellence Award. After establishing his research lab, he was awarded a four year National Institutes of Health grant to investigate the lifelong benefits of exercise on bone health. Dr. Warden also received funding from the IUPUI Office of the Vice Chancellor for Research Signature Center Initiative to establish the IU Center for Translational Musculoskeletal Research. These recognitions are in addition to his two ongoing research projects. In addition, he has published extensively in nine peer reviewed journal manuscripts, one book chapter and six published abstracts; three of these manuscripts are co-authored by students under his direction. He was also recently awarded the IUPUI 2011 Research Frontiers Trailblazer Award.

SHRS New Faculty Spotlight

Dr. Fengyi Kuo Clinical Assistant Professor, Occupational Therapy

Dr. Kuo joined the IU Department of Occupational Therapy in August 2010. Her teaching focus is the pediatric and young adult content of the curriculum, and applies her community based practice and international experience into her teaching. Dr. Kuo has been an invited speaker for four presentations in Taiwan and she has received a certification from the Harvard Program in Refugee Trauma. She is committed to civic engagement. Locally, she is on the Board of Directors for the Heritage Place of Indianapolis, providing older adults with coordinated human services. Dr. Kuo is also on the Advisory Board for the Burmese Community Center for Education, assisting newcomers in life skills training and tutoring in collaboration with the Tzu Chi Foundation. Nationally, she is an item writer for the National Board for Certification in Occupational Therapy. Internationally, Dr. Kuo is a 2010-2011 delegate for the Pan-Pacific and South-East Asia Women’s Association of Taiwan at the United Nations 55th session of Commission on the Status of Women. She is also on the Board of Directors for RESOURCE Foundation, Inc., which offers health care training to providers from developing and developed countries. The school is proud to spotlight her achievements and welcome her to the IU Family!
After more than 50 years of producing top-notch physical therapists who practice all over the world, it's no surprise to hear of the considerable accomplishments of our IU PT alumni such as Dr. Lynn Taylor Glass. An exceptional student during her academic career at IU and now a proven clinician, Lynn graduated from the DPT Class of 2008 and has found herself traveling the world ever since. She and her husband, an Air Force pilot, have lived on the Kadena Air Force Base in Okinawa, Japan since November 2009.

Shortly after arriving in Okinawa, Lynn became familiar with a therapeutic riding program at a local Japanese farm and impressed by the operation, began volunteering there. The program is managed by Teri Ashofteh, PT - also an IU PT alumna - who has lived and worked in Okinawa as a pediatric PT for the past nine years on the island's US military bases. In addition to managing the therapeutic riding program, Teri also provides lecture services to the Okinawa School of Rehabilitation and invited Lynn to attend a class with her.

Lynn soon received her own invitation from the school’s director, Tsukasa Yomanine, to teach a class for his physical therapy students. She was thrilled at the opportunity and prepared by reconnecting with her IU clinical education director, Professor Valerie Strunk, looking for tips and ideas. Both agreed that highlighting the differences of PT practice in the two countries would allow students from both countries the experience of looking outside their own culture and comfort zone.

Lynn lectured on the educational experience of American PTs and received help from several 1st, 2nd, and 3rd year DPT students, who provided background information and photos to their Japanese counterparts. The IU students were eager to reach out to their Japanese peers and included stories of their lives and educational experiences. Not only was Lynn’s class hugely successful, but the response from the Japanese students was overwhelming. “They were so excited to ‘meet’ some American PT students, and loved to hear about our experiences in US PT school,” she commented. PT education in Japan begins right out of high school and once complete, is equivalent to an American associates degree. After the three year program, a Japanese PT can expect little range in their scope of practice; working only in hospitals or rehabilitation units. Lynn remarked that the students were enthusiastic and extremely impressed with IU DPT students’ education. “It makes me feel very proud to know that I accomplished something great by graduating from IU, and it makes all the hard work worth it.”

“The differences between PT education and practice in Japan and the US are vast...but the underlying thread remains that PTs the world over want to make a difference in the lives of their patients.”

~ Dr. Glass
OT STUDENT ORGANIZATIONS EXEMPLIFY STELLAR COMMUNITY SERVICE

The Department of Occupational Therapy promotes student professional development and scholarship through two student organizations - the Student Occupational Therapy Association (SOTA) and Pi Theta Epsilon (PTE). Both organizations coordinate a variety of civic engagement events including annual participation in the Alzheimer’s Association Memory Walk, collecting food for Gleaners Food Bank, hosting luncheons at the Riley Hospital Ronald McDonald House, and providing event support to the Indianapolis ‘SurviveOars’ Pink Paddle Fundraising Gala for cancer awareness. “As future health care professionals, it is vital to be active within our surrounding community to both advocate for our profession and to find new venues in which we can assist individuals in need,” states Natalie Brassard, OT Class of 2011, Pi Theta Epsilon President.

SOTA members from the OT Class of 2011 (shown left), promote the OT program and profession by sponsoring regular luncheons for residents at the Riley Hospital Ronald McDonald House. These luncheons provide a unique and relaxing social event for families who have children currently being treated at Riley Hospital for Children.

Each fall, the annual food drive organized by Pi Theta Epsilon for Gleaners Food Bank of Indianapolis becomes a competition between the two cohorts of OT students, department faculty and staff. The Class of 2011 (shown right) were the 2009 and 2010 winners of this event.

OT STUDENT ORGANIZATIONS PROMOTE PROFESSIONAL DEVELOPMENT

In addition to civic engagement activities, members of SOTA and PTE attended the 2010 American Occupational Therapy Association’s National Conference and AOTA/NBCOT Student Conclave to engage in professional networking and scholarly activities. Several students from the Class of 2012 attended the event in Louisville, Kentucky (shown above).

Brian Duff of the OT Class of 2011 (shown left) won a nomination for Chairperson for AOTA Assembly of Student Delegates. Although he was not elected to the position, the nomination was a significant honor for both him and the department - he is the first IU OT student to be nominated for this esteemed student position within the AOTA.

ND STUDENT MAKING STRIDES IN NUTRITION FOR PREMATURE INFANTS

What can you feed a high risk infant? Often these infants are premature, may have medical disorders such as cystic fibrosis, chronic kidney disease or are candidates for cardiac surgery. Their kidneys are immature and have a decreased ability to concentrate urine. They require enhanced levels of nutrients, often modified to overcome digestive or absorption issues. Commercially available infant formulas do not provide nutrients suitable for these babies. A three month review of the University of Iowa Pediatric List-Serv and a survey of Registered Dietitians at Riley Hospital for Children identified the need for specialized recipes for critically ill infants. Thanks to Brooke Fenneman, a Department of Nutrition and Dietetics master’s student, help is at hand for these high risk infants. For her master's project, Brooke developed three reference tables (and an accompanying online instructional module) to provide the data and instructions necessary to develop and prepare safe, nutritionally appropriate, specialized feedings suitable for high risk infants. Brooke is a graduate of the SHRS Dietetic Internship Program, the SHRS e-learning Graduate Certificate Leadership Development in Pediatric Nutrition and will be awarded the Master of Science in Nutrition & Dietetics in December 2011. Brooke is employed as a Pediatric Dietitian at Riley Hospital for Children.

ND STUDENT INVESTIGATES THE BENEFITS OF SODIUM RESTRICTIONS

Kate Juergens, a dietetic intern, will be the first to say “Sodium is a ‘black sheep’ nutrient.” The American Heart Association and the 2011 Dietary Guidelines Advisory Committee endorse the recommendation that the general population consume no more than 1500 milligrams of sodium each day; but Kate discovered more to this story. While sodium restriction helps reduce blood pressure, there is debate about unintended consequences of sodium restriction on normal blood pressure. The Indiana Dietetic Association recognizes the importance of the topic and invited Kate to present at the Indiana Dietetic Association spring meeting April 13, 2011. Kate’s seminar explored the relationship between sodium restriction and blood pressure and addressed the following questions: Will a reduction in sodium benefit individuals with normal blood pressure? Is sodium reduction feasible? What foods are limited in 1,500 mg sodium diet? Are there risks of unintended nutritional deficiencies? This is an exceptional professional recognition for a dietetic intern at this point in her education. Kate Juergens will graduate from the SHRS Dietetic Internship Program in June 2011.
The **Lishe Bora Project**, ‘Good Nutrition’ in Swahili, evaluates the effect of protein quality and micronutrients in meat on the health and nutritional well-being of women living with HIV in rural Kenya, and the health and development of their children by means of a randomized, controlled, feeding intervention study. The project led by Dr. Judith Ernst, IU Department of Nutrition & Dietetics and Dr. Grace Ettyang, Moi University, began in 2006 with funding from USAID Global Livestock Collaborative Research Support Program, the National Institutes of Health, and the Heifer Project International (HPI). There were 228 women and 155 (122 HIV-negative) children enrolled in the study from December 2008 - June 2010. They receive medical care at a rural health clinic within the USAID Academic Model Providing Access to Healthcare partnership.

At enrollment, the women were not receiving antiretroviral drugs or sick with any infection and, with their children, were randomized to one of three nutrition biscuit supplement groups - meat, soy or wheat - for an 18-month treatment period. Directly observed treatment (DOT) workers deliver the biscuits to the participants five days each week, wait while they eat, and bring back any leftovers for weighing. The purpose of the study is to assess if additional calories and high quality protein early in the course of HIV, before the infection progresses to AIDS, keep the mothers as healthy and as strong as possible, lengthen the time to AIDS and support the growth and development of their HIV-affected vulnerable children. The median income of the enrolled families is $250 per year; they live primarily off their own land or from food donations. Hence their common diet is primarily plant based with little or no animal source foods. It is expected that nutrient deficiencies are present at baseline for the majority of the mothers and children and it is hypothesized that some deficiencies will be corrected for those who receive the meat intervention.

The mothers are very grateful for the study because they feel “healthier and stronger” and look forward to the daily biscuits. One is planning to return to school; others now have jobs; and another has purchased land and is building a house. Many are concerned about the end of the intervention phase, fearing they will lose everything that they have gained; this is noted and being addressed. From the periodic assessments, we can determine if any gains in body strength, lean body mass, immune function, quality of life in mothers and overall health and growth and development of children can be maintained in the present living environments of these families.

During the study, the mothers have become friends and joined support groups of 10-12 women per group. The goals for each group are to become registered with the local government and open a bank account. This will foster the development of sustainable initiatives, enabling them to increase their income and access higher quality food for themselves and their families. Once the groups are established, they are then able to link with non-governmental groups such as HPI and further develop sustainable initiatives such as the HPI “Passing on the Gift” program with dairy goats.

Anyone wishing to contribute to the sustainable initiatives for these groups, can make tax deductible donations online at the IU Foundation website:

**Judy Ernst Kenya Project, Acct # 032P035036**

http://shrs.iupui.edu/support/givingoptions.html#nd

Or mail to:  The IU Foundation  
P.O. Box 663802  
Indianapolis, IN 46266
The Department of Physical Therapy continues to support the Indiana Chapter of the American Physical Therapy Association's (INAPTA) in the push for direct access of physical therapy services in Indiana. Faculty, students, and alumni have participated in the significant legislative lobbying efforts this winter which included the PT Day at the State House, testimony in support of legislation for direct access, and testimony in opposition to chiropractic legislation limiting physical therapists right to use manipulation as a treatment approach.

With the January 2011 Legislative Session, physical therapists from across the state renewed the goal of acquiring direct access for Indiana - which remains one of only two states in the country that does not allow patients direct access to physical therapy services. Currently in Indiana, patients are required to obtain a physician's referral before accessing physical therapy services. To show support for the legislation, the INAPTA organized the PT Day at the State House on January 26th, 2011, providing members with an opportunity to support the legislation and meet with senators and representatives. All three academic PT programs in the state, including Indiana University, cancelled classes to allow students to attend the event. Most department faculty, students, and numerous alumni spanning several decades were present. Two members of the IU D.P.T. Class of 2009 are part of the INAPTA's Legislative Committee and played an active role in the organization. The rally was a huge success with over 500 physical therapists in attendance, speaking with legislators to increase support for our cause.

On February 16th, 2011, the direct access bill was introduced during the hearing of the Public Health Committee in the Indiana House of Representatives. Third year student, Kathy Wood Vossmer, IU D.P.T. Class of 2011, was chosen to testify on behalf of all physical therapy students in support of the direct access legislation. She did an outstanding job providing compelling testimony to highlight the limited professional growth and opportunity for graduates if our state remains limited in patient access. Legislation proposed by the chiropractic association was also presented; representatives from all three PT programs in Indiana testified in opposition including Dr. Peter Altenburger, co-chair of the IU Department of Physical Therapy. Following debate and compromise within the subcommittee, the direct access bill was approved by a vote of 9-4; and language within the compromised bill allowed for the chiropractic legislation to end. However, recent events involving right to work legislation leading to a Democratic Representatives walkout stalled the physical therapy legislation. But all is not lost, as the INAPTA hopes to attach the language to another bill for approval later in the legislative session. We remain hopeful that some form of direct access will come soon to Indiana.
SHRS Departments Continue Aggressive Research Agendas

Robotic Center now operating at full speed

The Robotic Rehabilitation Center - a collaborative effort with the IU Department of Physical Therapy, Riley Hospital for Children, and Indiana University Health - is busy with research and clinical treatments occurring daily. A multi-site study is underway exploring outcomes of the MIT-Manus shoulder-elbow robot, with 15 children now in the study, and a goal to have 30 enrolled. Treatments have also begun using the Hocoma Lokomat - a robotic system designed to enhance gait recovery, body weight support, and a treadmill. Protocols are being designed for the first study exploring gait interventions utilizing this robotic device.

This year is exciting for the center, as three new robots - wrist robot, ankle robot and upper extremity machine - will arrive with treatment and research to follow. This progress has resulted in the outgrowth of the current facility. The center has secured space in the new IU Health Neuroscience Center under construction near Methodist Hospital, which is set to open in spring 2012. The new space will be a state-of-the-art facility allowing the robotics center to serve the pediatric population of Indiana in both a research and clinical capacity. The center will move late spring to early summer of 2012.

The Robotics Center Team (Dr. Greg Wilson, Dr. Deb Hamby, Mrs. Pauline Flesch, Dr. Peter Altenburger, Dr. Tracy Dierks and Dr. Ryan Cardinal) was recently honored with the 2011 Anita Slominski CARING Award by the United Cerebral Palsy Association of Greater Indiana.

PT Osteoporosis Research Making Headway

Dr. Robyn Fuchs and her lab assistants are conducting studies in the Bone Physiology Lab to identify novel genes involved in regulating bone formation in response to exercise and pharmacological agents. The goal is to develop models to be translated to humans as a means to reduce the risk of developing osteoporosis. The research is funded by the NIH Division of the National Institutes of Musculoskeletal Research.

Dr. Fuchs also works on evaluating the skeletal phenotype of genetically modified mouse models with limb morphogenesis with collaborator, Dr. Anthony Fruilli of the Pediatric Wells Center. This has important translational applications for the human condition Saethre-Chotzen Syndrome. The research team, in collaboration with Dr. Amy Bayliss, is working on an article to be submitted for publication focused on designing effective exercise programs for individuals with and without osteoporosis; which is poised to become an invaluable resource in the development of safe and effective treatment plans.

OT Research in Alcoholism and Schizophrenia

Dr. Sandi Morzorati, the Department of Occupational Therapy’s resident neuroscientist, continues her research of animal models for alcoholism and schizophrenia. She recently received an R21 grant award from the National Institute of Mental Health. This translational project will use complementary electrophysiological (EEG) studies of patients with schizophrenia and a phencyclidine (PCP) rodent model of schizophrenia to investigate oscillatory disturbances as a potential biomarker for schizophrenia. In the PCP rodent model, an atypical antipsychotic and glycine transporter inhibitor will be used to reverse disturbances in oscillatory activity.
Exercise is recommended to improve bone health and reduce the risk for osteoporotic fracture associated with aging. However, the skeleton is most responsive to exercise during adolescence and not in later adulthood. The question is whether childhood exercise-induced bone changes persist into adulthood where they would be advantageous in reducing bone fracture risk.

Dr. Warden’s team explored this question using a novel animal model. They exercised the right forearms of young (5-week-old) rodents to increase bone size and strength, while left forearms were not exercised and used as internal controls. Following the 7-week exercise program, animals were restricted to cage activities until old age (2-years-old). Despite not exercising for a lifetime (92 weeks), the previously exercised bones remained significantly larger and stronger than contralateral non-exercised bones. This suggests that childhood exercise has lifelong benefits to bone health and that the old exercise adage of “use-or-lose-it” does not apply to the skeleton.

Dr. Warden’s animal model findings are interesting and provide preliminary evidence for the lifelong skeletal benefits of exercise during growth; however, rodents are clearly not humans. In particular, the rodent skeleton possesses several distinct physiological differences to that of humans. Consequently, it is not appropriate to assume that the phenomenon of lifelong benefit of exercise during growth also occurs in humans.

To translate their findings to humans and with the assistance of an NIH award, Dr. Warden and his colleagues are exploring bone health in the upper extremities of former Major League Baseball (MLB) players (see above photo). Like the rodent model, MLB players exercised one upper extremity during growth to induce improvements in bone health. By comparing bone health in the exercised upper extremity to contralateral non-exercised upper extremity of these high-level athletes at various times following their retirement, Dr. Warden’s team is showing that childhood exercise has lasting benefits on bone health in humans. This has implications for exercise recommendations during adolescence for lifelong bone health.
SHRS DONORS OF 2010

The school is grateful to our donors who help educate future physical therapists, nutritionists, dietitians, occupational therapists and health scientists. Whether you have made significant annual contributions, given over a long period of time, or designated the school in your estate plans, we appreciate your support! If we have listed your name incorrectly or would prefer we not list your name in future publications, please contact the SHRS Dean’s Office at kaitbell@iupui.edu.

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Development
KATHERINE WOOD VOSSMER, D.P.T. 2011

Katherine Wood Vossmer is an outstanding example of an exceptional student who has benefited from the generosity of our school’s alumni, friends and supporters.

Graduating from the University of Southern Indiana with a Bachelor of Science in 2008, she maintained a 3.97 GPA and received several awards including the Today’s Woman Scholarship, Outstanding Future Educator Award, the Dean’s Scholarship, Kiwanis Mental Attitude Award, National Fastpitch Coaches Association All-American Scholar Athlete, and was a member of the National Dean’s List, among other achievements.

She began the IU DPT program in fall 2008 and has continued to excel in academics, service, and clinical experience. Kathy is at the top of her class, has been an active participant in the Multiple Sclerosis Swim Program, volunteers with exercise prescription at a community church, and has served as a student mentor for fellow classmates. In 2010, she was awarded the Frances C. Ekstam Fellowship as well as the American Physical Therapy Association-Indiana Chapter (INAPTA) scholarship. Kathy was recently named a 2011 Chancellor’s Scholar and is a nominee for the SHRS T. Kay Carl Promise Award, the only school-wide scholarship available at our school. Kathy will graduate this May and we are proud to spotlight her as a top student at SHRS.

SAGE WEAVER, M.S.O.T. 2011

Sage Weaver is another fine example of an exceptional student who has benefited from the generosity of our school’s alumni, friends and supporters.

She has always made service to others a priority, from presiding over the local Habitat for Humanity Chapter and student council in high school, to helping out at the local veterinary office or special needs camp, she never says no to an opportunity to serve her community. After overcoming years of illness and disability, Sage set out to become an OT where she could empower people to embrace recovery, fight against allowing disability to define them, and hold on to their dreams. Graduating cum laude from the College of Wooster with a Bachelor of Science in 2009, she was a College Scholar and received the Department of Biology Honors Award in Neuroscience.

Despite many personal challenges, Sage entered the MS OT program in 2009. Since that time she has been elected by her peers as the President of the Student Occupational Therapy Association and became a member of the Phi Theta National OT Honor Society. As an advocate of the OT profession, she has understood not only the importance of appreciating movement and physical abilities but the psychological and social issues facing those challenged by illness and disease. Sage is the student ideal that we strive to recruit into the OT profession. We were happy to recognize her with both the Katherine Belzer and Carol Duke Nathan Fellowships. She is a shining example of the caliber of students graduating from our school and we are proud to spotlight her as a top student.

I am thankful to have received support through fellowships as it has lessen the financial burden of pursuing a Doctoral degree. I am thankful that the School recognizes my commitment to improving myself, the university, and my profession.

~ Kathy Vossmer

Education is a priority in my family, but with money so tight, making my dreams a reality has been a struggle. The honor of receiving the Belzer and Carol Duke Nathan Fellowships has helped me focus on opportunities for learning while in the IU OT Program. I am thankful for the generosity of the donors to these fellowships who recognize the immense value they have for me.

~ Sage Weaver
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