



Jimmy Mathews, left, and Gary Burke stand on the PRT tram guideways at Duke University Hospital. The two Medical Center Engineering & Operations workers have worked on the Personal Rapid Transit system since its design and construction in the 1970s. To make way for hospital expansion, the PRT section between the North and South hospitals will close on Oct. 15. PHOTO BY MARK SCHREINER

30 years on the PRT

By Mark Schreiner

They were there before the beginning, and now they'll be there after the end.

But let's not get ahead of ourselves.

This story is about Jimmy Mathews and Gary Burke.

They work in a tidy shop in a lower level of Duke University Hospital. There, as they have for three decades, they and their col-

leagues keep the hospital's unique PRT system going.

After 30 years, they say they are still impressed by the technology of the system, parts of which are similar to the machine that put Neil Armstrong and Buzz Aldrin on the moon in 1969, and whose full name is Personal Rapid Transit.

Mathews and Burke know that the PRT's departure is needed to

see PRT, p.12



See map on p. 13 for alternative methods of transportation



Biologist wins three big awards in one month

Chay Kuo, M.D., Ph.D., assistant professor of cell biology and pediatrics at Duke University Medical Center, has won three prestigious awards in one fell swoop. His cutting-edge, noteworthy progress in stem cell research is the reason that three different organizations – the National Institutes of Health, the Sontag Foundation and the Packard Foundation – called him with good news this month.

"Chay is a remarkable physician-scientist whose work reveals secrets of neural stem cells, offering hope for children born with brain injuries," said Duke School of Medicine Dean Nancy C. Andrews, M.D., Ph.D.

"The Cell Biology Department is very proud of Chay and his achievements," said Brigid Hogan, Ph.D., chair of the Department of Cell Biology. "He is a wonderful example of how scientists doing basic research at Duke are working hard to build bridges to clinicians dealing with the most heartbreaking medical problems. The innovative ideas of our young faculty like Chay, in combination with the most advanced technologies for real-time imaging and screening, are pushing the envelope of discovery research at Duke."

"My job as a scientist is to tackle difficult questions and see how they will advance the field of neurological disease research in the coming years, and these awards will give me the resources to explore promising avenues and advance findings more quickly," said Kuo. "The awards are stunning and unexpected developments for my new laboratory, because this time last year I was a post-doctoral researcher. None of this would have been possible without the generous support from the Jean and George Brumley, Jr., Neonatal and Perinatal Research Institute, the Duke Stem Cell and Regenerative Medicine program, and the see KUO, p.8

INQUIRY

Race-based health

"After all, genetically speaking, I am about 99 percent the same as anyone else," writes Susanne Haga on **Page 10**



BENEFITS

Open enrollment

The time to sign up for health coverage and other benefits is here. Information sessions are planned to help you. **Page 14**

CALENDAR

Lace up your shoes

The Start! Heart Walk is Oct. 19, and the Duke Medicine team needs you. **Page 3**

INSIDE SCOOP

Vehicles old and new

This month, Inside Duke Medicine sports part two in Mark Schreiner's series of stories about the PRT tram, the pilot-less people mover that's connected Duke University Hospital's North and South buildings for the last 30 years.

Read his profile of the dedicated technicians who have kept the PRT running, and be sure to study the map on Page 13 to understand the transportation alternatives that will be in place on Oct. 15.

While that's been in works, here in the Internal Communications office, we've been working off a roadmap of our own for the last year.

For nearly 20 years, this newspaper has been the primary vehicle for sharing the institution's news and stories. But information moves faster now and a monthly newspaper can't fully cover the "river of news"

We're online!
inside.dukemedicine.org

that flows through this institution. Try writing down every piece of information you see or hear over the next few days – every patient story, research announcement, employee award, policy update and benefits wrinkle – and you'll understand the challenge.

We wanted to create an effective and efficient way for employees to monitor all that news flowing by.

So our roadmap has included

diligently engineering (like our cover subjects Jimmy Mathews and Gary Burke have done with the PRT) a new communications vehicle to complement the printed newspaper.

The result is Inside Online. We hope you'll make it a habit to visit <http://inside.dukemedicine.org> each and every day.

It is a daily news Web site designed to reflect – in a timely and interactive manner – more of the employee stories and news you can use. See page 16 for a screenshot and more.

Your pilots for this online communications vehicle include Web editors Erin Pratt and Bill Stagg. Use the Contact Us form to alert them to interesting items for the site.

With your help, we'll keep each other moving together into the future.

– Anton Zuiker

BY THE NUMBERS

Men in nursing

Women continue to outnumber men in the Duke University School of Nursing, but men are closing the gap. In fact, DUSON is seeking to launch a chapter of the American Assembly for Men in Nursing. An application has been submitted to AAMN. Here's a look at the latest numbers from DUSON:

Men make up:

- 16% of all faculty
- 18% of all staff
- 18% of the cohort most recently admitted to the accelerated bachelor of science in nursing (ABSN) program (Up from 6% in the previous group.)
- 23% of the spring 2008 master of science in nursing (MSN) cohort (Versus 12% in spring 2007.)
- 27% of nursing school Ph.D. students
- 38% of core ABSN faculty, including the assistant dean for undergraduate education



ON THE WEB

Highlighting the best health, science and employee news from Duke Web sites

INSIDE ONLINE



PHOTO BY BILL STAGG

Scrubs scrub

Amanda Rankin-Swentor prepares for her annual cleaning and waxing of the 65th General Hospital War Memorial between the Morris Clinic building and the School of Nursing near Duke South. See this and other daily pictures at Inside Online.

<http://insidedukemedicine.org/home/2008/09/18/statue-cleaning/>

RESEARCH

M.U.R.D.O.C.K.

Duke's massive Kannapolis-based research project now has its own web site; register to participate in the project's human health and disease research studies.

<https://www.murdock-study.com>

TOOLS



SlideRocket

A slick new online tool for creating and sharing slideshows and presentations.

<http://www.sliderocket.com/>

INSIDE VOLUME 17, ISSUE 10

Inside Duke Medicine

Inside Duke Medicine, the employee newspaper for the Duke University Health System, is published monthly by Duke Medicine News & Communications.

Your comments, story ideas and photo contributions are always welcome and appreciated. Deadline for submissions is the 15th of each month.

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Duke University Health System

CALENDAR

October

Your insider's guide to what's happening at Duke Medicine

learn



Oct. 1 12:15-1:05 p.m.

Meeting Emerging Challenges: Global Health at Duke with Michael Merson, director of Duke's Global Health Institute. N.C. College of Veterinary Medicine, 4700 Hillsborough St., Raleigh

Oct. 2 12-1:30 p.m.

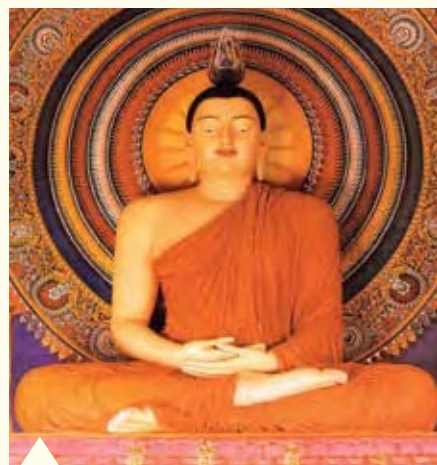
Spirituality, Theology & Health Seminar: New Directions in Research on Religion and Health Behaviors. Christopher Ellison, Ph.D., professor at the University of Texas at Austin, will discuss how religious networks—within family and household, personal communities, and congregations—affect health behaviors. Medical Center Board Room 1170B

Oct. 2 6:30 p.m.

University Seminar in Global Health Stephen Lewis will talk about the HIV/AIDS disease burden on women in Africa. He will also discuss how education access is a means to obtain better health outcomes for women. Sanford Institute. Free parking across the street in the Pickens Clinic lot.

Oct. 10 6:30-8 p.m.

Identity Theft Prevention with financial counselor Cassandra Taylor. Teer House. **Details: 416-3853**



Oct. 14 6-8:30 p.m.

Nature of the Mind: the first of three sessions. Duke Integrative hosts Geshe Chongtul Rinpoche of the Menri Monastery. Explore ancient Tibetan teachings from a lama who has earned the highest level of education in Tibetan philosophy. Learn how meditation can bring peace and stability to your mind. Center for Living Campus. **Details: <http://dukeintegrativemedicine.org>**

Oct. 15 12 p.m.

Regulatory Networks in Health and Disease: "Tipping Iron Balance" with Dean Nancy Andrews, M.D., Ph.D., 103 Bryan Research

Oct. 15 6-8:30 p.m.

Compassion and Love with Geshe Chongtul Rinpoche: the second of three sessions. Compassion and love are essential tools for releasing stress, anxiety, and confusion. Learn how they can bring stability to your life and be the best medicine for happiness and health. Center for Living Campus. **Details: <http://dukeintegrativemedicine.org>**

Oct. 16 5:30- 7 p.m.

Healthy Joints: Comprehensive Approaches to Pain-free Movement A free seminar presented by Janet Shaffer, licensed acupuncturist, Tracey Moon, massage therapist, and Shelley Wroth, M.D. Duke's Center for Living, Integrative Medicine Bldg., room AB. Register: **416-3853**.

Oct. 16 6-8:30 p.m.

Cultivating Body, Speech, and Mind Energy with Geshe Chongtul Rinpoche: the last of three sessions. Generating peaceful and healthy energy is largely dependent on the interconnectedness of the body, speech, and mind. Center for Living Campus. **Details: <http://dukeintegrativemedicine.org>**

Oct. 17 5:30 p.m.

Don't let Injuries Slow You Down Ann Marie Husk, P.T., will discuss common walking and running injuries, tips for prevention, and treatment suggestions. Alumni Box at Wallace Wade Stadium. **Details: <http://www.hr.duke.edu/runwalk/education>**

do



Oct. 2 4-5:30 p.m.

Founders' Day Convocation Founders' Day celebrates the founding of the university and provides an opportunity each year for the university to reflect on its history and heritage and to recognize major contributions by students, faculty, administrators, employees and alumni. Open to the public. Duke Chapel. **Details: 684-2641**

Oct. 15 10 a.m.-2 p.m.

Feel Like a Million Health Fair sponsored by LIVE FOR LIFE. More than 35 health representatives will be available to answer questions and free health screenings will be offered. Other free services include:



The 2008 Start! Triangle Heart Walk takes place on Oct. 19. Details below.

ILLUSTRATION BY VANESSA DEJONGH

flu shots and information about gym discounts and smoking cessation programs. Durham Regional Hospital, First Level Classroom. **Details: 684-3136 (option 1)**

Oct. 29 9:30 a.m.-3 p.m.

Feel Like a Million Health Fair sponsored by LIVE FOR LIFE. More than 35 health representatives will be available to answer questions and free health screenings will be offered. Other free services include: flu shots and information about gym discounts and smoking cessation programs. Duke Medical Center, Searle Center. **Details: 684-3136 (option 1)**

give



Oct. 19 2-4:45 p.m.

2008 Start! Triangle Heart Walk Duke Medicine steps out in the fight against heart disease and stroke, the nation's No.1 and No.3 killers. The event includes a

1 and 2.5 mile walk. The Create Hope, Inspire Change, and Celebrate Success areas will: pay tribute to lost loved ones, honor survivors, encourage behavior changes, highlight successful fundraising efforts, and celebrate individuals and companies that have made changes to lead a heart-healthy life. Imperial Center in RTP. **Details: <http://www.starttriangle.org>**

How to submit:

Send calendar listings to **editorinside@mc.duke.edu**

Want more info?

Visit us online at **<http://inside.dukemedicine.org>**

The Calendar is a monthly selection of events that feature the best of happenings at Duke and Duke Medicine.

AT A GLANCE

"It is often thought that medicine is the curative process. It is no such thing. Nature alone cures. What nursing has to do is to put the patient in the best condition for nature to act upon him."

– Florence Nightingale (1820-1910)

INSIDE JOKE



IT FIGURES

438,527

Units of care provided by the Duke Department of Physical Therapy & Occupational Therapy in the 2008 budget year; that averages out to more than

8,433 each week.

Source: Department of Physical Therapy & Occupational Therapy

Read about the department's work to ease one long-time PT patient into independence at college at <http://inside.dukemedicine.org> – search for "Dennos"

SUPPORT

GME fund marks a milestone

By Bill Stagg

Duke University Health System marked the first year of its GME innovation fund at a Sept. 10 celebration at the John Hope Franklin Center. The fund's goal is to allow program directors, faculty and trainees to develop sustainable short-term initiatives to enhance Duke's learning environment and contribute to quality patient care. In all, 25 of 26 proposals were approved in the first year covering 13 departments. First-year funding averaged more than \$67,000.

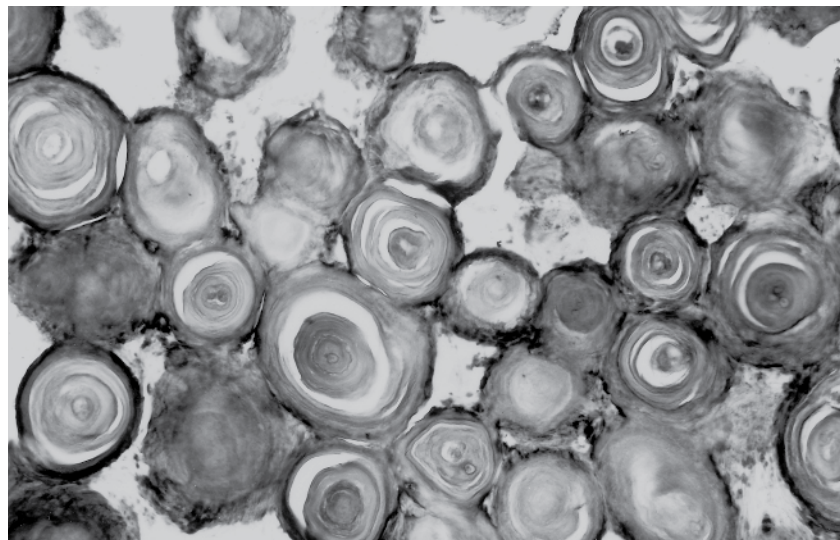
Proposals for future funding are due by Jan. 1, 2009, for grants of \$50,000 to \$100,000 a year for three years, with the option to reapply for an additional three years. For application guidelines, go to the GME Web site <http://www.gme.duke.edu>.

The GME funding has been well-received. A survey found that more than 80 percent of those who received money said they would not have been able to do their project without the support. Many cited benefits ranging from increasing interest in medical education and allowing for collaboration, to enhancing programs with technology and making learning easier, convenient and more fun.

The celebration featured comments from Chancellor for Health Affairs Victor J. Dzau, M.D.; Vice President for Medical Affairs Michael Cuffe, M.D.; and GME Director John Weinerth, M.D.

It also featured presentations by funding recipients David Tanaka, M.D., on improving residents' resuscitation skills; Michael Haglund, M.D., on the Duke neurosurgery innovation grant; and Suzanne Woods, M.D., on promoting individualized learning plans for internal medicine residents through advancement of the advising process.

PICTURES



What could this be? Find the answer below.

Microscope preserved

After more than 40 years on the job, the workhorse Zeiss Ultraphot II Photomicroscope that took this intriguing image is being retired.

The microscope, purchased for \$10,500 in 1966 (about \$70,000 in 2008 dollars), was donated to the Duke University Medical Center Library's Collection of Historical Medical Instruments by the Department of Pathology in a ceremony held Oct. 1. PhotoPath



supervisor Susan Reeves said about the microscope:

"There is an element of this machine and its history that transcends the physical and quality attributes. It represents an era where human interaction and craft were appreciated and required."

The image, by the way, is of psammoma bodies, which are round collections of calcium seen in some tumors. The term derives from the Greek word psammos, which means "sand." ■

BULLETINS

News briefs, notices, events, and the IDM Book Club

RANKINGS

Duke 8th among best U.S. hospitals

For the 19th year in a row, Duke University Medical Center has been named as one of the top 10 U.S. hospitals in the annual *U.S. News & World Report* best hospital edition.

Duke dropped one place from its 2006 and 2007 overall ranking to tie for eighth place overall with Brigham and Women's Hospital in Boston. Duke had seven top-10 rankings in the specialties measured.

Duke is the only hospital in North Carolina and the Southeast ranked in the top 10.

EFFORTS

Duke and Durham: Supporting the community

This year, Duke will introduce "Doing Good in the Neighborhood," a campaign to help support needs in our community.

In addition to giving through the United Way, faculty and staff will also have the option to give to a host of local agencies supported by the Duke-Durham Neighborhood Partnership and Duke University Health System.

It's online!

Because no administrative fees are deducted, 100 percent of your contribution goes directly to these neighborhood agencies. The campaign begins Nov. 3

In the meantime, go to <http://inside.dukemedicine.org> and search for "neighborhood partnership" to see the impressive list of contributors and volunteers who made the 2008 Duke-Durham Campaign a record-setting success.

HONORS

Duke Raleigh named among the best

Duke Raleigh Hospital was named one of the "100 Best Places to Work in Healthcare" by Modern Healthcare magazine.

"We are extremely proud for Duke Raleigh to receive this national recognition," said Doug Vinsel, chief executive officer of Duke Raleigh Hospital. "It reflects the collaborative efforts across our organization to continually seek ways to better serve our employees, all who work to provide the best care to our patients every day."

The complete list will be published in a special supplement on Oct. 27. A gala will also be held to honor this year's winners in Chicago on Oct. 29.



■ IDEAS

Hand hygiene pays off

The recent observation of Clean Hands Week acknowledged the powerful simplicity of washing away germs. Hand-washing is easy and saves lives.



Here are some hand-hygiene tidbits from the Centers for Disease Control and Prevention.

Hand hygiene should be done before and after each patient contact, and can be accomplished by either washing hands for 15 seconds with hospital-approved soap and water or by use of a waterless hand sanitizer.

Gloves do not eliminate the need for hand hygiene. Likewise, the use of hand hygiene does not eliminate the need for gloves. Gloves reduce hand contamination by 70 percent to 80 percent, prevent cross-contamination and protect patients and health care personnel from infection. Hand hygiene should be done before and after each patient contact just as gloves should be changed before and after each patient contact.

When using an alcohol-based handrub, apply product to palm of one hand and rub hands together, covering all surfaces of hands and fingers, until hands are dry.

Health care personnel should avoid wearing artificial nails and keep natural nails less than one quarter of an inch long if they provide any "hands on" patient care at Duke.

Alcohol-based hand rubs take less time to use than traditional hand washing. In an eight-hour shift, an estimated one hour of an ICU nurse's time will be saved by using an alcohol-based handrub.

■ OPPORTUNITIES

Bereavement Council seeks new members

Are you interested in bereavement issues? Duke Hospital's Bereavement Advisory Council (BAC) is seeking new members.

BAC is a multidisciplinary committee that works closely with the Bereavement Services coordinator on developing programs for patients, families, and staff in areas of grief, loss, death, and dying.

Did you know that the BAC works with the Bereavement Services coordinator to sponsor hospital-wide services of remembrance, bereavement follow-up programs, and an educational series entitled Conversations?

What ideas might you have to enhance our bereavement work at Duke?

New members will serve three-year terms beginning in January 2009. The council meets monthly and strongly encourages members to have the support of their supervisor and department prior to making a commitment.

Applications will be accepted through Nov. 21. Questions can be directed to Rebecca McIntyre at mcint017@mc.duke.edu or, Joanna Parker at joanna.parker@duke.edu.

New nurse in the ICU



First-year nurse Brian Hooker pauses in the PICU. PHOTO BY MARK SCHREINER

Brian Hooker, RN, will soon mark his first year on the job as nurse in the pediatric intensive care unit at Duke University Hospital. Here he reflects on what it was like to go from the classroom directly to intensive care nursing.

By Brian Hooker, RN

Exams and essays every week. Skits and hospital crisis situations to study. Drug dosages and their mechanisms of actions to memorize.

Nursing school was no joke; in fact, at the time I could have sworn it was the hardest thing I had ever attempted.

But textbooks don't bleed. Skits aren't real. Flashcards aren't at the tips of my fingers anymore now. I'm a brand new nurse working in the intensive care unit.

It's a circle. You work yourself from beyond the outside in, leaning on experienced preceptors and nurse managers. I received an overwhelming amount of support from former nurse manager Kristi Ryan and my preceptor and mentor Sue Parrish, an experienced PICU RN. Sue often tells me that the first year in the ICU is just like school; after work you must go home and study everything that was new to you that day.

First comes the responsibility of learning how to be safe, such as learning safety checks and what supplies and alarms need to be set up in the event of an emergency. Then come simple tasks, such as turning patients and monitoring their vital signs. More complex tasks – drawing frequent labs, understanding what lab values mean, and communicating with the health care team – soon follow.

The nurse is often the first health care provider to pick up on signs of

poor organ function or poor body perfusion – I've learned how to voice these things to my team. One of the most intense experiences I experienced was coming back from a procedure. My patient's oxygen saturation monitor was quickly trending downward. By the time we reached the unit it was reading in the fifties. I remember immediately pulling the code bell and having the full support of my fellow nurses, charge nurse, clinical lead, respiratory therapists and physicians. I answered questions about what happened during the procedure and followed orders from physicians. Any order I did not fully understand was explained quickly to me in a thorough manner; the patient had a positive outcome due to successful communication and efficient teamwork.

Recognizing adverse events was sometimes the most difficult part for me. I had to learn that while turning Patient A is an important and necessary task, a hypotensive Patient B carries more weight. In the PICU/PCICU, the words "I need clarity" are used to allow a new grad (or anyone) to stop whatever is going on and have someone clarify the situation.

The process of transitioning from classroom to real world can be summed up in one word: time. I found that Duke offered me excellent resources, tools, experienced co-workers willing to help me learn, and nurse managers ready to go "the extra mile" to help see me get through this transition. ■

■ EVENTS



Not just horsin' around

For more than two decades riders have gripped the reins, leaned in and jumped for the children. Nov. 4-9, the Duke Children's Benefit Horse Show will celebrate its 25th year.

The Duke Children's Benefit Horse Show is one of the premier hunter/jumper events in the Southeast and has raised more than \$1.2 million for Duke Children's Hospital & Health Center in its history.

The show has been managed and cultivated in large part by Joan Petty and Catherine Midyette. Along with their husbands and siblings, they have made the Horse Show what it is today — a must-attend event for horse show exhibitors across North America. It is because of their dedicated support and talent that the Horse Show celebrates such a milestone this year.

Be sure to join in the festivities – including a horse-around play for kids – during the Horse Show weekend at the Gov. James B. Hunt Horse Complex at the State Fairgrounds in Raleigh.

Details: <http://dukechildrens.org>

IDM BOOK CLUB

Developing leaders

Just released in its third edition, **The New Leadership Challenge: Creating the future of nursing (F.A. Davis, \$36.95)** by Theresa Valiga, Ed, RN, FAAN of the Duke University School of Nursing and Shella C. Grossman, Ph.D, APRN-BC has served as a valuable resource for faculty teaching leadership skills.



"They really seem to like the focus of the book, especially for RN-to-BSN and graduate students, and for nurses in clinical practice," Valiga noted.

It stresses that although leadership and management are related, they are not one and the same and that leadership is not an innate ability but one that can be learned and developed through conscious and purposeful effort. The book included a balance of theoretical exploration; the extensive use of real-world examples from clinical practice, education, and administration; self-assessment exercises; and the integration of creative learning activities. The book can be purchased at Amazon.com.

Reading a good book? Tell us about it at editorinside@mc.duke.edu

■ EDUCATION



Snyderman funds Childhood Obesity Fellowship

By Jim Rogalski

As an active 12-year-old, TeVon Ewing transitioned from sport to sport as naturally as birds and butterflies migrating with the seasons. Soccer, basketball, and baseball helped to keep the stocky pre-teen healthy and fit.

At 13, spurred by a significant growth spurt and insatiable appetite, TeVon gained 40 pounds and went from a slightly high body mass index of 24 to 33, which is obese even by adult standards. Barely into puberty, he's has high blood pressure and a pre-diabetic increased level of insulin.

"I was just eating a lot," said the effervescent teen with an infectious smile. "I like food."

TeVon is part of a worldwide sea of children dealing with obesity. If not corrected, obese children face the potential for adulthoods filled with chronic illness.

Luckily, TeVon's pediatrician referred him to Duke Children's Healthy Lifestyle Program, where his entire family is educated and coached on a healthy lifestyle, and where his health is regularly monitored. "We're offering him a lifestyle approach that is evidence-based and tailored to him as an individual," says Sarah Armstrong, M.D., director of the program.

It is this progressive, individualized, and prospective approach to health that helped to inspire Ralph Snyderman, M.D., Duke University chancellor for health affairs emeritus and James B. Duke Professor of Medicine, to pledge \$100,000 to the Department of Pediatrics for a fellowship to study how best to battle the global epidemic of childhood obesity. The gift will be made through the Snyderman Foundation.

"With this fellowship, we want to train a brilliant and committed individual to discover what works and doesn't work to prevent obesity in children of different backgrounds and metabolic inheritances," Snyderman said. "Fighting childhood obesity should be personalized and not a one-size-fits-all approach."

The Duke fellow will be named by the end of the year and will be under the direction of Armstrong, associate professor Alex Kemper, M.D., and Thomas Kinney, M.D., associate chair for the Department of Pediatrics. The fellow will be trained in the clinical management of overweight children and will be cross-trained by a cardiologist, endocrinologist, pulmonologist, nutritionist, and physical therapist. The fellow also will learn the fundamentals needed to conduct groundbreaking clinical research.

"We are grateful to Dr. Snyderman and appreciate his vision in shaping this fellowship to focus strongly on prevention and prospective health around childhood obesity," said Armstrong.

A version of this article first appeared in Duke Med Alumni News.

PATIENT CARE

Does reducing stress improve lung function?

New study seeks COPD patients, caregivers

By Melissa Schwarting

At 49 years old, William Lambeth, M.D., found his life as a busy OB/GYN come to a sudden halt.

"You go into an instant fight-or-flight response only you can't fight or flight," he said. "You become immobilized. To say its frightening is an understatement."

Lambeth is describing daily episodes associated with his chronic obstructive pulmonary disease (COPD), a lung disease that restricts air flow and is the fourth leading cause of preventable death for men and women.

A new Duke Medicine research program aims to help those with COPD and their loved ones cope with

cough, wheezing and weight loss. COPD is commonly caused by smoking.

For Lambeth, it all started one busy week in December 1997.

"I went upstairs to shower and return to the hospital, but by the time I got to the top I could not breathe," said Lambeth.

Eight months later he decided he could no longer continue to work. Even minimal physical activity became too taxing. "It's like breathing through a straw all of the time."

"Everyone with COPD has some level of anxiety,

but their emotional needs often go unmet," said Scott Palmer, M.D., M.H.S., scientific director of the lung transplant program. "Medical interventions to treat anxiety can reduce respiratory function and potentially adversely affect breathing, so psychological interventions, such as coping skills training, can help empower patients to manage their own health and provide a better long-term solution."

The new research program is designed to explore more effective ways to help patients with lung disease cope with problematic symptoms, improve their quality of life, improve their physical functioning and increase their survival.

The five-year, \$3.6 million study is funded by the National Institutes of Health.

The Duke team also includes Tereza Martinu, M.D.; Neil MacIntyre, Frank Keefe, Michael Babyak, and Virginia Fenwick. Researchers at the Ohio State University are led by Charles Emery, Ph.D., and Philip Diaz. Scientists from the University of North Carolina at Chapel Hill also will participate, including Alan Hinderliter, M.D., and Diane Catellier, D.P.H.

The team is looking for people with COPD and their partners or caregivers to participate in a unique coping skills training program delivered over a series of weekly, 30-minute telephone calls that will provide tools designed to enhance their ability to manage the disease symptoms. Participants also will receive the latest educational materials about optimal ways to manage COPD.

Lambeth reiterates the value of addressing the often overlooked psychological aspects of COPD. "This is a disease that is hard to grasp. You go through a grieving process. It's really helpful to have someone to talk to." ■

For more information about the Duke COPD research program, contact Julie Johnson, study coordinator at (919) 684-5487 or email James Blumenthal at Blume003@mc.duke.edu.



William Lambeth, M.D., takes oxygen through a nasal cannula while he works on his laptop at home. At 49, the OB-GYN's life came to a halt when developed chronic obstructive pulmonary disease. PHOTO COURTESY WILLIAM LAMBETH

the disease, especially the incredible emotional toll.

"People with COPD experience a drastic change in their ability to complete everyday tasks and commonly develop anxiety and depression," said James Blumenthal, Ph.D., clinical psychologist and the lead investigator of the new study.

More than 15 million Americans are living with COPD and more than a million North Carolinians have a chronic lung disease.

Some research has reported depressive symptoms or major depression to be as high as 80 percent and elevated symptoms of anxiety to exceed 90 percent. These rates are much higher than other chronic illnesses.

"Anxiety can trigger shortness of breath, which can become severe. Over time, people adopt a sedentary lifestyle to avoid these episodes, which can worsen their overall health," Blumenthal said. "We'd like to break this cycle."

COPD, which encompasses emphysema and chronic bronchitis, causes irreversible loss of lung function that can require lung transplantation in later stages. Symptoms include shortness of breath, chronic



PROFILE



David Walmer, M.D. (left) poses with colleagues Haywood Brown, M.D., and Jeff Wilkinson, M.D. in Haiti.

PHOTO PROVIDED BY DAVID WALMER

Helping the Underserved

By Kelly Malcom

Fifteen years ago, David Walmer, M.D., traveled to Haiti with other members of Triangle Presbyterian Church to paint walls at Hopital Sainte Croix, in Leogane. While there, he met with Haitian gynecologist, Jean-Claude Fertillien and began what is now a wide-ranging project to revolutionize gynecological testing in that impoverished country.

“Several of us got so involved that, eight years ago, we decided to start a nonprofit organization called Family Health Ministries to help manage our efforts in Haiti,” said Walmer, chief of Reproductive Endocrinology and a staff member of the Hubert-Yeargan Center for Global Health (and the Duke Global Health Institute).

Since then, FHM, in collaboration with Haitian caregivers, has provided a number of educational opportunities for Duke students on the practice of medicine in resource-poor areas, through an interdisciplinary Duke course called “Healing in the Developing World and Care of the Underserved: a Medical and Theological Perspective.”

Walmer has teamed with biomedical engineering students to develop an inexpensive, portable colposcope to screen women for Human Papilloma Virus.

“Practitioners in low resource countries often rely on the naked eye for these examinations because traditional equipment is too expensive and requires electricity,” he noted.

Recently, the nonprofit bought ten acres of land in Haiti to build a teaching and research hospital with which to continue its work. ■

FEATURE



Duke supports research and educational efforts around the world in order to improve global health. ILLUSTRATION AT LEFT BY VANESSA DEJONGH. PHOTO AT RIGHT PROVIDED BY THE DUKE GLOBAL HEALTH INSTITUTE



An international approach

by Kelly Malcom

“There are certain rights people have, and one is the right to good health, no matter where you live,” said Michael Merson, M.D., director of the Duke Global Health Institute, when discussing its mission. “But the challenges of global health are complex. Addressing these challenges requires skills and knowledge from many perspectives – from the life sciences to the social sciences.”

The Duke Global Health Institute (DGHI) was created in 2006 to address health disparities around the world. Since its inception, the institute has collaborated with programs at Duke and abroad to strengthen efforts in global health research, service and education. DGHI research is focused around six Signature Research Initiatives (SRIs) on emerging global health themes. The SRIs engage faculty from multiple Duke schools and departments and address major current issues in Global Health from a broad interdisciplinary perspective. The six SRIs are: obesity and cardiovascular disease; global aging; gender, poverty and health; emerging infectious diseases; global environmental health; and health systems strengthening.

“These signature research initiatives reflect areas of priority in global health and some of the preexisting strengths of Duke University and Duke University Medical Center,” said John Bartlett, M.D., of the Department of Medicine

and the newly appointed DGHI associate director of research. “The intent is that each initiative can evolve over time based on expertise in the university and based on global health needs.”

Duke has been building its international presence in medicine for over a decade, with projects in Asia, Africa, and Europe.

The collaboration with Kilimanjaro Christian Medical Center in Moshi, Tanzania on a variety of projects related

“When doing research in developing countries, one must learn to be patient.”

to emerging infectious diseases, including HIV/AIDS, is one example.

In 2002, John Crump, M.D., was recruited to help expand research programs in Tanzania.

“We started in a very modest way, with small studies that were funded by donations from individuals and industry. The goal in those early days was to demonstrate enough of a track record of research collaboratively in Tanzania that we could eventually compete successfully for NIH grants. By 2004, we succeeded in getting our first NIH grant,” said Crump.

The DGHI is also expanding research efforts in India, where Merson and others are involved in studies looking at behavioral changes to stem

the tide of AIDS, as well as research into curbing ever-increasing rates of cardiovascular disease, obesity, and diabetes.

Other Duke faculty research projects include work in Sri Lanka, where there are ongoing infectious disease and behavioral studies in the aftermath of the 2005 Indian Ocean tsunami, and in Leon, Nicaragua, where Duke researchers are studying RNA diagnosis of infectious disease.

The Duke-NUS Graduate Medical School in Singapore will also see a boost in its infectious disease programs with the recent arrival of Duane Gubler, M.D., as director of

the Signature Research Program in Emerging Infectious Diseases, which will identify strategies to prevent future SARS-like epidemics in Asia.

Though communicable diseases place a heavy burden on developing nations, noncommunicable diseases, such as obesity and heart disease, will continue to challenge countries around the world.

“Five of our new signature research initiatives are focused on these areas as we anticipate the future of global health,” said Bartlett. He hopes to recruit faculty from throughout Duke to take an interdisciplinary approach to these new global health issues.

Another essential element to global
see GLOBAL, p.9

NEWS

Rodent study links mom's diet to baby's asthma risk

By Mary Jane Gore

A pregnant mouse's diet can induce epigenetic changes that increase the risk her offspring will develop allergic asthma, according to researchers at National Jewish Health and Duke University Medical Center. Pregnant mice that consumed diets high in supplements containing methyl-donors, such as folic acid, had offspring with more severe allergic airway disease than offspring from mice that consumed diets low in methyl-containing foods. The results of the study are being published Sept. 18, 2008, in the online version of the *Journal of Clinical Investigation* and will appear in the October print issue.

The prevalence of asthma has nearly doubled in the past 25 years. Asthma currently affects about 11 percent of the U.S. population and accounts for \$9.4 billion in direct health care costs. Although both genes and environment are believed to play a role in the development of asthma, scientists have been unable to definitively identify specific causes of the disease or explain the rise in prevalence.

Epigenetics is the study of gene regulation. Environmental exposures can lead to modification of methyl groups (CH₃) binding to certain DNA molecules, which can result in modified expression of specific genes. A variety of environmental factors, including diet, tobacco smoke, and medications, can modify methyl groups binding to DNA, particularly

during periods of vulnerability. Although no changes occur in the genetic code, epigenetic effects can be passed to offspring.

Emerging research has indicated that epigenetic mechanisms can affect the development of the immune system, skewing it either toward or away from a predisposition to allergies.

The research team decided to examine the potential role of epigenetics in the development of allergic asthma. They fed pregnant mice diets either high or low in methyl donors. In addition to folic acid, the high methyl-donor diets additionally contained higher levels of L-methionine, choline, and genistein.



ILLUSTRATION VANESSA DEJONGH

When the researchers evaluated offspring mice using a model of allergic asthma, they found that mice, whose mothers had the high methyl-donor diets, showed greater severity of asthma; more airway hyperreactivity, more allergic inflammation in their airways, and higher levels of the IgE in their blood. They also found that T cells were more likely to be the type associated with allergy.

The male offspring also transmit-

"The current research suggests that too much folic acid during pregnancy may be related to an increased risk of asthma."

ted a higher predisposition to allergic airway disease to their progeny. In contrast, mice exposed to high-methyl-donor diets during lactation or adulthood showed no increased propensity to allergic sensitization.

"There seems to be a crucial stage, during development in utero, when a young mouse is susceptible to epigenetic changes that can alter its immune system," said co-author John W. Hollingsworth, assistant professor of medicine at Duke University School of Medicine. "These epigenetic changes

may partially explain why it has been so difficult to definitively identify genes that contribute to asthma risk; the effect of genetic variations can be masked or further complicated by epigenetic changes."

The current research suggests too much folic acid (and other dietary supplements) during pregnancy may be related to an increased risk of allergies and asthma, and may even play a role in the dramatic increase in asthma prevalence during the past two decades. The U.S. Public Health Service recommended in 1992 that all women of childbearing age consume 400 micrograms of folic acid daily to reduce their risk of birth defects of the spine and brain. In 1996 the U.S. Food and Drug Administration required that folic acid be added to specific flour, breads and other grains to prevent birth defects. Research has suggested that these measures have helped reduce birth defects.

Given the important role folic acid supplementation has played in prevention of birth defects, Schwartz and Hollingsworth do not advise any changes in folic acid supplementation, but do believe the issue is worth further investigation. ■

KUO, continued

dedicated colleagues in my research group."

He heard from the National Institutes of Health that he won the Director's New Innovator Award of \$1.5 million over five years. This award is for work on neural stem cells and their role in brain injury and repair. "The goal of this award is to encourage scientists to do exactly what they want to do," Kuo said. "One thing I have always wanted to do is science that could lead to therapeutic solutions for patients suffering from brain injuries after trauma and stroke."

The NIH award goes to "highly creative researchers (who) are tackling important scientific challenges with bold ideas and inventive technologies that promise to break through barriers and radically shift our understanding," said NIH Director Elias A. Zerhouni, M.D., who announced the awards on Sept. 22.

Kuo also won a Distinguished Scientist Award from the Sontag Foundation for his research into brain tumor development. This prestigious award is \$600,000 over a four-year period, beginning October. "Stem cells hold tremendous therapeutic promise, but stem cells behaving badly can have grave consequences," said Kuo. Tumors in the brain are often deadly, but where these tumor cells come from is poorly understood. Kuo and colleagues are planning experiments to investigate how mutations in neural stem cells can give rise to brain tumors, and how destroying these cancer-causing stem cells may result in successful therapy. Only two Sontag Distinguished Scientist awards were given this year.

"These awards reflect the vibrant and exciting atmosphere at Duke as a place to conduct the best stem cell research, both to realize the potential for therapy and as a target for cancer treatments," Kuo said.

Third, Kuo was named a Packard Fellow in Science and Engineering from the David and Lucile Packard Foundation. Aimed at supporting unusually creative researchers early in their careers, the fellowship provides \$875,000 over five years. With these funds, the Kuo laboratory and collaborators will engineer a chemical screening platform that will give scientists powerful new tools to understand the architectural blueprints of how stem cell environments are constructed, "which will give us new ways to look at biological problems," Kuo said. "This award will provide a basis for and tie together our future work." ■

Inquiry

Science Editor: Kelly Malcom

Inquiry features science and research-related news items from Duke Medicine News and Communications and other Duke departments. To submit content, contact us at editorinside@mc.duke.edu

GLOBAL, continued

health research is commitment, something demonstrated by Duke's long-term international efforts. Crump recently co-authored a JAMA paper detailing ethical considerations for short-term experience in global health, including respecting cultural differences, training local staff and achieving mutual and reciprocal benefits. But this takes time.

"When doing research in developing countries, one must learn to be patient and to measure progress on longer time horizons. Progress can be quite slow, whether that's because of infrastructure, personnel or bureaucratic limitations, so you have to adapt to a more long-term way of thinking about things," acknowledged Crump. ■

For more information about the Duke Global Health Institute visit <http://www.globalhealth.duke.edu>

The Hubert-Yeargan Center: committed to global education

Duke has exhibited a commitment to improving healthcare access in developing countries and to educating the next generation of physicians about medical practice in other nations. For the past 2 decades, Duke has sent medical students and residents to such far-flung areas as Moshi, Tanzania and Galle, Sri Lanka to add a hands-on international element to their education.

In 2004, the Hubert-Yeargan Center for Global Health was founded to support global health education programs for medical students and residents and to set up mutually beneficial collaborative relationships with global partners to address the health care needs of local communities. "We emerged from a program set up to help medical residents to go overseas and be exposed to medical care in the developing world," said Christopher Woods, M.D., chief of infectious diseases and clinical microbiology, and hospital epidemiologist for the Durham VA Medical Center and co-director of the Hubert-

Yeargan Center. "Today, that remains our focus. Our educational piece provides a variety of opportunities for medical trainees."

Third-year medical student Beau Muñoz recently traveled to Sri Lanka to study infectious disease. "I got a different perspective in Sri Lanka and a chance to see how these diseases are treated with minimal therapeutic interventions and minimal diagnostic technologies," he said. The Hubert-Yeargan center recently announced a joint effort with the DGHI to set up an official Duke Global Health Residency program. "This new program is unique not only at Duke but in the nation because of its interdepartmental approach. The inaugural class includes physicians from psychiatry, neurosurgery, medicine and obstetrics and gynecology," said program director Cynthia Binanay, RN, BSN, MA. Each resident, selected after a rigorous screening process, will perform both clinical and research work during their nine-month rotations.



PHOTO PROVIDED BY ANGELA VO

Link between nervous and immune systems found

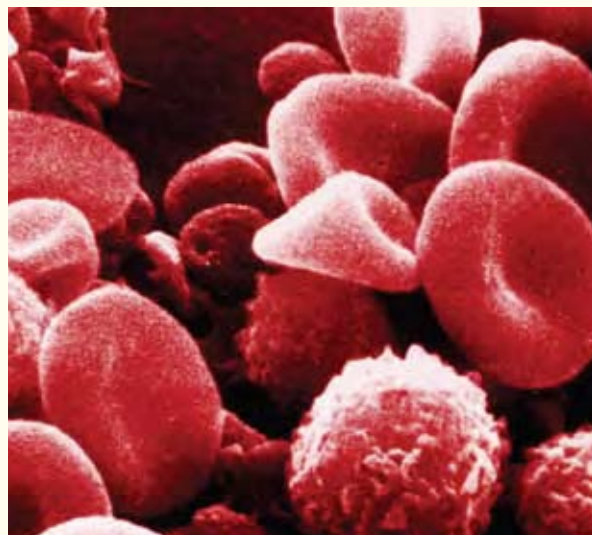
By Mary Jane Gore

Duke researchers have discovered genetic links between the nervous system and the immune system in a well-studied worm, and the findings could illuminate new approaches to human therapies.

For some time, researchers have theorized a direct link between the nervous and immune systems, such as stress messages that override the protective effects of antibodies, but the exact connection was unknown.

"This is the first time that a genetic approach has been used to demonstrate that specific neurons in the nervous system are capable of regulating immune response in distant cells," said Alejandro Aballay, Ph.D., assistant professor in the department of molecular genetics and microbiology. They studied a neural circuit in the roundworm *Caenorhabditis elegans*.

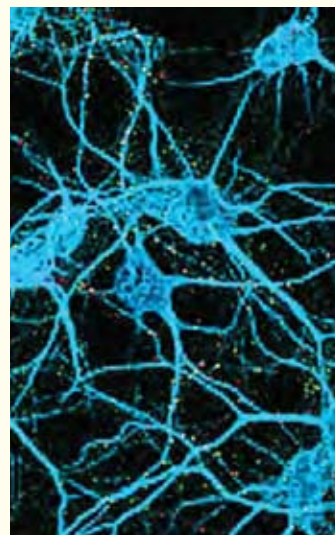
"The study of neural-immune communications is quite challenging in mammals," Aballay said. "The simple, well-characterized nervous system of *C. elegans* and its recently discovered innate immune system make it a prime system for research. We can study the mechanisms and biological meaning of the cross-talk between the immune and nervous systems, and our studies should set the stage for a new field of research."



Lymphocytes (knobby white blood cells, pictured above) play an important and integral role in the body's defenses. A new study has shown that a flawed nervous system receptor can block immune response. Synapses shown at right. PHOTOS FROM WIKIMEDIA COMMONS

Pamela Marino, Ph.D., who oversees molecular immunology grants at the National Institute of General Medical Sciences of the National Institutes of Health, said, "Dr. Aballay has made use of the well-defined genetics of the roundworm to reveal evidence of cross talk between the nervous system and the innate immune system. Beyond neuronal regulation of immunity, this work opens the door to understanding how neurons may affect other non-neural processes, such as fat storage and longevity."

The study, published in the Sept. 18 issue of *Science*, was funded by grants from the Whitehead Scholars



Program and the National Institutes of Health.

The research team used two approaches to show the genetic connection between nerve cells and immune-response cells.

They found that NPR-1, a worm cell receptor linked to proteins that are similar to mammalian neuropeptide Y, functions to suppress the activity of specific neurons that block immune responses. They then studied worms with a mutated *npr-1* gene that produced an NPR-1 receptor that didn't function. The scientists showed that when the flawed receptor didn't work, the neurons were able to block

the immune response and the worms became more susceptible to infection by pathogens.

The three different neurons found to express the receptor NPR-1 are exposed to the body fluids of the roundworm – the equivalent of the bloodstream in humans. Signals from the neurons can travel and communicate with other tissues, such as intestinal tissue, which often directly contacts microbial pathogens, Aballay said.

They also performed a full-genome analysis on roundworms that had altered nerve-cell function because of a mutation in the NPR-1 gene. This analysis showed the animals had poorly regulated expression of genes that encode markers of innate immune responses. In particular, they found that most of the immune marker genes were regulated by a P38 MAPK signaling pathway, which is required for immunity in animals from worms to humans.

"The complexity of the network involved in the communication between the neural system and the immune system expands the number of possible targets for therapeutic interventions," Aballay said. "The nervous system alone provides a large number of targets for novel approaches to boost innate immunity against different pathogens." ■

ESSAY

Moving beyond race-based health

By Susanne Haga, Ph.D., IGSP Scholar,
Assistant Professor

This Op-Ed appeared in the Aug. 8 edition of The Herald-Sun of Durham, NC.

At a time when genetics research continues to reveal just how similar we all are, it's frustrating to see the continued reliance on race as a basis to treat individuals differently when it comes to their health.

I'm not referring to the inequitable treatment experienced by some groups with respect to access to health care services, but rather to the development of race-based products such as vitamins and drugs.

A company called GenSpec is selling vitamins specially formulated for African-Americans, Caucasians, and Hispanics.

While there are some differences in disease prevalence among races, there are no diseases or conditions – and certainly no nutritional requirements – that are exclusive to just one group. If we've learned anything from the last decade of genetics research, it's that our DNA is generally colorblind.

Although genetics is involved in most if not all aspects of our health, the environment plays at least an equal role. Even if we knew which genes played a part in our dietary needs, it's unlikely those differences would follow perceived racial divides.

The U.S. Census Bureau groups people into five categories: White; Black or African American; American Indian and Alaska Native; Asian; and Native Hawaiian and Other Pacific Islander. But at the biological level, those distinctions blur. Certain parts of our DNA



Some companies are beginning to market vitamins with "genetically specific" formulas.
ILLUSTRATION BY VANESSA DEJONGH

code will be more closely associated with one population or another, but the vast majority is shared among populations worldwide.

As people have traveled the globe over centuries past, individuals of mixed heritage began to increase. African-Americans, for example, typically have varying proportions of European and African ancestry. The Hispanic population adds yet another layer of complexity as their ancestors descended from three regions: Europe, Africa, and America.

Given the wide variation within groups, the development of a "genetically specific" formula would

be challenging, to say the least. (Interestingly, GenSpec seems to have overlooked the Asian population, or more likely even they haven't been able to come up with a single concoction for this diverse group.)

The recent increase in the numbers of people who identify with more than one race would seem to pose a rather large problem to the companies marketing race-based products.

Halle Berry, Tiger Woods, and Barack Obama are some of the more well-known names in this fast-growing group. Or perhaps these companies are smarter than we give them credit for.

One blogger, apparently of mixed heritage, asked if she should take the 'Caucasian' vitamins in the morning and the 'African-American' ones at night.

This company is not the first, nor will it probably be the last, to market race-based products. A few years back, a company called NitroMed developed a drug called BiDil for heart disease which was approved for treatment in African-Americans. Early data showed that it was also effective in Caucasians, but no more so than drugs already available.

So, the company conducted an African-American only clinical study to prove the safety and effectiveness of their drug, leading to the approval of the first race-targeted drug. Nubian Health Products also offers vitamins and dietary supplements to African-Americans.

As a genetics researcher and someone of mixed heritage myself, these companies reflect a troubling trend.

The fact that I don't fit neatly into the common racial designations used to bother me. Now, I've come to appreciate my uniqueness, while realizing it counts for such a tiny part of me. After all, genetically speaking, I am about 99 percent the same as anyone else.

Not only are companies misleading the public to believe that races are biologically distinct, requiring race-specific products, but the basis for their wares flies in the face of science. As we stride toward a more personal approach to health and medicine, we need to look beyond skin color. Population-based health and medicine should be a thing of the past. ■

LISTENING

Duke Global Health

Katia Koelle, Ph.D., of the Department of Biology and Alun Lloyd of NC State will speak "Modeling in Dengue." Oct. 29, 4:30-6 pm at the John Hope Franklin Center.



DOING

Clinical trials

Participate in clinical trials and you can gain access to new research treatments before the treatments are widely available. To find active clinical trials, search by keyword or browse by specialty at <http://DukeHealth.org/clinicaltrials>

LEARNING

DTMI Seminars

A seminar series highlighting the M.U.R.D.O.C.K. Study will take place on Tuesday evenings in October at the Murdock Research Lab in Kannapolis. Register online at: <http://forms.dukehealth.org/dtmi/duke.nsf/seminar>

PATIENT CARE



Focus on: The Right Route

The fourth part of 'Six Rights in 6 Months' patient safety series

Routes of administration are somewhat like routes of travel. For many years, “old Route 1” was the only road that travelers took when they wanted to drive north-south on the East Coast.

It was well-traveled, a tried and true route that drivers knew would get them safely to their destination. As more and more vehicles took to the roads and drivers demanded fast, effective routes of travel, other routes were developed. Today, there are multiple routes that travelers can take to reach their destinations.

The history of medication administration has followed a somewhat similar path, starting with only a few medications that were given via only one or two primary routes. Today, the sheer number of medications, combined with new routes of administration, make safe and effective medication administration a challenge to everyone involved in the medication use process.

In 2006, a landmark report was published by the Institute of Medicine of the National Academies titled *Preventing Medication Errors*. This report, which started a nationwide conversation and drive to maximize medication safety, notes that approximately 1.5 million people are harmed by medication errors each year, with an estimated cost of these potentially fatal errors at \$3.5 billion per year. The medication safety leaders at Duke have taken this charge very seriously and continue to work to maximize safety and minimize the possibility of error in the medication use process.

To help in this journey along the safety highway, the Medication Safety Education Committee at Duke University Hospital has developed the “6 Rights in 6 Months” campaign. Designed to help keep awareness of medication safety in the minds of all people involved in the medication delivery process, the campaign is focusing on one of the 6 Rights of the medication use processes each month.

This month's focus is the **Right Route**.

Route-related questions arise frequently: Can this medication be given intravenously, or is it only given orally? Is there a different form of it that is used when given via an enteral tube? Is it available in liquid form or is that tablet crushable to administer it through the tube? And is it available in a certain form to facilitate administration to a particular patient?

It's not as simple as it used to be. But identifying the correct route is an extremely important step in

the process as we strive to maximize the safety of the medication use process at Duke.

As with each of the 6 Rights, there are multiple steps and considerations for each member of the healthcare team involved in the process of getting the correct dose to the patient. A few examples of steps that can be taken to help assure the right route of a medication include the following:

- For prescribers, assure the medication is ordered for the appropriate route for the patient's condition (e.g., order for tetanus vaccine subcutaneously, order for enoxaparin to be given IM).
- For pharmacy, check for the correct formulation and concentration for the route to be administered and include any warnings as appropriate (e.g., “Do not give intrathecally”, or “Give via G tube only”).
- For a nurse administering a medication, check the route against the medication administration record or order. Use only oral syringes for orally administered medications.
- For patients or family members, be comfortable and assertive in asking questions about a way a medication is to be given to you or your family members.

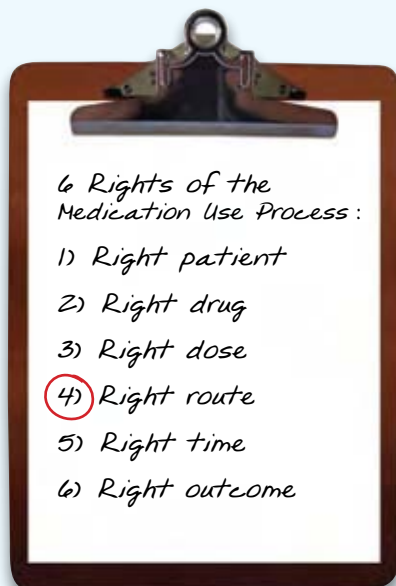
But, the Right Route is just one of the 6 Rights of Medication Safety.

Another part of making safe choices in the medication delivery process is practicing a few “non-

negotiable behaviors,” including always taking and using the medication administration record with you to obtain and administer medications, taking medications in the original packaging into the patient's room, labeling any medication prepared at the time of preparation, and reviewing or returning to the last step prior to any interruptions that may occur in the process. These behaviors and safety steps are considered important enough to be included each month, even as we focus on a different “Right.”

Throughout the six months of our “6 Rights in 6 Months” effort, the Medication Safety Education Committee continues to stress the importance of the basics of effective processes combined with vigilance by all persons in the medication use process to maximize the safety of our medication use processes. Our patients deserve no less. ■

Want to know more about the Medication Safety Education Committee and its efforts? Contact committee coordinator John Howe, RN, at howe0003@mc.duke.edu, or visit the Medication Safety Web site at <http://PatientMedSafetyEd.duhs.duke.edu/>.



■ FIRST PERSON

See leaders online

This month, go to <http://inside.dukemedicine.org> to see new video messages from health system CEO Victor J. Dzau, M.D.; Durham Regional Hospital CEO Kerry Watson, and Duke Raleigh Hospital CEO Doug Vinsel.

It's online!

Also, the Web site includes archives of previous First Person interviews with Duke University Health System leaders.

■ PRIVACY

Mum's the word. Oct. 6-10

The 14th Annual “Mum's the Word” Confidentiality Campaign sponsored by the Health Information Management Department (HIM) will be held Oct. 6-10.

To highlight the commitment to confidentiality, look for chrysanthemum plants – ‘mums’ – to be delivered around Duke University Hospital.



The purpose of the campaign is to continue to raise staff awareness of each patient's right to have health information held private and the obligation as an employee of the Duke Health System to protect that right.

All employees are required to sign the confidentiality agreement form on an annual basis.

Mum plants will be delivered to the approved Duke North nursing units and Duke South clinics on Oct. 6.

At Duke University Hospital, information tables will be staffed outside of Duke North and Duke South cafeterias and in the transit lobby from 8:00 a.m.-2:00 p.m. on Oct. 7 and 10.

Those who stop at the information tables are encouraged to take a confidentiality quiz. Completion of a quiz will allow for participation in a raffle for an American Express gift certificate.

Take this opportunity to talk about confidentiality of patient records and remember that:

- If the information is not needed to do your job as it relates to treatment, payment, or operations it should not be accessed.
- You are responsible for anything accessed under your password.
- Do not look up information on friends or family members.
- Never leave a chart unattended in the hallways.
- Never share passwords.
- Never discuss patient information in the halls or on the elevator.
- Access to patient records is audited.

If you have any questions regarding confidentiality or privacy, please call Senior Privacy Officer Barbara Woolley at **684-2615**.

ON THE COVER

PRT, cont.

make way for significant expansion projects, but they are a little sad to see it go.

“When Duke bought the PRT, they bought the best — we’re still using the original equipment,” Mathews said. “I suppose you could consider us original equipment, too.”

On Oct. 15, the service — at least the part between the North and South hospitals — will end. Expansion projects, including a major hospital addition, are being built where the PRT guideway is located.

When the projects are complete, North, South and the new addition will be connected by something that part of the medical center has never had, climate-controlled indoor walkways.

Keeping it going

Decades ago, the PRT’s maker, Otis Elevator Co., left the PRT business.

When parts wore out, when electronics needed repair, there was no catalog to order from, no help line to call.

Burke, an Appalachian State-trained electrician, has made himself an expert at electronics. In his spare time, he’s repaired the broken toys in the discount bin at Radio Shack and given them away as presents. He also credits a Duke colleague, the late John Tewksbury, with giving him critical training in electronics.

For the PRT, he’s fabricated whole computer chip panels, patiently re-soldering hundreds of tiny electronic connections.

“We’ve repaired, fixed and fabricated to keep it going,” said Mathews. “We have a higher performance rate — near 99 percent — than what was estimated when it was first built. The goal was 97 percent performance.”

The story of that long run of professionalism and craftsmanship began more than 30 years ago.

In the mid-1970s, Mathews and Burke were relatively new employees — electricians working for Medical Center Engineering & Operations.

One day, a supervisor came in and showed Burke a recent issue of *Popular Mechanics*. The cover story was about a new people-moving concept that wasn’t an elevator and wasn’t a train, but had elements of both.

“Then he looked at me and said, ‘Gary, you’re going to build it,’ ” he said.



An artist’s rendering from the early 1970s of the Personal Rapid Transit vehicle Otis Elevator Co. designed for Duke University Medical Center. After nearly 30 years of service, the PRT route between Duke North and Duke South will close Oct. 15.

PHOTO COURTESY DUKE UNIVERSITY MEDICAL CENTER ARCHIVES



An electric vehicle like the one pictured above will provide service between Duke North and Duke South, starting Oct. 15.

PHOTO COURTESY DUKE UNIVERSITY HOSPITAL

The future, then

Burke and Mathews were sent with their families to Denver, where manufacturer Otis had its laboratories and factory.

Between skiing and seeing Pike’s Peak, they worked with engineers on the system they were designing to serve Duke Hospital’s planned North Division.

The PRT was required because not all hospital functions could be moved from the building that today is known as South into what became known as North. Patients and staff would have to be moved back and forth between the buildings.

Early medical center studies eliminated a moving sidewalk as a solution.

So, in a time before widespread use of the Internet or electronic medical records that could flash across the medical center in an instant, the PRT was cutting-edge technology.

Also, in 1979, there was the issue of a quarter-mile distance between buildings to consider.

But, the landscape will be very different when the expansion of Duke University Hospital and, potentially, a

How it works

Here’s how the PRT works: Specially-designed vehicles ride in concrete guideways. Rails on the guideways feed electricity into the vehicle. With that power, a blower pushes air through rubber skirts on the vehicle’s bottom. It rides on a cushion of air, like a hovercraft.

An additional system uses magnetic induction, pushing against an iron-and-aluminum bar in the guideway, to propel the vehicle forward.

Inside the vehicle, a pair of computers — this is the Space Age part — monitor operations and use data from sophisticated sensors to match speed and position against guide markers and its own programming. When the two computers agree, the machine moves forward.

The pilot-less vehicle hums as it carries staff, faculty, visitors and patients over the quarter-mile run from North to South. A trip takes about a minute. The system is monitored by a round-the-clock staff.

It’s not a perfect system. It doesn’t operate as well in rainy weather, and snow shuts it down completely, since the vehicles hover so close to the surface.

Even so, the well-made, redundant equipment has been so robust, Mathews said, there’s never been need to overhaul or renovate the system. It has run 24 hours a day since that first day in 1979.

Next steps

After 30 years with Duke, Mathews and Burke are staying. And they will continue to work on the PRT — particularly, the line that runs under Erwin Road between Duke North and Parking Garage II.

The talents of the PRT teams other members are still needed — they will continue to be employed with Duke in other positions.

The last three decades have been good, Burke said.

“I have a job where everyday I am continually challenged,” he said. “I have to learn new things, I have to solve problems — that’s what makes a good job.”

Mathews’ recently saw his youngest graduate from the University of North Carolina at Wilmington.

“But we’re still here and we will keep it going,” Mathews said. “For as long as we’re needed.” ■

PRT tram facts

- The system was built by Otis Elevator Co. in the 1970s.
- It doesn’t run on wheels — it rides on a cushion of air
- The first PRT ride occurred in December 1979. Eye Center receptionist Jane Bindewald cut the ribbon.
- Service between Duke North and Duke South will end permanently on Oct. 15.
- Service between Duke North and Parking Garage II will continue.
- The walkway between North and South will stay open.
- Find out the latest at *Inside Online* — <http://inside.dukemedicine.org>

proposed cancer center are complete. Current plans foresee just a 90-foot gap between buildings that, unlike the present walkway, will be enclosed and climate-controlled.

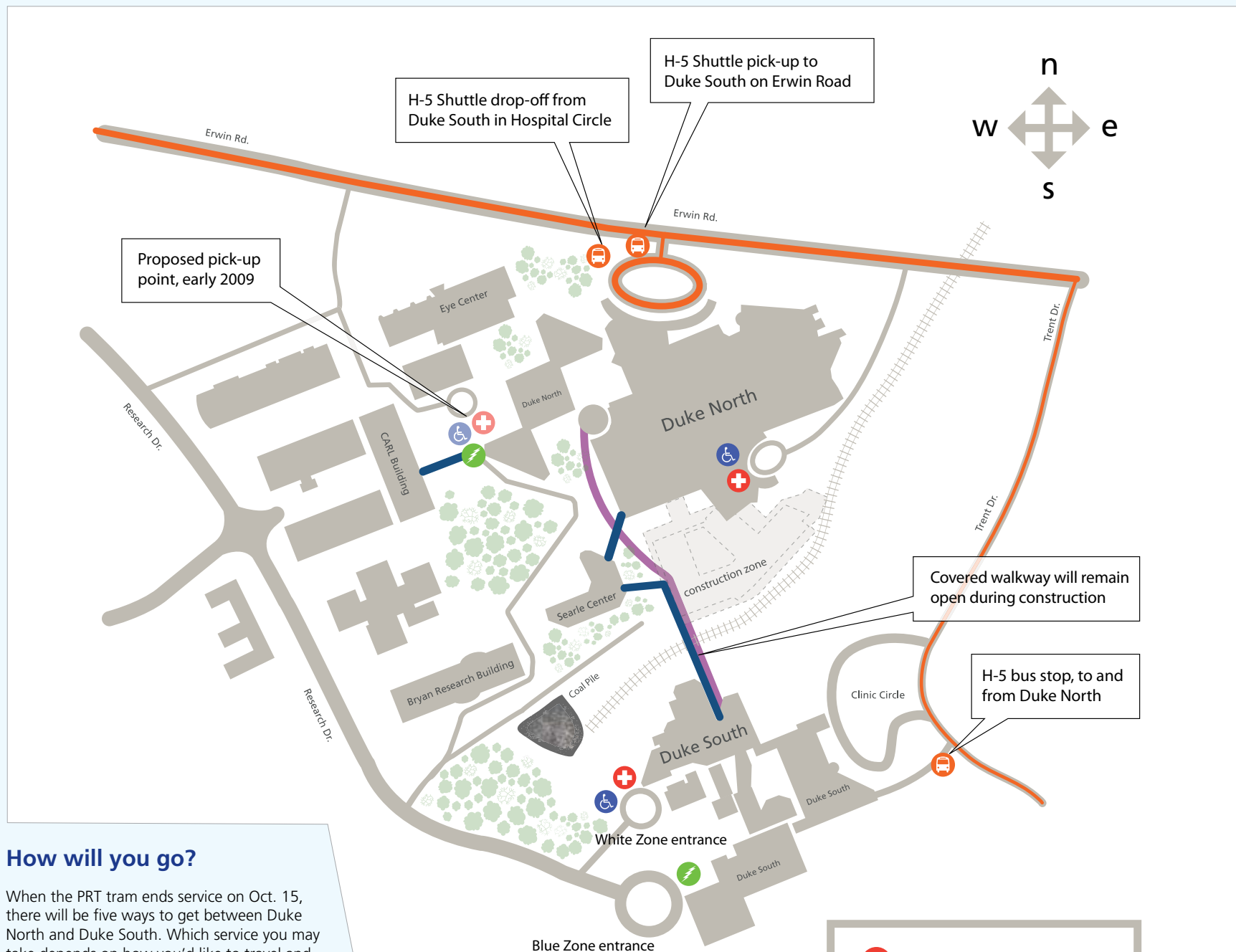
When Otis announced it had made a \$5.9 million deal with Duke for a futuristic “horizontal elevator” in the mid-1970s, the news was reported in newspapers big and small around the world.

By 1979, the PRT was being installed at the medical center. The first ride was taken in December that year. The Associated Press told the world that Duke treated the first ride “as a major event: officials dispensed punch and had an employee chorus sing railroad songs.”

State transportation Secretary Tom Bradshaw was there and Duke Eye Center receptionist Jane Bindewald cut the ribbon.

5 Ways to Travel

On Oct. 15 PRT, service ends; electric vehicle, other alternatives begin



How will you go?

When the PRT tram ends service on Oct. 15, there will be five ways to get between Duke North and Duke South. Which service you may take depends on how you'd like to travel and your level of personal mobility.

Walk: The covered walkway between North and South will remain open throughout the construction period. Walking is great exercise, according to LIVE FOR LIFE.

H-5 bus: The H-5 shuttle bus – which is available free of charge to all employees and visitors – leaves from bus stops at North and South every 15 minutes.








Electric vehicle: This service is intended for visitors and employees who have difficulty walking long distances. The service continues all day. To ride, just come to one of the pick-up/drop-off locations: The CARL Building walkway at Duke North or the Blue Zone entrance at Duke South.

Wheelchair bus: For employees and patients who use wheelchairs. Each trip on this service must be requested through Patient Transport. Between October and early next year, wheelchair vans will leave from the ambulance

bay at the Emergency Department at North and from the White Zone entrance at South. In early 2009, the pick-up/drop-off location at North will switch to a new site at the CARL Building walkway.

Ambulance: For patients. As with wheelchair vans, each trip on this service must be requested through Patient Transport. Between October and early next year, patient transport ambulances will leave from the ambulance bay at the Emergency Department at North and from the White Zone entrance at South. By the end of February, the pick-up/drop-off location at North will switch to a new site at the CARL Building walkway.

Diligent work has gone into making these plans, but please remember they are subject to change. ■

-  ambulance pick-up/drop-off
-  H-5 shuttle pick-up/drop-off
-  wheelchair van pick-up/drop-off
-  electric vehicle pick-up/drop-off
-  H-5 shuttle route between Duke North and Duke South
-  covered walkways
-  site of old PRT track

NOTICE: This map is subject to change. Please check <http://inside.dukemedicine.org> for the latest details.

WORKING

Talking politics on campus

It's a political year. Duke University and Health System encourages all students, faculty and staff to be active and engaged citizens, and to participate fully in the political life of the community, said Michael Schoenfeld, Duke University vice president for public affairs and government relations.

Schoenfeld wrote to the Duke community last month to remind employees that it is important to keep in mind the legal guidelines that govern political activity on campus.

As a non-profit, tax-exempt entity, Duke must abide by federal and state laws prohibiting the use of its facilities, services or personnel to promote or support individuals or organizations campaigning for public office. These laws prohibit Duke, and any of its related entities, from contributing to or supporting political candidates or parties.

"Simply put, no Duke resources – including personnel, e-mail accounts, copiers, office space, vehicles or publications – may be used for political purposes," Schoenfeld wrote. "The restrictions on political activity do not apply to any employee acting as an individual, on their own time and using personal resources. Understanding the basic rules helps promote vibrant discussions on campus about candidates and political issues without violating the law."

The following guidelines address common questions about political activity by Duke employees:

Speaking out on political issues

A Duke employee who speaks or writes on political issues – such as at campaign events, op-eds, blogs and other public media – should take care to indicate that the comments are personal and do not represent the views of the university or health system.

Political campaigns

Federal law prohibits Duke from raising funds for a political candidate or political party. This prohibition includes using Duke facilities, personnel or other resources for partisan political activities. In addition, employees may



ILLUSTRATION BY VANESSA DEJONGH

not use the university or health system seal, letterhead, symbols, or other identifiable marks of institutional affiliation (including photos of Duke buildings) to endorse or promote political parties, campaigns or candidates.

"It is important to keep in mind the legal guidelines that govern political activity on campus."

Candidates on campus

Candidates for political office may speak on campus at the invitation of the university, health system or organizations affiliated with Duke as long as:

- Duke provides equal speaking opportunities to political candidates

seeking the same office;

- Duke as an institution is not indicated as being in support of or opposition to the candidate;
- No political fundraising occurs; and
- The appearance is a speech, a Q&A session, or a similar format typical of an educational activity at an academic institution.

Candidates can visit campus without an invitation at events open to the public, but fundraising is not permitted. ■

Are you registered?

Visit <http://www.sboe.state.nc.us/> to learn about the deadlines for registering, and confirm your current voter registration.

BENEFITS

2009 SIGN UP

Open enrollment information sessions

Open enrollment, that stretch in October when faculty and staff select or make changes to health, dental, vision and reimbursement benefits, takes place this month. For the fourth consecutive year, participants in the Duke Basic plan will not see a premium increase.

Learn about the new health care card, get help in determining which health plan is best for you and your family, or learn how you can save money through a reimbursement account during an information session.

Wed, Oct 1, 10:30 am - 11:30 am
Duke Hospital 2002

Thurs, Oct 2, 10:30 am - 12 pm
Bryan Ctr, Rm A

Mon, Oct 6, 11:30 am - 12:30 pm
Searle Ctr, Rm E

Tues, Oct 7, 6 pm - 7 pm
Duke Hospital 2002

Fri, Oct 10, 10:30 am - 12 pm
Perkins Lib, Breedlove

Mon, Oct 13, 2:30 pm - 3:30 pm
Duke Hospital 2001

RETIREMENT NEWS

AIG answers questions

News coverage about the government takeover of American International Group (AIG) in September has raised questions about AIG/VALIC Retirement Plan funds, one of the options many Duke employees have for investing retirement funds.

Jim Simone, vice president for relationship management with AIG/VALIC, supplied the following information:

- VALIC (The Variable Annuity Life Insurance Company) is an insurance company incorporated and protected by Texas state insurance regulations. VALIC is a wholly owned subsidiary of AIG, and VALIC's funds are completely separate from the parent company AIG.
- Texas state insurance laws help to preserve and enhance the solvency of the general account and to assure that the contractual obligations to insurance clients are fulfilled.
- VALIC's fixed options provide fixed rate earnings and a guarantee of principal. This guarantee is backed by the claims-paying ability of VALIC, which supports only the obligations of VALIC, not any obligations of AIG.
- Participant assets in variable annuity account options are invested in mutual funds regulated by the SEC and are separate and distinct from any AIG assets.

At Duke, general inquiries can be directed to Human Resources at (919) 684-5600 (ask for a benefits retirement representative). If you have questions about your AIG/VALIC investments, you can call AIG/VALIC at (919) 401-3252.

ON THE JOB

DUSON takes a LEED

The Duke University School of Nursing building, already pleasing to the eye since its August 2006 opening, has won a coveted designation that certifies it's also pleasing to the environment.

The building has just received silver LEED certification – a rating of construction standards based on the number of LEED points (33) it earned. It's the fourth new construction project at Duke to earn the silver LEED designation, and one of only 400 nationally.



LEED buildings use resources in a more environmentally friendly manner compared with conventional buildings. LEED buildings also offer a better work environment with an eye on employee health and comfort.

"The Duke University School of Nursing is proud to be in a leadership position nationally and across the Duke campus with our commitment to using sustainable materials and techniques in the construction and maintenance of our facility," said Catherine L. Gilliss, DNSc, RN, FAAN, dean of the Duke University School of Nursing and vice chancellor for nursing affairs, Duke Medicine.

The building's "green" elements are spread across the five LEED (Leadership in Energy and Environmental Design) categories, plus Innovation and Design Process:

- **Sustainable Sites:** The design team minimized the building's footprint and protected the site's open spaces.
- **Water Efficiency:** Fixtures reduce potable water use by 30 percent.
- **Energy and Atmosphere:** The building saves 32.5 percent in lighting wattage, in addition to other savings.
- **Materials & Resources:** Achievements include diverting 50 percent of construction waste from the landfill, and using 40 percent local, regional and recycled content materials.
- **Indoor Environmental Quality:** Building users can open windows and control lights to their comfort.

Beyond the standard LEED points, the DUMC architect encouraged the pursuit of "green housekeeping," which mandates environmentally preferred chemicals, microfiber mops and recycled paper products in accordance with Green Seal Standards.

The DUSON building will become the first at Duke to incorporate the program.



Lamb Foundation's 20 years of support celebrated

Twenty years ago, the N.C. Knights of Columbus' Lamb Foundation of NC Inc., began a relationship with the Duke Fragile X Clinic. Families suspected of carrying the Fragile X gene, which causes hereditary mental retardation and autism, often did not have insurance to cover genetic testing. This limited the clinic's ability to provide adequate genetic counseling. The Lamb Foundation of N.C., which raises public awareness and support through the sale of humble Tootsie Roll candies, began making contributions to the clinic to help families pay for the tests. Since

then, the donation has also been used to help cover the costs of child development supplies for the children and an annual parent workshop to educate the families about Fragile X syndrome.

The K of C made a presentation to the Fragile X Clinic last month. Pictured are George Scott and John Gouldie of the N.C. Knights of Columbus, left, Allyn McConkie-Rosell, Ph.D.; Ave Lachiewicz, M.D.; Gail Spiridigliozzi, Ph.D., and Debbie Burgess of the Duke Fragile X Clinic.

PHOTO BY MARK SCHREINER



Island of relaxation

Duke Hospital staff members and patients' families enjoy a sunny fall day under the umbrellas in North's newly refurbished interior courtyard. The courtyard, just off the main lobby, features colorful flowers, trees and other greenery, as well as a cistern and a segment of split rail fence to add to the welcoming atmosphere.

PHOTO BY TIM PENNIGAR

ANNOUNCEMENTS

7 to be honored during Medical Alumni Weekend

The Duke Medical Alumni Association will present the following awards on Oct. 24 in conjunction with Medical Alumni Weekend, Oct. 23-26:

Distinguished Faculty Award

Augustus O. Grant, M.D., Ph.D., HS 1977-'80, professor of medicine, Cardiology

Paul O. Modrich, Ph.D., James B. Duke Professor of Biochemistry

Marilyn Jo Telen, M.D., HS '80-'83, Wellcome Professor of Medicine and chief, Hematology

Distinguished Alumnus/a Award

Lawrence J. D'Angelo, M.D. '73, MPH, chief, Division of Adolescent and Young Adult Medicine, Children's National Medical Center

David R. Piwnica-Worms, M.D. '82, Ph.D. '83, professor, radiology and molecular biology and pharmacology, Washington University School of Medicine

Tracey A. Rouault, M.D. '77, HS '77-'82, head, Molecular Medicine Program and chief, Section on Iron Metabolism, National Institutes of Health

William G. Anlyan Lifetime Achievement Award

Samuel L. Katz, M.D., Wilburt C. Davison Professor of Pediatrics, Duke

Find more information about Medical Alumni Weekend at: <http://medalum.duke.edu>

Procurement recognized by minority business council

Mary Crawford, associate director of Procurement and Supply Chain Management accepted the Public Sector Entity of the Year award for the department at the Carolinas Minority Supplier Development Council's Business Opportunity Conference in Charleston last month. Duke was nominated by a minority supplier that the department has helped develop over the past few years.

Also at the conference, Crawford taught a class to minority and women business owners called "Going Green to Get the Green," which focuses on how smaller businesses can anticipate the needs of purchasers requiring that goods and services be sustainable.

Feng awarded \$270,000 grant to study OCD

Guoping Feng will share the inaugural Hartwell Biomedical Research Collaboration Award with colleague Andrew Pieper, M.D., Ph.D. of the University of Texas Southwestern Medical Center. The new award will provide \$270,000 over three years to continue their research into obsessive-compulsive disorder (OCD).

ON THE WEB

INTRODUCING INSIDE ONLINE

<http://inside.dukemedicine.org>

Inside Duke Medicine, the monthly newspaper for the Duke University Health System, now has a sibling – Inside Duke Medicine, the daily news Web site. We call it Inside Online, and it's where we'll post more news, features and multimedia content to help you be better

informed about working at Duke Medicine.

Take a tour of the new home page below to learn about the key features of the site. Then surf over to <http://inside.dukemedicine.org>, make it your home page, and come back each day to see what's new at Duke Medicine.

Don't worry, the newspaper version isn't going anywhere. We'll continue to print some 17,000 copies each month, with the best articles, feature stories, news items and employee photographs from our daily online coverage. ■



1 Duke Medicine in Pictures Featuring photos, videos, news reports and other images showing the best of Duke Medicine.

2 Today's Top News Bulletins of health system news, to give you the day's important tips. Each bulletin has a category to help you quickly know how the tip affects you.

3 Search Find exactly what you're looking for. And if it's not on Inside Online, use our Contact form to send us your suggestions and contributions. Also in this bar, find the In Print page to get the PDF of the latest newspaper, and the RSS/Subscribe page for our newsfeeds.

4 Inside Scoop A health system blog, where we post news of all sorts from across the health system. The most recent item is at top, so be sure to scroll down to read past items.

5 High Five Employee recognition and testimonials – where we celebrate your achievements big and small and let your voices tell about what makes Duke Medicine a great place to work. Be sure to nominate a co-worker when she or he exemplifies the Duke Medicine values and mission.

6 Recent Postings An index to *Inside* news and feature stories about your entity.

Inside Duke Medicine

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Next issue

The next print edition will appear **Nov. 3**. The deadline for submissions for that issue is **Oct. 15**.