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Dear Friends,

Two big events this spring highlighted exciting research happening in the School of Health & Environment - one featured the work of faculty and staff and another highlighted the innovative research of our students.



We took a video camera to the student research symposium and captured short clips of the students answering why their research is important. We put them on the spot and they responded as the professionals they've become. Be sure to click on the links to the videos in the Student Research article below to hear their excitement.

About 75 of our faculty and staff came together for a day of sharing research with presentations, symposia and posters. Learning about the wide-range of research topics has already sparked collaboration among SHE colleagues. View our web site for research highlights and links to department pages with faculty bios and more details.

Congratulations to all of our 2011 graduates. On a beautiful May day, a record-breaking number of students and their families celebrated commencement. We'll be sure to include photos in our next newsletter.

All my best,

Dean Shortie McKinney School of Health and Environment University of Massachusetts Lowell

# SHE Grads Beat National Averages on Licensing Exams

Graduates in the School of Health and Environment (SHE) nursing, medical technology and physical therapy programs have achieved consistent above-average pass rates on board examinations they must take to practice in their fields.



"I am proud of the excellence of our graduates that has resulted in high pass rates on licensure and certification examinations, especially in comparison to the pass rates of other university programs within the region and across the nation," says Dean Shortie McKinney of the School of Health and Environment.

Read more of the eNews story.



# High-Tech Bus Puts Students on Road to Nursing

What better way to get high school students excited about the nursing profession than to give them hands-on experience?

UMass Lowell nursing faculty is taking this idea on the road in the form of a 34-foot bus that is home to two realistic mannequins - birthing mother

"Noelle" and newborn "Hal." By simulating functions of the human body such as breathing, crying, talking and assuming medical conditions, the high-tech mannequins offer students a fun and intriguing way to find out if the nursing profession is for them.

<u>Read more of the eNews story</u> and view photos of the bus and high-tech mannequins in the photo gallery.

# Man's Best Friend Key to Improved Health

Deirdra Murphy and Cynthia Ferrara are partners on a \$175K study to increase the activity of dog owners in Lowell and Worcester.

Regular dog walkers tend to be healthier than non-dog owners. But not all dog owners walk their dogs. A new collaborative study by UMass Lowell and UMass Medical Center hopes to

change that by finding ways to get all dog owners moving.



The alarming rise of obesity in the United States - along with obesity-related illnesses such as, diabetes, cardiovascular disease and arthritis - is driving health-care providers and researchers to find innovative ways to motivate people to increase physical activity. Targeting dog owners presents a huge opportunity for improved health since 39 percent of all U.S. households own at least one dog, according to the U.S. Humane Society.

Read more of the eNews story.

#### SHE Student Research Videos & Presentations

School of Health & Environment students were well represented at the University's Student Research and Community Engagement Symposium in April. The research featured studies about measuring stress on athletes, examining the relationship between chemicals and weight gain and improving symptoms of anxiety and stress among kids with autism.

Listen to the interviews of students on the SHE student research page and hear in their own words why their research will make a difference in people's lives.



Rebecca McCabe and Amanda Lopes studied how exercise reduced stress and therefore symptoms of anxiety among autistic children.



Jennifer Gonzalez studied the how endocrine disrupter chemicals effect weight.



Laura Donigian studied biomarkers of stress among student athletes.



Nutritional Sciences major Stephanie Tasiopoulos talks about her internship at Lowell General Hospital.

#### **Community Engagement Projects**

The symposium also featured community engagement activities that gave students an opportunity to highlight their service learning projects. SHE students in all departments presented 17 posters in the categories of service learning, volunteering and internships. See the projects at this web site.

# Nursing Will Have a New Home in 2012

UMass Lowell recently broke ground on the new \$40 million, 69,000square-foot Health and Social Sciences Building that will be home to three of the university's most popular majors in health and social sciences - criminal justice, nursing and psychology.

"The students who will study in this new building will help advance a vibrant society," Chancellor Marty
Meehan said. "So many of our students are committed to making a difference, both while they are here and after they graduate. They help our celebration. communities thrive. We salute our students and the faculty who inspire them."

Read more of the eNews story.



Dean Shortie McKinney, Chair of Nursing Karen Devereaux Melillo, Prof. Jackie Dowling and student Djwan Scott participated in the groundbreaking celebration.

### Student News

#### **PT Students Present in Turkey**

Physical Therapy students Emma Barnard and Erin Reusch, along with Assistant Prof. Deirdra Murphy traveled to Istanbul, Turkey in June to participate in a workshop on assistive technologies. In preparation, students Scott Dery, Benjamin Kim, Emma and Erin discussed assistive technology



methods this spring with students from Yeditepe University in Istanbul.

Emma and Erin presented alongside the students from Yeditepe at the US-Turkey Collaborative Effort in Advancing Assistive Technology-based Education State of the Art Research workshop. They will discuss the cultural and social differences impacting the implementation of assistive technology and how the two different physical therapy programs prepare students to manage patients with disabilities in their respective communities. The workshop is funded by the National Science Foundation in collaboration with UMass Lowell engineering faculty and students.

#### **Students Learn at Clin Lab Conference**



Senior Medical Technology students attended the 25th Northeast Region Conference and Exhibition, a joint meeting of Clinical Laboratory Management Association, the New England Clinical Ligand Assay Society and the American Association of Clinical Chemistry. Also attending from the department of Clinical Laboratory and Nutritional Sciences were Mahdi Garelnabi, Donna Rogers and Nancy Grandbois. Education

sessions at this meeting included topics such as Bioterrorism and the Laboratory, Laboratory Management, Quality and Safety and Immunoassay.

#### **Intern Learns About Toxics Use Reduction**

A graduate student in the Department of Regional Economic and Social Development, Jason Gresci is interning at the Toxics Use Reduction Institute for his Master's capstone project. One of Jason's projects is to create a report about reproductive and development toxicants, using data submitted by Massachusetts companies under the Toxics Use Reduction Act.

# Students Help to Prevent Falls of Elders

Second-year physical therapy students Marielle Jensen-Battaglia and Nicholas Jarjoura, along with Assistant Prof. Erika Lewis presented a Fall Risk Reduction program to the



Jason Gresci leads a discussion at the TURI Community Conference.

Chelmsford Senior Center and the Lowell Senior Center through the Council on Aging. The program is designed to educate and train aging adults to use a checklist to self-assess fall risk in their homes. The presentation will included Tai Chi exercises for reducing the incidence of falls. The students received a Merrimack Valley Sandbox Campus Catalyst \$500 grant award from The Desphande Foundation in support of this project.

#### **Students Present Immunology Posters**

For the third year, the junior Clinical Laboratory Sciences class presented their immunology posters at the annual convention of the American Society for Clinical Laboratory Sciences, Central New England chapter, held in Providence, Rhode Island. A requirement of the presentation was that the students join the organization and attend the conference.

#### **New Men in Nursing Group Established**

Of the 619 nursing students at UMass Lowell, 54 are men, placing the Department of Nursing's male student population well above the national average of 6 percent. Two Nursing students, Matt MacDonald, RN, and Jason Hebert led the effort to establish a campus-based student organization, UMass Lowell Men in Nursing. The purpose is for male nursing students to network, offer support in professional advancement and meet each other socially.

The students recently established a



Alan Costa, Matt MacDonald, Chair of Nursing Karen Devereaux Melillo, Prof. Geoffry Phillips McEnany and Jason Hebert.

campus-based chapter of the American Assembly for Men in Nursing (AAMN), a national organization. Prof. Geoff Phillips McEnany is the faculty advisor for the group.

# **Students Design Fitness Program for Older Adults**

Doctor of Physical Therapy students Megan Brady, Meghan Ierardi and Mike Pruett collaborated with faculty and students in Psychology as part of a five-campus UMass Learn and Serve grant to improve the health of senior citizens.

Psychology students and faculty met with the seniors Senior citizens at the Francis to discuss exercise and a feeling of community and the Gatehouse participated in exercise physical therapy students used the feedback to design sessions designed by physical an exercise program for the group at the Francis Gatehouse.



therapy students.

They learned about the importance of physical activity and relationships on their health. This program was met with great success and provided an ongoing opportunity for members to adopt an active and healthy lifestyle with community support.

### Community Groups Look to Hire Students

They came from Boston, Winchester, Salisbury and Lowell more than 30 organizations visited campus recently to recruit community health students for internships. Community Health majors are required to work 32 hours a week during senior year to gain work experience.

"Learning by doing is a priority of the community health program throughout the curriculum," says event organizer Assoc. Prof. Nicole Champagne of the Community Health and Sustainability Department. "Building on that, the senior-year internship offers students a substantial opportunity for professional development and networking that will position them for success in the job market."



Jimmy Le and Sabrina Lozandieu search for jobs at the community internship

Read more of the eNews story.

# **Fulbright Scholar From Maldives Chooses UMass** Lowell

When Shaheed Mohamed, a graduate student in the Department of Clinical Laboratory and Nutritional Sciences, told his instructor, Prof. Alease Bruce that he was returning home for the holidays and that it would take him two



days to get there, she asked where he was headed.

To her surprise, Shaheed answered, "I'm from Maldives." Maldives is the smallest of the Asian countries in population and land area. It is an island nation comprised of 1,190 islands in the Indian Ocean of which about 200 are inhabited. Shaheed returned to Male, the capital and largest city on the North Male Atoll.

How did Shaheed find out about the Master's in Clinical Laboratory Sciences here at UMass Lowell? He found the program on the Internet. He completed his undergraduate degree from Curtin University in Australia with a major in Medical Sciences in 2006 and worked in the Indira Gandhi Memorial Hospital in Maldives as a clinical laboratory scientist from 2006-2010 and at the Maldives College of Higher Education as a visiting lecturer from 2008-2010. He had known Boston to be a great vibrant academic center so he was familiar with the region.

Why did he choose UMass Lowell? Shaheed said that "UMass Lowell is one of the few universities across the U.S. offering a Master's program with a strong emphasis in Clinical Laboratory Sciences. I like the way the professors teach and communicate here. There is a line of connection between the teacher and student."

Upon completion of his Master's degree, Shaheed plans to pursue a career in health care as well as in academia. The department is proud to have had Shaheed from the flagship international exchange Fulbright Scholars' Program.

# High School Students Qualify for State Science Fair

Two juniors from Methuen High School worked with Assistant Prof. Nancy Goodyear in the Department of Clinical Laboratory and Nutritional Sciences on a science fair project titled *Fighters of Foul Bacteria*.

Bansari Patel and Katisha Bellegarde (in photo) tested a variety of toothpastes for their ability to kill bacteria found in the mouth. In order to perform the experiments,



they arranged to work with Nancy Goodyear in her research lab in Weed Hall in the evenings.

They tested Aquafresh, Colgate, Crest and Tom's of Maine toothpastes for activity against bacteria swabbed and cultured from the back of Katisha's tongue. Their experiments showed that Aquafresh, Colgate, and Crest inhibited all bacterial growth, but Tom's of Maine allowed a small number of bacteria to grow. Their project placed 4<sup>th</sup> at the Methuen High School Science Fair, and 35<sup>th</sup> at the Massachusetts Region IV Science Fair which qualified them to compete in the State Science Fair held at MIT in May.

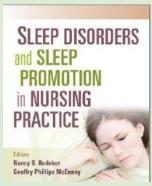
### Grant to Fight Childhood Asthma Epidemic

Prof. Susan Woskie of Work Environment is co-investigator in charge of environmental assessment for a federally-funded \$425K project aimed to fight childhood asthma. Fred Youngs is the home environment assessor and Rebecca Gore is the statistician.

Read about the project in the eNews story <u>"Federal Grant to Fund Asthma-Prevention</u> Efforts."

### Staff & Faculty News

#### **New Book**



Prof. Geoffry Phillips McEnany of Nursing co-edited the book *Sleep Disorders and Sleep Promotion in Nursing Practice*. This work presents the latest scientific evidence on health promotion, prevention, and treatment for sleep and sleep disorders.

The graduate textbook and reference guide provides strategies for promoting normal sleep, caring for disordered sleep and supporting sleep in health care settings.

#### **Presentations**

**Prof. Alease Bruce** attended the Society for College Science Teachers' Conference held during the 2011 National Conference on Science Education in San Francisco in March. She presented research on the "Pedagogical Approach to New Technology Introduced into a Classroom."



Murphy, D., Hillier A., Ferrara, CF., Baltisberger, N., Lopes, A., McCabe, R., Collins, S.M. **Effects of Exercise on Heart Rate Variability, Cortisol, and Stress on Young Adults With A Diagnosis Of Autism Spectrum Disorder.** *World Physical Therapy 2011,* Amsterdam, Holland, June 20- June 23, 2011. The aim of this study was to assess the effect of an 8-week physical exercise and relaxation intervention on stress, as measured by heart rate variability, cortisol, and self-report anxiety measures in adolescents and young adults on the autism spectrum. This presentation is a faculty-student collaborative research report poster.

Murphy, DA, Stanley, A. **Moving a Community to Better Health**. CU (Community University) Expo 2011. Waterloo, Canada, May 10-14, 2011. The purpose is to share the

story of a diverse urban community's effort to improve nutrition and physical activity for residents through community-university partnerships as a storytelling presentation.

Knight, M., Coakley, C., Ravishandrin, C., Marhefka, J., Teeter, C. & Melillo, S. **Pro Re Nata Medication Administration in a Psychiatric Inpatient Setting**. Poster presentation at McLean Hospital's Research Day.

Teter C., Melillo S., Onger D., Coakley C., **Knight M.** (2010, April). **Pronounced and sustained tachycardia associated with the use of atypical antipsychotics during inpatient hospitalization.** Poster presentation at McLean Hospital's Research Day.

Phillips McEnany, G. **Sleep & Its Relationship to Health and Disease.** Grand Rounds presentation at the Veterans Administration Medical Center.

#### News



**Assistant Prof. Mahdi Garelnabi** of Clinical Labs was inducted as a full member of Sigma Xi at the banquet of the UMass Lowell Chapter.

From left, Mahdi Garelnabi, Inductee with Full Membership; Patrick Scollin, Former Secretary, Vice President and President; Mary Elizabeth Hooker, Councillor-At-Large; and Robert Tamarin, Presiding President, UMass Lowell Chapter, Sigma Xi and Dean Of Sciences.

**Prof. Kay Doyle** was recently elected Chairperson of the American Society for Clinical Pathology (ASCP) Communications Committee that oversees the Society's global outreach promotion, including all print, electronic, television and radio media outreach and coverage. The committee provides input on print and electronic publications such as Critical Values, Laboratory Medicine, and e-NewBriefs, career promotional materials and presentations and exhibits at the American School Counselors Association, the National Association of Biology Teachers and the National Science Teachers Association annual meetings.

**Professor Mary Elizabeth Hooker**, Department of Clinical Laboratory and Nutritional Sciences, served this year, as she does annually, as a judge in the field of Biology and the subfields of Botany, Microbiology, Ecology, and Evolution at the 2011 Massachusetts Region IV Science Fair that was held at Somerville High School in March. This competition serves as a qualifier for the Massachusetts State Science and Engineering Fair that is held at M.I.T.

#### **Publications**

SugE, a New Member of the SMR Family of Transporters, Contributes to Antimicrobial Resistance in Enterobacter cloacae, Antimicrobial Agents and Chemotherapy, Gui-Xin Hea, Chu Zhanga, Robert R. Crowb, Conner Thorpea, Huizhong Chenc, Sanath Kumarb, Tomofusa Tsuchiyad, and Manuel F. Varelab.

Lewis, E. Longitudinal Assessment of Emotional Intelligence in Doctor of Physical Therapy Students. The Internet Journal for Allied Health Sciences and Practice. April 2011.

Volume 9 Number 2.

Gerdner, L.A. & Remington, R. (2010). **Therapeutic effects of music in people with dementia.** In D. Ames, A. Burns & J. O'Brien (Eds.) *Dementia*. Hodder Arnold: London.

Knight M. (2011). Access to mental health care for older adults. *Journal of Gerontological Nursing.* 

Nursing students Stefanie Satryb and Tommy Wilson authored this article with Assistant Prof. Miki Patterson for their senior year, **Casting All Wrapped Up**, *Orthopedic Nursing Journal*, January/February 30 (1).

Bello A, Quinn MM, Perry MJ, Milton DK. **Quantitative assessment of airborne exposures generated during common cleaning tasks: a pilot study.** *Environmental Health*.

Nobrega S, Champagne NJ, Azaroff LS, Shetty K, Punnett L. Barriers to Workplace Stress Interventions in Employee Assistance Practice: EAP Perspectives. *Journal of Workplace Behavioral Health.* 

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