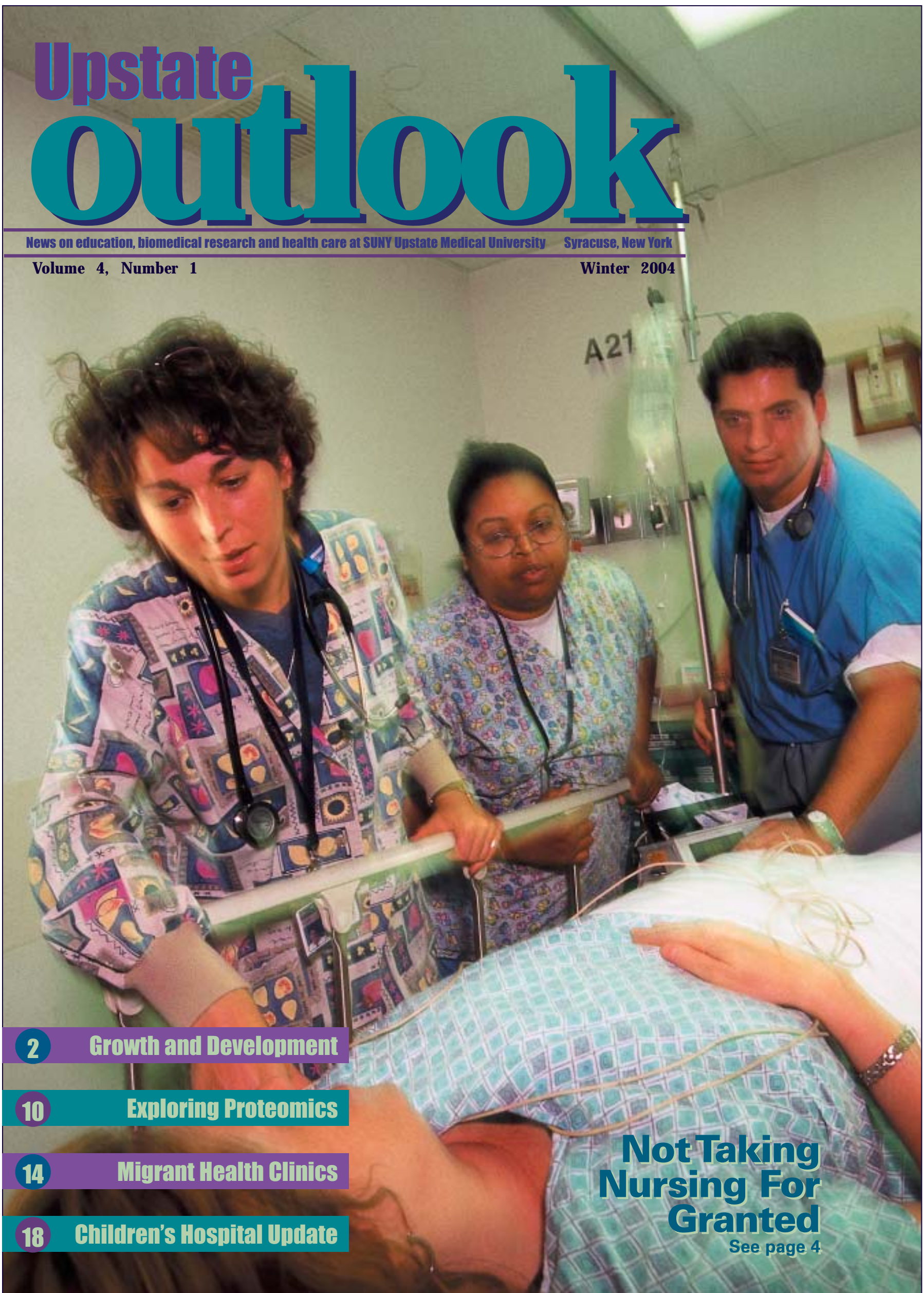


Upstate outlook

News on education, biomedical research and health care at SUNY Upstate Medical University Syracuse, New York

Volume 4, Number 1

Winter 2004



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Growth and Development

It feels good to be in growth mode again. Here at SUNY Upstate, we're moving full steam ahead with the vertical expansion of University Hospital's east wing. Our plans call for a five-floor addition that will be crowned by the CNY Children's Hospital.

Expansion of the east wing has been anticipated since the building was added in the mid 1990s. But those of us who understand the workings of an academic medical center appreciate that delayed gratification comes with the territory.

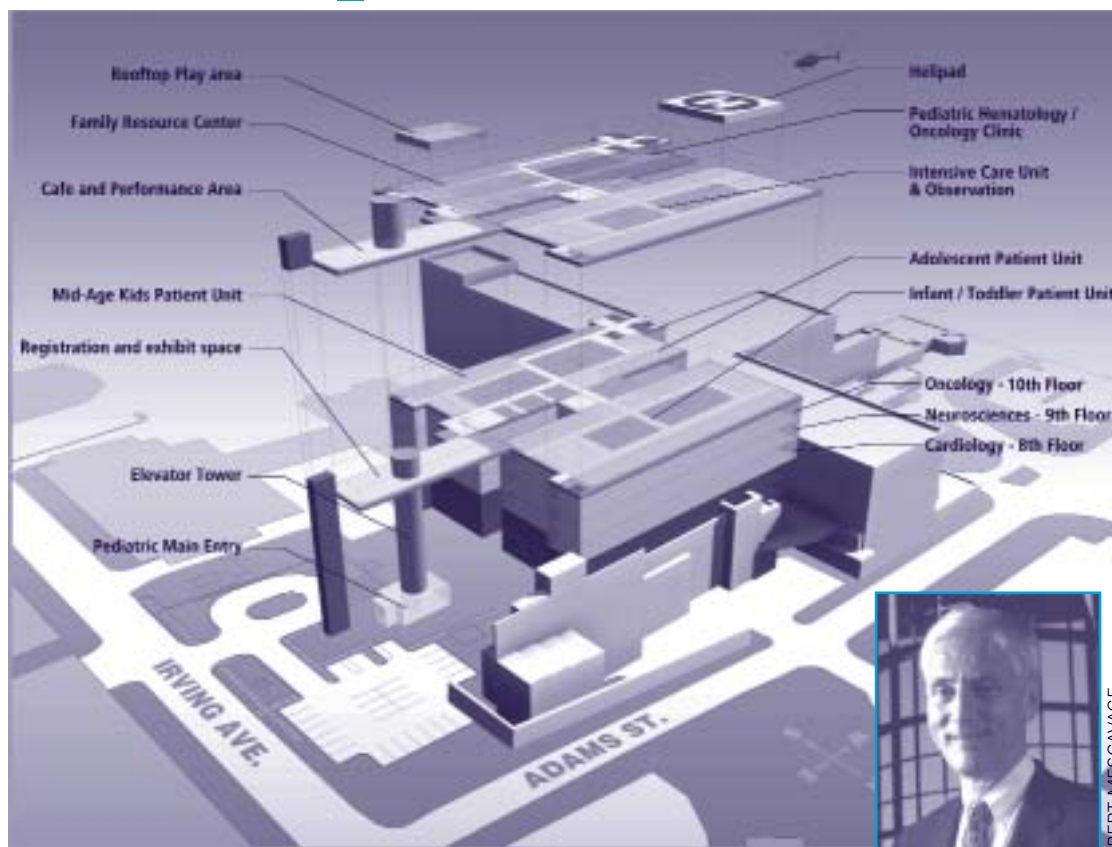
The all-important Certificate of Need has been approved, and the architect who will work with us to design the addition over the next year has been selected. Because the new construction will be on top of the existing structure, no significant site preparation will be required. Thus, progress should be visible about one year from now, aiming toward an occupancy date of December 2007.

The total cost of constructing the east wing expansion will be nearly \$100 million, which is part of a bond authorization from the State of New York. Of that total, University Hospital - pleased to place our resources behind something that has been on the collective agenda of our community for decades - will use \$35 million to construct the CNY Children's Hospital, which will occupy the top two floors of the east wing expansion.

In addition, we have engaged in a community campaign to raise \$15 million for equipment, programmatic costs and other features that will make the Children's Hospital a special place for children and their families.

Under the dynamic leadership of Pediatric Chair Dr. Thomas Welch, Children's Hospital Campaign Chair Mary Ann Shaw, Vice President for Development Eileen Pezzi, and the Upstate Foundation Board led by Don Denton, the necessary forces are aligned, including a cohesive vision, a collaborative spirit and the essential financial support.

Already, our community has embraced the CNY Children's Hospital like no other cause in my memory. I must say I am very gratified, but not surprised, by this response. This is a strong and cohesive community, with a generous heart and solid values.



Conceptual building plan. Karlsberger Architects, Columbus, Ohio.

Gregory Eastwood MD

The Children's Hospital may be the centerpiece, but the east wing expansion will feature three other institutional priorities in the remaining additional floors: neuroscience, oncology and cardiovascular.

Neuroscience, for example, has had a long historical identity with Upstate in both research and clinical services. In the 1990s - widely considered "the decade of the brain" - we added the Gamma Knife and other new approaches to brain and spine surgery, and we reinforced the institutional commitment to neuroscience by changing the name of the Department of Physiology to the Department of Neuroscience and Physiology.

Our increasingly multidisciplinary program in cancer care has also made dramatic strides forward, exemplified by its recent accreditation from the American College of Surgeons' Commission on Cancer. This badge of honor is awarded to only one in four hospitals nationwide. An entire floor of the east wing expansion will be dedicated to cancer care, allowing us to concentrate advanced cancer services within one place - much like the rationale behind the CNY Children's Hospital.

SUNY Upstate's world-class Institute for Cardiovascular Research has inspired us to dedicate additional clinical resources, including one floor of the east wing

expansion, to cardiac care. The ranking of heart disease as the leading cause of death in our nation is added rationale for focusing more resources in this area.

No small part of the east wing expansion will be its addition of private, family-friendly rooms for our patients. Our original University Hospital building designed in the late 1950s and opened in 1965, is nearly a half century out of date.

A final note on our plans for the new and improved east wing. The expansion is less than 50-feet from Crouse Hospital. The expansion is designed to be Crouse-friendly in its physical location and in its clinical programs - pediatrics, cancer, neurosciences and cardiovascular disorders. My vision is that some day Crouse Hospital and University Hospital will be one thriving academic medical center, serving the needs of the Central New York region and recognized across the nation for its clinical, education and research programs.

So here's to a new year and a new era for SUNY Upstate Medical University, University Hospital and Central New York health care. Our ongoing quest for excellence is something which unites us all.

-Gregory L. Eastwood MD,
President
SUNY Upstate Medical University

Upstate outlook

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ON THE COVER

Diane Stets-Pereira, RN, BSN; nursing assistant Clarissa Gaines; and emergency medicine resident Mario Capuzzi MD in the University Hospital Emergency Department.

Susan Kahn
Photographer

Not Taking Nursing for Granted

A noble profession by nature, nursing continues to grow in stature, as hospitals link positive patient outcomes – and bottom lines – to a high caliber of nursing care. In this issue, we examine the art, the science and the business of nursing in a teaching hospital, plus University Hospital's pursuit of Magnet status from the American Nursing Association.

By Denise Owen Harrigan, et al. **Page 4**

Proteomics: the New Genetics

With the human genome mapped, SUNY Upstate scientists are focusing on the even-more-elusive challenge of identifying proteins, which give cells their marching orders and are key targets for disrupting disease.

By Leslie Eimas **Page 10**

Bumper Crop

In their first year of providing free health care for CNY migrant workers, SUNY Upstate medical students and faculty expected to visit three farms but found a far greater demand for their portable clinics, inspired by Bruce Gould MD '79.

By Susan Keeter **Page 14**

A Room of Their Own

When the CNY Children's Hospital at University Hospital opens in 2007, all rooms will be private and family-friendly – one of many reasons CNY has embraced the concept of a children's hospital.

By Denise Owen Harrigan **Page 18**



ROBERT MESCAVAGE

Publisher's Perspective

Optimism is clearly the theme of this issue, and it is fuelled by progress on all fronts at SUNY Upstate. As Dr. Eastwood reports on the opposite page, we are proceeding with deliberate speed toward the long-anticipated, vertical expansion of University Hospital. Throughout this issue, we find welcome evidence that the CNY Children's Hospital at University Hospital is a reality rather than a dream.

Our research enterprise continues to grow at a faster rate than most SUNY schools, and – as you will read on page 10 – our proteomics research facilities are well ahead of the curve. And in our feature on nursing at University Hospital, we share our ever-increasing respect and appreciation for the noble profession of nursing. As Chief Nursing and Operating Officer Ann Sedore notes, nurses are not only the heart of our hospital, they are its economic drivers.

This issue carries stories that inspire as well as impress. Our medical students and faculty have taken a literal approach to "field work" and created a portable health clinic for migrant workers. Upstate alumnus and internationally recognized oncologist David Schenkein MD '83 has played a key role in gaining FDA approval of the revolutionary cancer drug VELCADE™. And Ruth Woods of Syracuse, who insists she is "just a mom," has raised the funds that have raised the bar for physical rehabilitation at University Hospital.

Optimism? I trust that this issue of *Outlook* justifies my emphatic use of the term and convinces our readers that SUNY Upstate's future looks very bright indeed.

Ronald R. Young, Publisher
Vice President for Public and Governmental Affairs



UPSTATE MEDICAL PHOTOGRAPHY

Not Taking Nursing For Granted

Nursing in an academic medical center is no easy task. University Hospital commits to listening more closely to nurses, raising their profile and easing the pressures on their practice.

After two years as a University Hospital nurse – and six months in the Emergency Department – Tammy Sunderlin BSN, RN remembers fleeing to the garage after work one night, climbing into her car and bursting into tears. “Three helicopters and three ambulances came in during that shift,” she remembers. “We had back-to-back traumas and lost a patient. I was devastated and exhausted and questioning if I could do this every night.”

Five years later, Sunderlin doubts she could do anything else. “You never know what’s going to come through the door,” she concedes. “You have a patient with an earache in one room, with a gunshot wound in the next, a helicopter landing on the roof and an ambulance pulling in from a massive motor vehicle trauma.

“I have come to the conclusion,” she says, “that I can’t help save every patient. But I can make a difference to every patient or to that patient’s family.”

Commitment – the cornerstone of a strong nursing practice – helps many nurses endure job situations that are psychologically and physically draining. But commitment can wear thin, even in the most dedicated nurses. And commitment can’t be taken for granted,

especially in a field where more than 13 percent of the nation’s nursing positions are vacant, the average age is approaching 50 and a career in nursing seems to be losing its luster in the eyes of younger generations.

Paying Attention

Perennial pressure to recruit new nurses is a key reason University Hospital has intensified its efforts to support, empower, educate and promote its 800 nurses. Pressure to retain existing staff is even stronger, since it costs an estimated 100 percent of a nurse’s annual salary to recruit a new nurse. Paying closer attention to nurse satisfaction has already improved the hospital’s RN retention rate by 6 percent between 2000 and 2003.

An important byproduct of not taking nurses for granted is increased awareness of their pivotal contribution.

“University Hospital has come to recognize that nurses are not only the heart of the hospital, they are the economic drivers,” says Ann Sedore PhD, RN, chief nursing and operations officer. “Thanks in large part to the quality of our nursing, this hospital made an additional 1,000 beds available last year and generated an additional \$14 million in revenues.”

More significant are University Hospital’s mortality rates, which are the

lowest in the region, according to two recent report cards by the Alliance for Quality Health Care and Excellus.

University Hospital Executive Director Ben Moore III credits these high grades to the University Hospital staff members, 800 of whom are nurses. A 2002 study at the University of Pennsylvania showed a strong correlation between positive patient outcomes and attentive nursing care – specifically, a low ratio of patients to nurses.

Pressure Points

High-caliber nursing care is essential at University Hospital, which treats the sickest patients in the region and has the third highest acuity in New York State. Raising the bar even higher is University Hospital’s affiliation with SUNY Upstate, one of 125 academic medical centers in the United States. These institutions operate at the leading edge of medicine. Clinical care is highly specialized. The status quo is constantly challenged by research. And – since education is Upstate’s core mission – teaching is integrated into every endeavor.

“Teaching is second nature for our nurses,” agrees Sunderlin, now patient service director of the Emergency Department. “Nurses are always teaching – new nurses, new residents, medical students, patients. It takes time. You have to hold back from doing things yourself

and remember that this is the teaching hospital of an academic medical center.”

The multi-focused and often-urgent nature of nursing at University Hospital affects the formula for staffing. “We’ve insisted on above-average staffing levels, because our hospital is a teaching hospital, and our patient mix is not average,” says Moore. “Our average patient is twice as sick, twice as complicated as patients in other local hospitals.”

Nursing Councils: Signature Element

Staffing formulas are also adjusted to accommodate staff nurses’ service on University Hospital’s nursing councils, reconfigured to give nurses more input into hospital operations.

“We’re pretty proud of our nursing councils,” says Sedore. “Initially, they were made up of managers and educators. But we wanted staff nurses to have a stronger voice. As it turns out, having them on the councils has developed great leaders.”

Ninety staff nurses and 70 nurse managers serve on seven councils and their committees, according to Nancy Page MS, RN, coordinator for nursing practice and cochair of one of the councils.

University Hospital is the only Central New York hospital with this level of staff input in its governance structure.

“Council participation is voluntary, and it’s a lot of work,” notes Page. “But it gives the nursing staff an opportunity to be heard, and it makes a real difference.”

Role in Research

The Nursing Research Council, for example, involves staff nurses in medical research. Encouraged by the council, Karen Hirschman RN helped design and conduct a clinical study on the inpatient psychiatry unit. “So far, our study has verified what we found in the literature: that literacy levels drop an average of four years during the acute stages of psychiatric illness,” she reports. “In the next phase of our research, we will adjust our patient reading materials to appropriate literacy levels.

“This experience proves we base our practice on evidence,” Hirschman says. “Best of all, it improves our patient care.”

It was the Nursing Research Council that reviewed the literature and confirmed that patients heal faster – and go home earlier – in hospitals with a lower nurse-patient ratio.



Edward Lindberg RN and nursing assistant Evelyn Scott in the Emergency Department.

SUSAN KAHN

To support a research-based nursing practice, Gregory L. Eastwood MD, SUNY Upstate president, now serves as president of Friends of the National Institute for Nursing Research (FNINR). At a recent FNINR forum in Washington, DC, Eastwood said, “I believe that research is vital to the profession of nursing. Without the discovery of new knowledge through research, education and health care stagnate and slowly become irrelevant.”

Broader Exposure

Nursing councils also broaden the nurse’s perspective on health care, according to Priscilla Worrall, PhD, RN, University Hospital’s coordinator for nursing research. “The patient remains the nurse’s touchstone,” she explains. “But the councils increase our nurses’ exposure to the business of healthcare. They realize that you can’t separate the business from the practice.”

Heart of Nursing

As chief nursing officer at University Hospital, Sedore views her role as “making us operate as a viable business while understanding the heart of nursing.

“It isn’t a business heart,” she admits. “Nurses are often offended by the business of health care. They sometimes see it as dehumanizing. But nurses are the economic drivers of the hospital. That’s power. I’m beginning to get them to accept that idea.”

Bottom Line

For University Hospital nurses, the bottom line is the patient – and nursing councils ultimately serve the patient. “The councils have increased our nurses’ ability to make decisions and get what patients need, when they need it,” reports Page.

“How much nurses can do independently is a huge issue. Autonomy really makes

Clinically Speaking

people happy. You can pay nurses a fortune, but if you don't respect what they bring to the patient's care, they won't stay."

"You Are So Ready"

The nursing councils made a strong impression during the last JCAHO evaluation. "At the closing conference, the JCAHO appraiser was glowing about our shared governance structure," Page reports. "She said to us, 'I can't believe you haven't applied for Magnet status. You are so ready.' (see page 9.)

"Nursing councils are not something you get for free," Page concedes. A nurse who serves on a council is allotted one day a month for that activity, while a council chair can receive one or two days a week. For salaries to cover replacement of nursing council chairs, cochairs and advisors, University Hospital spent \$102,000 last year. The investment appears to be paying off. Staff nurses who have chaired councils have a 100 percent retention rate.

Higher Profile

A fringe benefit of the nursing councils is higher visibility for nurses. "An academic medical center is the toughest place for nurses to make inroads," says Page. "There is a longstanding tradition that docs control the practice. Thanks to our nursing councils, physicians see more nurses at high-level meetings, and there's more dialogue about working in teams to improve patient care."

Good collaboration between doctors and nurses improves not only patient care, but nurse retention. Creating a more collegial environment for nurses is therefore a University Hospital priority, endorsed by physician leadership.

Nurse for a Day

While physicians and nurses share a common goal, they often function on different planes. That's what prompted pediatric intensivist Neil Seidberg MD to create the "Nurse for a Day" program, which gives residents a birds-eye view of nursing routines and responsibilities.

"Nurses and residents do very complementary yet very different work," explains Seidberg. "Residents are used to writing orders and walking away. For a full day, I have our residents play the role of a very new nurse in the Pediatric Intensive Care Unit. The residents are not allowed to write orders. The experience improves communication – and forces residents to stick around and see things that docs don't usually think about."



Tammy Sunderlin BSN, RN, Patient Service Director, Emergency Department



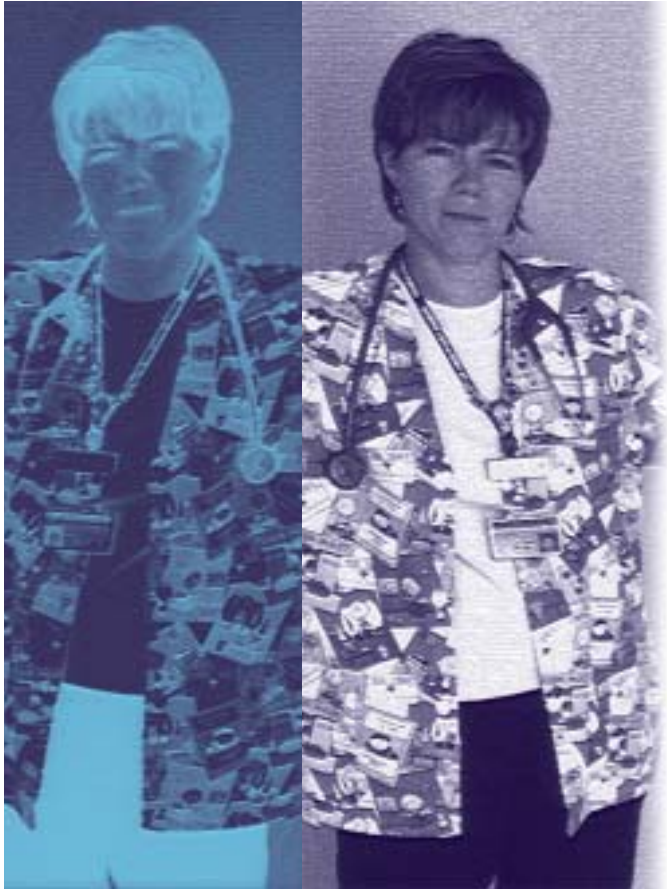
"Nurses are not only the heart of the hospital, they are the economic drivers."

—Ann Sedore PhD, RN
Chief Nursing and Operating Officer

Soon, Upstate's College of Medicine will offer a pilot elective that pairs a first-year medical student with a University Hospital nurse, at the bedside of a very sick patient. "What better place to start building respect and communication?" asks Lynn Cleary MD, associate dean for curriculum in the College of Medicine. "The nurses will teach the students to draw blood and change IVs, but primarily we want the medical students to watch the nurses approach, touch, move, bathe and communicate with patients.

"Nurses are so busy," acknowledges Cleary. "The patient is their primary client, and they have no formal responsibility to teach medical students. But it will be worth their time, if this experience improves communication and enhances the student's appreciation of nursing roles and skills."

Paul Cunningham MD, chair of the Department of Surgery, is also focused on the issue of interaction between surgical residents and their professional associates, including hospital nurses. His department has committed to helping residents develop the six competencies established in 1999 by the American Council for Graduate Education. Interpersonal and communication skills figure prominently on that list, as does the need to work well with a health care team.



Nancy Page MS, APRN, Coordinator for Nursing Practice

SUSAN KAHN

Paying closer attention to nurse satisfaction has already improved the hospital's retention rate by 6 percent between 2000 and 2003.

Pediatric resident Cary Qualia MD shadows PICU nurse Tanya Lancer RN in the PICU's "Nurse For a Day" program.



SUSAN KAHN

Works Well with Others

"Some residents intuitively work well with others," observes Cunningham. "Some residents are handicapped in this respect. But these are skills that can be learned and can be mandated, although it's not easy to do.

"It's like wearing seat belts," he adds. "You have to set standards and enact laws, then publicize, politicize, audit and enforce those laws."

To monitor the progress of 50 surgery residents, training in hospitals throughout Syracuse, the department has designed an electronic evaluation system with a section on interpersonal communication. "At the moment, supervising surgeons evaluate our residents," Cunningham reports. "At some point, it would be nice to have input from nurses."

Although attendings are not subject to such evaluations, Cunningham sees an attitude shift – for the better. "In our specialty, there's traditionally been a sense that being nice is for family doctors, not surgeons. But the culture is changing. This younger generation seems very team-oriented and principle-driven. They would choose another specialty rather than work with mean-spirited, difficult individuals.

"The bottom line is that the surgeon sets the tone for the entire team," concludes Cunningham. "My philosophy is to take your work seriously but don't take yourself too seriously. You need to show respect to everyone you meet, whether it's a nurse, a patient, a housekeeper or another physician."

Put It in Writing

In the eyes of a nurse, respect is essential. Even more critical is having the authority to do what is best for the patient.

"The nurse who is with the patient 24 hours a day plays the central coordinating role, pulls the necessary disciplines together – and elevates the entire process to a higher level," explains Lori Holmes PT, cochair of the Multidisciplinary Practice Council. "We're working on defining how we all communicate, collaborate and move the patient through the system."

Sedore believes that formalizing the nurse's role as coordinator is an essential building block for a better nursing environment. "I am a developing-the-infrastructure type of person," she explains. "I like consistency. Once I learn what's important, I translate it into processes. My goal is to leave in place a structure that defines how we operate yet is open to challenges."

Role of Redesign

University Hospital's recent "redesign" has also made the environment more nurse-friendly.

"The past five years represent a transition to a more egalitarian style of nursing at University Hospital," says Sedore. "Creation of the patient service leader position is one example. Patient service leaders are recognized for their clinical expertise and paid more for their leadership role. But instead of moving up the ladder into management, they stay on the floor to coach and guide other nurses."

Patient service managers also play a key role in nurse retention. "We take care of the nurses, so they can take care of the patients," says Patient Service Manager Lisa Brackett BS, RN, who works in the Intermediate Intensive Care unit. "My philosophy is that these nurses don't work for me, they work with me. They need to connect with me, to know I respect them and will go to bat for them. Even if I can't change something, I can listen to their concerns.

Plenty of Choices

"I also handle scheduling, and scheduling is very important to my staff," she adds. "I try to accommodate their needs. If you give to nurses, they give back. If you don't – well, today's nurses have plenty of choices when it comes to jobs."

Clinically Speaking

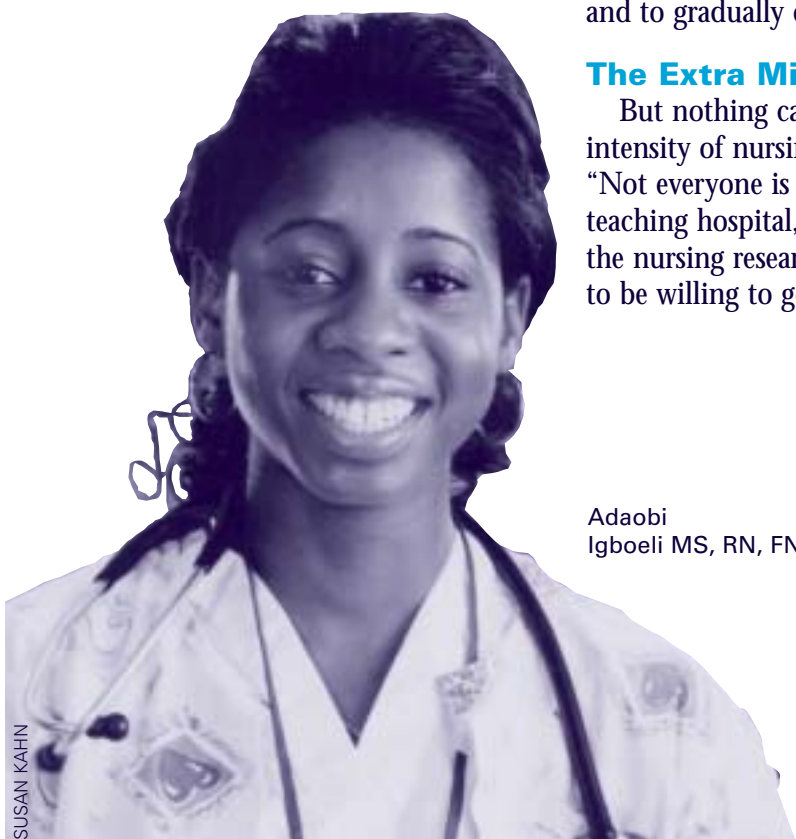
Brackett takes obvious pride in her staff. “I have one of the best teams in the hospital, with low turnover and high patient satisfaction scores,” she says. “Our nurses are very active on nursing councils and very interested in learning. At one point, 50 percent of my nurses were in school earning bachelor’s or master’s degrees.”

Spreading the Wealth

In the intense atmosphere of University Hospital, impromptu learning opportunities occur on a daily, if not hourly, basis. There’s also been a concentrated effort to offer nurses more formal educational opportunities. Tuition support is available for RNs pursuing bachelor’s, master’s and doctoral degrees related to nursing – and for LPNs earning RN degrees. Upstate’s own College of Nursing offers University Hospital RNs free tuition – up to 12 hours a semester – toward a bachelor’s degree in nursing, a master of nursing degree or a post-master’s advanced certificate.

Adaobi Igboeli MS, RN, FNP, a coronary care nurse at University Hospital, has taken full advantage of Upstate’s College of Nursing, earning a master’s degree and becoming a nurse practitioner. The process has dramatically broadened her horizons.

“When you go for your basic RN training, your focus is on hospital nursing,” she explains. “The bachelor’s degree broadens your perspective to the family, the community, even the political impact of nursing.”



Adaobi Igboeli MS, RN, FNP

“In my nurse practitioner courses,” Igboeli continues, “you add the skills to diagnose and treat disease. This is the best part. I’m not just looking at what the patient’s vital signs are, I’m figuring out why they are what they are and what we can do about it.”

There is also strong support – and financial incentive – for University Hospital nurses to earn certification in their clinical specialties. Almost 14 percent are now certified, with the strongest concentrations in psychiatry, emergency medicine, oncology and orthopedics.

A Sense of Support

“Nursing education at Upstate extends beyond the academic,” notes Sedore. “We offer a lot of sessions on personal growth and changing career goals.” For new hires, the hospital is also lengthening orientation. “This is not always the most welcoming environment,” Sedore admits. “There’s not always a lot of time to come up to speed. On day two, you’re expected to pull your own weight.”

Sunderlin fondly remembers her first nursing job in University Hospital’s coronary care unit. It was 1996, and the nurses were “very welcoming and very outgoing,” she reports. Today, there is a more structured initiation period. In the Emergency Department, for example, the goal is to have new nurses paired with preceptors to learn policies and procedures and to gradually ease into practice.

The Extra Mile

But nothing can fully alleviate the intensity of nursing at University Hospital. “Not everyone is cut out to be a nurse in a teaching hospital,” warns Priscilla Worrall, the nursing research coordinator. “You have to be willing to go the extra mile.”

“Not everyone is cut out to be a nurse in a teaching hospital. You have to be willing to go the extra mile.”



–Priscilla Worrall, PhD, RN
Nursing Research Coordinator

“This is acute care – the most extreme level of care – in a tertiary and quaternary environment,” agrees Sedore. “It’s not necessarily family friendly – the hours can be difficult to fit into the lifestyle of a young or middle-age adult. But we’re investing in programs that make our staff healthier. We’re offering health fairs and massages. We’re keeping the cafeteria open until 2 a.m. We’re building our crisis intervention teams, so nurses have a sounding board when situations are emotionally difficult.”

“It is very hard when someone dies in the Emergency Department,” says Sunderlin, “The family needs your support. Other patients still need your attention. At the same time, you’re often stunned by the violence, the trauma or the suddenness of it all.”

“We all have our coping mechanisms,” she continues. “Sometimes you turn to the crisis intervention team. Sometimes nurses get together and talk. Or you take a little time alone. But a lot of the pain is unspoken or buried under laughter.”

“As a little girl, I wanted to be a nurse so I could help people. I guess it was a pretty romantic notion,” says Sunderlin, who has learned that it takes far more than a big heart to be a good nurse. As the patient service director of the entire ED, she now deals primarily with budgets, staffing, operations, policies and procedures – the business of nursing. When things get hectic in the ED, she jumps in and takes care of patients – and is still profoundly affected by their pain. “The day we have a trauma or a death, and it has no emotional impact on me,” she says, “that’s the day I leave nursing.”

–Denise Owen Harrigan
with
Stephanie DeJoseph,
Leslie Eimas,
Melanie Rich

magnet status



...is a term that surfaces routinely in conversations about nursing.



Magnet status is an elite designation, awarded by the American Nursing Association (ANA), that recognizes the delivery of excellent nursing care within an environment that supports professional nursing practice, according to Barbara Jackson LaCasse MS, RN coordinator of University Hospital's application for Magnet status.



"The process is very rigorous. You have to meet 14 standards, each with three to seven criteria," reports LaCasse. "But the application process has really galvanized people. We are addressing issues we've had on the back burner for years."

Magnet status designation was inspired by a 1983 ANA study which explored the characteristics common to successful hospitals and tied surgical patient outcomes to qualitative and quantitative levels of nursing.

From that study, the ANA developed 14 empirical standards that qualify an institution for Magnet status. Since 1993, only 82 health care facilities nationwide have earned the designation.

University Hospital decided to pursue Magnet status in August of 2002 and hopes to achieve its goal in 2005.

"It's a labor intensive task," reports LaCasse. "Our gap analysis is complete. We've benchmarked where we are and where we need to be."

"There were no surprises," she notes. "We knew where we were strong and where we were short. Our obvious strengths are commitment and quality of nursing. Salaries and benefits are very competitive. The institution is rich in educational opportunities. And our nursing councils bring governance and decision-making to where the rubber meets the road."

Hospital administration has made a strong commitment to the Magnet status application. "Our hospital's leadership is very proactive, energetic and open to change," according to LaCasse.

"Magnet status officially raises the bar," she adds. "It's not about perfect – no place is perfect. But it's outside confirmation that we provide excellent nursing care, and outside validation is always more convincing. Younger nurses especially look for Magnet status designation when they look for jobs. It proves that we've created an environment that makes nurses stick around."

—Denise Owen Harrigan

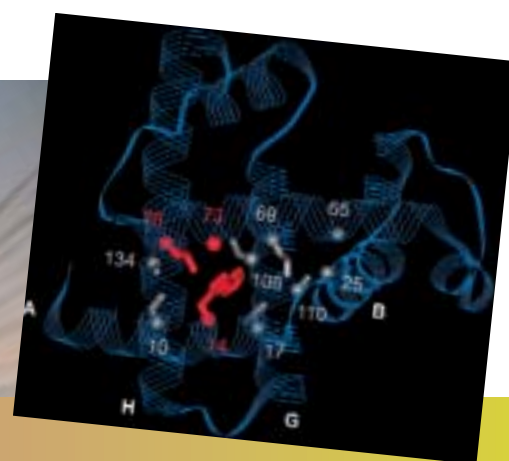
Barbara Jackson LaCasse MS, RN

SPIKE CALL, DAVID FEILING, ROBERT MESCAVAGE

DAVID FEILING

Proteomics

THE NEW FRONTIER



SUNY Upstate scientists focus on proteins as key targets for disease intervention.

Until recently, genomics – the study of genes – was the hot topic in science. But now that most genes in the human body have been identified, there's a new, hot topic: proteomics – the study of proteins.

For while our genes define us, the proteins made by those genes determine how our bodies work.

When a person becomes ill, a protein is usually to blame. Science reasons that if you identify the protein at fault – and determine its three-dimensional structure – you can design a drug to fix it. Such “designer drugs” are thought to work better and have fewer side effects than existing medications.

Now, the race is on to catalog all of the proteins in the human body, identify how they interact with each other and determine their structures. No easy task, considering that the characteristics of proteins change as the body changes – during illness, after a meal, with age, etc.

Elusive Topic

“It’s easy to talk about the genome of a person but difficult to talk about the proteome of a person,” says Kelvin Lee PhD, director of the Cornell Proteomics Program and organizer of the New York State Proteomics Symposium held on the SUNY Upstate campus last March. “It changes, for example, when a person gets sick.”

SUNY Upstate has significantly boosted its proteomics capabilities. In the spring, the university acquired two mass spectrometers. These highly sophisticated instruments help scientists identify proteins by giving the exact molecular weight of each protein present in a substance. (Each protein has a unique weight.)

Last spring, the university hired Gino Cingolani PhD, a protein crystallographer. He takes pure proteins, crystallizes them and determines their three-dimensional structures by bouncing x-rays off the crystals. Dr. Cingolani will select and purchase an x-ray diffractor when he arrives in January.

\$1 Million in Federal Funds

These developments are due, in large part, to the long-term vision of Richard L. Cross PhD, chair of the biochemistry and molecular biology department, who focused on making structural biology an area of excellence in Syracuse. With help from Provost Kenneth Barker PhD and Daniel Hurley, director of government and community affairs, he obtained a \$1 million federal grant to purchase the mass spectrometers and x-ray diffractor.

Cross also helped create SUNY Upstate’s newest doctoral program – Structural Biology, Biochemistry and Biophysics (SB₃) – offered jointly with Syracuse University and the SUNY College of Environmental Science and Forestry. This program, which began in 2001, teaches scientists how to determine the structure, function and relationships of proteins, DNA and other biomolecules.

SUNY Upstate’s proteomics expertise also includes the skills of Stewart Loh PhD, who determines the structure of proteins using NMR (nuclear magnetic resonance). Loh’s approach uses proteins in their natural form – liquid – instead of crystal, but is limited to small- to medium-sized proteins.

“Our new facilities will be very important for many research projects in Syracuse,” says Cross, who received the 2003 Chancellor’s Award for Excellence in Scholarship and Creative Activities.



Top and above: protein crystals grown by Mark Schmitt MD/PhD, associate professor of biochemistry and molecular biology, in preparation for determining their three-dimensional structure.

Top right: three-dimensional structure of apomyoglobin, a protein studied by Stewart Loh MD/PhD, associate professor of biochemistry and molecular biology.

“Many researchers get to the point where they need the structure of what they’re studying. Once you know the structure, you can design a drug to inhibit the protein’s activity,” he says.

Pharmacology Professor Mario Delmar MD/PhD intends to use the mass spectrometers for his research on the protein connexin, which forms channels between cells and allows them to communicate with each other.

“This protein is very important in various systems,” Delmar says. “In the heart, connexin allows all of the cardiac cells to contract at the same time, so the heart beats efficiently. Under some conditions, like a heart attack, the channels close, leading to a loss of electrical synchrony. We study the changes in the protein’s structure that cause the channels to close.”

Using NMR, Delmar has determined the structure for the part of connexin that regulates the opening and closing of the channels. His next challenge is to identify the proteins that associate with it.

“Previously, we would go to the Albert Einstein College of Medicine in the Bronx to do this type of work. Having mass spectrometers here should make it easier and faster to identify these other proteins,” he says.

Meanwhile, Mark E. Schmitt PhD, associate professor of biochemistry and molecular biology, is consulting with Cingolani for his research on the unusual enzyme Rnase MRP.

Schmitt discovered that the enzyme – comprised of 10 proteins and one RNA –

is essential for cell growth immediately before cell division.

Using mass spectrometry, Schmitt has identified the enzyme’s 10 proteins and is now growing protein crystals that will be used to determine their structure.

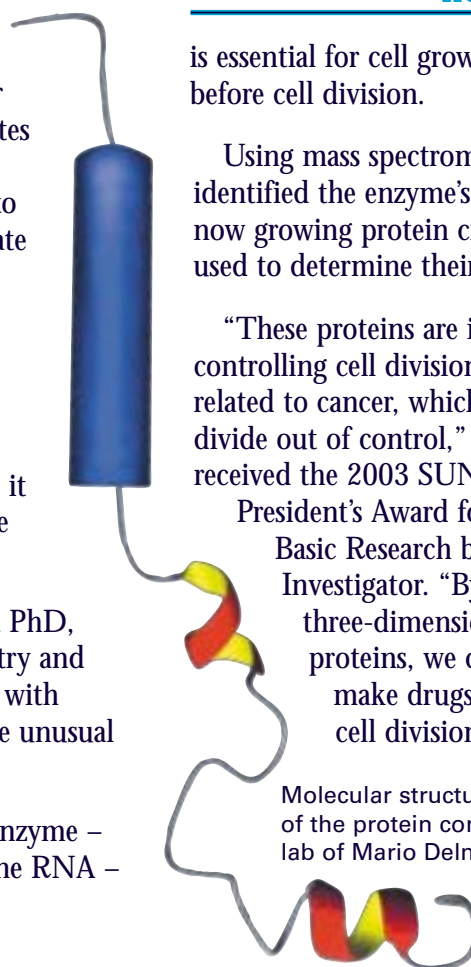
“These proteins are involved in controlling cell division and are ultimately related to cancer, which occurs when cells divide out of control,” says Schmitt, who received the 2003 SUNY Upstate

President’s Award for Excellence in Basic Research by a Young Investigator. “By knowing the

three-dimensional structure of the proteins, we could theoretically make drugs to stop the errant cell division.”

–Leslie Eimas

Molecular structure of a fragment of the protein connexin. From the lab of Mario Delmar MD/PhD.



NIH Funds Gilbert’s Landmark Research

A SUNY Upstate expert on cell division has been awarded one of 44 National Institutes of Health (NIH) grants to study human embryonic stem cells, making him the first researcher in Upstate New York to work with such cells.

Biochemistry and Molecular Biology Professor David Gilbert PhD began his research on the basic biology of human embryonic stem cells Sept. 1, with a three-year, \$322,000 grant.

Many scientists believe human embryonic stem cells could help treat conditions such as Parkinson’s disease, diabetes and heart disease. But stem cell use has been controversial.

Common Misconceptions

Some critics assume that human embryonic stem cells come from aborted fetuses or are involved in human cloning. Neither is true.

Human embryonic stem cells are derived from five-day-old embryos created in infertility clinics during in-vitro procedures. These embryos – which would otherwise be discarded – are donated for research purposes, with the consent of the donors.



Stem cell controversy heightened when President George W. Bush limited NIH funding for research to stem cells collected from embryos prior to Aug. 9, 2001.

Remarkably Versatile

Of particular interest to scientists, embryonic stem cells can turn into any type of cell in the body – for example, the beating cells of the heart or the insulin-producing cells of the pancreas.

If scientists can learn to replicate this specialization, the resulting cells may help treat a host of diseases and disorders including Alzheimer’s disease, spinal cord injury, stroke, burns, osteoarthritis, rheumatoid arthritis and vision and hearing loss. The cells may also be used to screen new drugs and to understand birth defects.

But before scientists create cell-based therapies to treat disease, the NIH wants to know how the cells work.

“The NIH recognizes the need to understand the basic biology of embryonic stem cells. The safety of their use lies in how much knowledge we have about their biology. We have only been studying human embryonic stem cells since 1998, when scientists first learned how to isolate them from human embryos and grow the cells in the lab,” Gilbert says.

Gilbert is interested in early human development, in particular, how a stem cell changes into a heart, muscle or nerve cell.

“I expect that within a few years we will be able to take the stem cells and make neurons (nerve cells),” Gilbert says. “We can do it really well now with mouse embryonic stem cells. If you can generate human neurons, then you have a possible cure for disorders such as Parkinson’s disease, spinal cord injury and Rhett Syndrome, which are all related to nerve damage.”

–Leslie Eimas



ROBERT MESCAVAGE

David Schenkein MD '83,
Vice President for Clinical
Oncology Development,
Millennium
Pharmaceuticals

Fast Track

Oncologist David Schenkein MD '83 changes lanes and takes the pharmaceutical route to combat cancer.

David Schenkein MD left his SUNY Upstate graduation in May of 1983 wavering between jubilation and apprehension. His next step was an internship at Tufts-New England Medical Center, “where I seemed to be the only physician without an Ivy League education,” Schenkein remembers. “I wasn’t sure if I really belonged there.”

“He belonged here,” says Jane DesForges MD, a legendary Tufts hematologist who encountered Schenkein early in his internship and became a lifelong mentor. “It was immediately apparent that David had a passion for medicine, intellectual intensity and a willingness to work hard. And patients loved him. It was an extraordinary combination.”

By the late 1990s, that winning combination – of curiosity, commitment and compassion – propelled Schenkein to the rank of director of the Cancer Center at Tufts-New England Medical Center. When he returned to Upstate last year – to deliver the prestigious Ross Lecture – he was in the midst of filing for FDA-approval of the revolutionary cancer drug, VELCADE™.

Schenkein’s high profile in the oncology world surprised no one at Upstate, but a recent career move – to vice president for clinical oncology development at the pharmaceutical company Millennium – astounded even Schenkein himself.

The Dark Side

“When I first went into practice, we regarded the pharmaceutical industry as the dark side – ‘The Evil Empire,’” Schenkein chuckles. “Today, much of what is new and exciting in medicine is happening on the industry side. Finally, pharmaceuticals are collaborating, not competing, with academic medicine.”

While Schenkein was in Syracuse last year to deliver the Ross Lecture (an honor, he notes, because he studied under Charles Ross at Upstate), he was often on his cell phone, orchestrating the submission of Millennium’s first cancer drug, VELCADE, for FDA approval. VELCADE is the first of a new class of medicines known as proteasome inhibitors, which disrupt the cascade of molecular events that regulate cancer cell growth and survival.

Approved in six months – record time – VELCADE is the first new treatment in 10 years for multiple myeloma, a virulent blood cancer that strikes about 15,000 Americans a year and kills about 11,000.

The prospect of such historic advances persuaded Schenkein to migrate to Millennium in 2001, after 20 years in academic medicine. “I saw this as an opportunity to make a difference on a much larger scale,” he says. “There is nothing like the personal gratification of helping an individual patient. But bringing a new drug to market can help hundreds of thousands of patients.”

Another attraction was Millennium’s reputation for operating at the outer edge of the scientific frontier. Schenkein had been torn between science and medicine since his undergraduate days at Wesleyan University, when he seriously considered pursuing a PhD in chemistry. At Upstate, he promptly gravitated toward the Weiskotten laboratory of Dr. Donald Bornstein. Schenkein published his first research paper, in the *Journal of Biological Chemistry*, as a second-year medical student.

And – despite his lack of Ivy-League credentials – he was the only Tufts intern in his year to publish a research paper (on Lyme disease, in the *Annals of Internal Medicine*).

The Patient Connection

But clinical medicine proved even more compelling. “My clinical professors at Upstate were so dedicated to patients,” he remembers. “It really wore off on me. As an intern at Tufts, I was ahead of the curve clinically.”

Syracuse Internist Paul Cohen MD, a University Hospital attending in the early 1980s, says that Schenkein had the markings of a model physician, even as a medical student. “He was compassionate, kind and communicative with patients,” Cohen remembers. “At the same time, he was the kid who always had extra questions for the attending. That kernel of curiosity was very visible. I was the person who steered David toward Tufts.”

“Without patients willing to sign up for clinical trials, you cannot take medicine to the next level.”
 –David Schenkein MD ‘83

It was an excellent match. Schenkein completed his residency in internal medicine at Tufts, then immersed himself in hematology and oncology. After research and clinical fellowships, he joined the clinical faculty, inheriting patients from his retiring mentor, Jane DesForges.

In the intense world of academic medicine, Schenkein was grounded by his patients – and admired for his ability to connect with them.

“A physician forms a bond with every patient,” Schenkein explains. “That bond seems even more profound in the life-or-death world of oncology. I spend a lot of my time talking with patients. I want them to understand their diseases and their options. My clinics run very late into the evening. When you have a 17-year-old patient with Hodgkin’s, for example, you need a long time to talk with the family.”

The Next Question

Schenkein always reserved a third of his time for research. “Back at Upstate,” he says, “they planted the seed: always ask the next question.”

“My research has always been translational,” he notes. “My lab work had a clinical trials component, and my clinical trials had a lab component.” Through the years, Schenkein tested new treatment compounds with Amgen, Immunex, Wyeth-Ayerst and other pharmaceutical companies. But when discussing clinical trials with patients, he was absolutely neutral.

“A physician must be as transparent as a pane of glass,” he says. “You have to make it clear to the patient that there is no right or wrong answer. A clinical trial consent form is very scary, as it should be.

The potential benefit to the individual patient can be very small.

“But without patients willing to sign up for clinical trials,” he adds, “you cannot take medicine to the next level.”

As his career progressed, Schenkein felt pressured to broaden his attack on cancer. “With every patient you lose,” he explains, “you lose a chunk of yourself.” In 1998, he was named director of the Cancer Center at Tufts-New England Medical Center.

In 2001, out of the blue, Millennium Pharmaceuticals approached Schenkein. He was flattered but not interested. Out of courtesy, he agreed to an informational session. “After two hours of listening to Millennium’s story,” he says, “I stopped laughing. This is really a different company.”

Millennium, widely recognized for its market-leading heart drug Integrilin – and now for VELCADE – “is a relatively small biopharmaceutical company at the forefront of genomic-driven drug development,” reports Schenkein.

When Schenkein joined Millennium in 2001, he hit the ground running. “My role is to help design clinical trials and get compounds to clinics,” he explains. “My area spends a large portion of our research and development budget,” he reports. “With all the regulations, clinical trials are incredibly expensive.”



But for the most part, Schenkein notes, “I stay as far as possible from the financial side of medicine.” Occasionally, he addresses investment analysts on the cancer drugs in Millennium’s pipeline. “Investment people want to know what you can deliver in the next 10 minutes,” Schenkein says. “They exert a lot of pressure on the industry.”

But Millennium, a publicly traded company that spends about twice as much on research and development as it earns in revenues, resists that pressure, according to Schenkein. “We’re in this for the long run. If we do what’s right for the patient, everything else will follow.”

–Denise Owen Harrigan

Field Work

SUNY Upstate medical students and faculty take portable health clinics to migrant farm workers.

Migrant Workers: the Medical Reality

Migrant farm workers are more vulnerable to injury and illness than most people living in the United States.

As a group, their average life expectancy is 49 years, compared to 77.2-year average

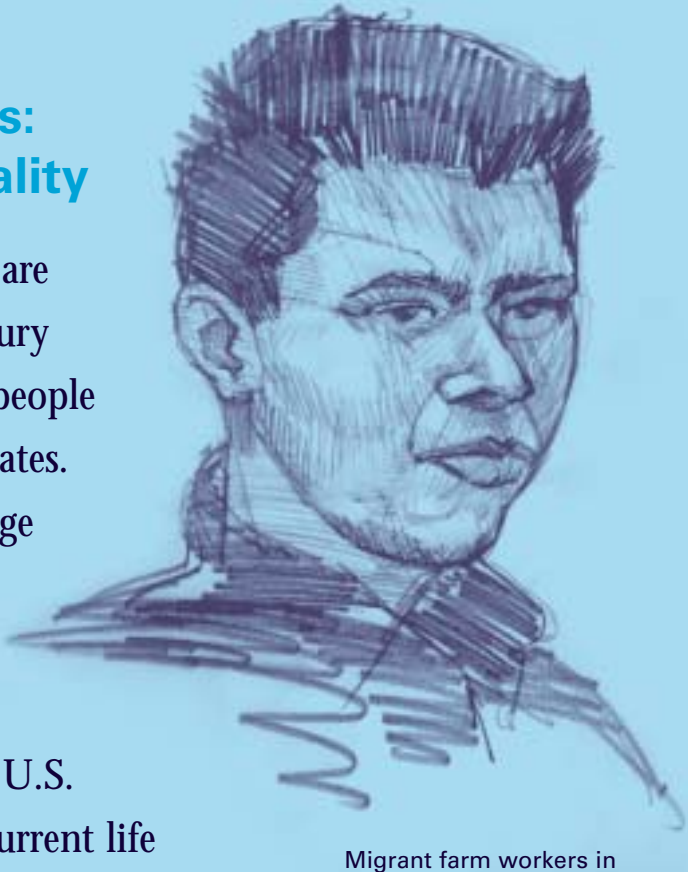
life expectancy for the U.S.

population overall.* Current life expectancy of migrant farm workers compares to average U.S. life expectancy 100 years ago. Some

workers have had little or no medical care, and all have gaps in care. Poverty, frequent relocation,

crowded living conditions and the grueling nature of their work make them especially vulnerable to communicable diseases and musculoskeletal conditions. Sun exposure leads to skin cancers; the combined effects of sun, dust, and wind lead to blinding eye conditions; and work requiring repetitive motion, bending and twisting leads to tendonitis, joint deterioration, and chronic back pain.

*Sources: Centers for Disease Control, National Vital Statistics System 2003 and Farm Workers Health Services



Migrant farm workers in Central New York – most in their 20s – tend to be Spanish-speaking males from Mexico and Guatemala who work at fruit and vegetable farms in the summer; and English-speaking Jamaican men who work in apple orchards in the late summer and fall.

Sketches by Susan Keeter.

Last summer, a SUNY Upstate volunteer program providing health care to migrant farm workers produced a bumper crop, sponsoring nine health clinics at six farms and treating 52 migrant farm workers.

The program, which had set an initial goal of offering a single-session clinic at three farms, was organized and staffed “by Upstate medical students and faculty members in collaboration with the Onondaga County Health Department (OCHD).

Planting the Seed

The collaboration began with a conversation at a conference on migrant health a year ago. Bruce Gould MD '79, associate dean for primary care at the University of Connecticut School of Medicine, compared notes with OCHD's Deborah Tracy. Gould runs health care clinics for migrant workers at tobacco farms in Connecticut. For the past several years, OCHD has visited Central New York migrant camps to screen for communicable diseases and provide some primary care. Tracy was eager to find a way to expand this care, and Gould was hopeful his clinics could serve as models.

As talk of collaboration ensued, Gould learned of Upstate's Salt City Health Outreach Program (SC Hope), a health clinic for the homeless, established in 1989 by Upstate medical students in collaboration with OCHD. SC Hope convinced Gould that Upstate had a commitment to helping the underserved and a structure that could be adapted to expand the existing OCHD migrant clinics.

Roll Up Your Sleeves

But taking a clinic to a farm posed unique challenges, says Ronald Miller MD '52, one of six Upstate faculty and 20 medical students who volunteered at the migrant clinics last summer. “Imagine trudging through an empty field, hoisting exam tables and supplies and looking for a spot to pitch tents,” he explains. “You hope there's an electrical outlet so you can run an extension cord. When there's not, you rely on batteries, lanterns and car headlights for power and light.”



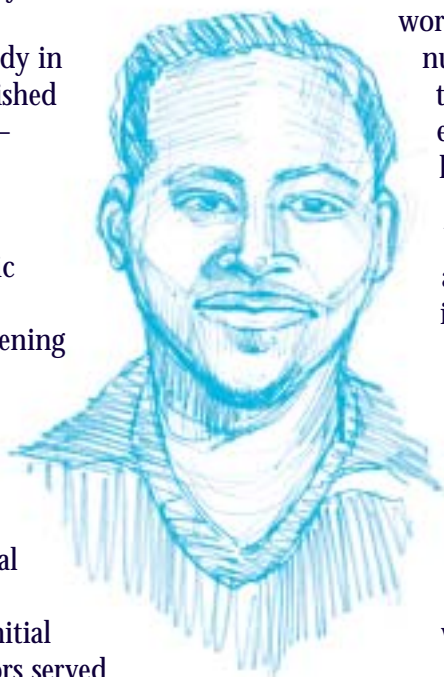
Under the Médico Aqui (Doctor Here) Sign: SUNY Upstate medical students and faculty and Onondaga County Health Department staff at a CNY migrant health clinic: kneeling, from left: Ronald Miller MD '52, Shazia Beg, Jen Nead, Nina Nami; Standing: Deborah Tracy RN,* Jung-Woo Ma, Jaime Masso,* Lleni Patch MD, Ariel Ruiz,* Aaron Fischman, Douglas MacQueen, Peter Cronkright MD, Arjun Srinath and Alex Rusanov. (*indicates OCHD staff. All others are medical students and faculty.)

Upstate offered equipment and volunteer staff to bolster OCHD's efforts. Upstate's student fees paid for tool boxes (used as doctor's bags). Pop-up tents (used as exam rooms) were purchased by the NYS Area Health Education Center (AHEC). Portable examination tables were borrowed from a Weiskotten Hall classroom. Networked laptop computers were on loan from SC Hope. Medication was supplied, at cost, by University Hospital's pharmacy and purchased with donations to the Upstate Medical University Foundation.

Fertile Ground

Last spring, Gould met with Upstate students and faculty members, OCHD staff and staff from community health organizations to find a way to expand the program. An important piece was already in place: OCHD had established a strong link – and trust – with area farmers and migrant workers.

So that the health clinic did not interfere with the farms' work schedules, evening hours were scheduled. Three tents were set up – one for vital signs and initial intake and two for examinations. The medical students knew enough Spanish to conduct the initial intakes. OCHD counselors served as interpreters during the actual examinations.



According to second-year medical student Douglas MacQueen, much of what they treated was "typical stuff" – skin rashes, eye infections and muscle strains. When more serious conditions, like hypertension or diabetes, were suspected, Tracy coordinated follow-up care, OCHD counselors provided transportation to the Syracuse Community Health Center (SCHC) and served as interpreters at those appointments. SCHC provided care at no cost to the migrant farm workers who had been seen at the clinics.

Reaping the Benefits

Peter Cronkright MD, associate professor of internal medicine, serves as Upstate faculty advisor for both the migrant and homeless clinics. "The medical students are learning to work with patients in a nurturing environment, and they're getting hands-on experience designing a healthcare delivery system," he reports. "We try to teach both in the classroom, but an experience like this is irreplaceable."

According to MacQueen, one of the primary coordinators, "The clinics drew a link between my studies and the reason I wanted to go to medical school in the first place, which is to care for others.



PETER BEATTY MD



COURTESY OF ALEX RUSANOV

Above: Bruce Gould MD '79. Above right: Faculty advisor Peter Cronkright MD, right, observes medical student Alex Rusanov record patient histories at a farm.



"The first year is such a challenge," he says. "There's so much reading, so many facts to stuff in your head. It can feel very removed from helping people. And it was eye-opening to meet the farm workers. There is so much need. If it weren't for this collaboration, the clinics wouldn't be there."

Next Season

To encourage the creation of clinics across the U.S., Cronkright, Gould and MacQueen conducted a workshop on migrant clinics at the annual American Association of Medical Colleges meeting in November in Washington, D.C. To prepare for next summer's clinics in Central New York, they are analyzing data from the clinics and recruiting new first-year medical students for 2004.

Bearing Fruit

Gould, chairman-elect of the National Advisory Council on Migrant Health of the Health Resources and Services Administration (HRSA), says the clinics help medical students develop into compassionate caregivers. "By going to the farms and making sure the migrant workers get the medical attention they need, and deserve, we are fulfilling the Hippocratic Oath in a very real way."

–Susan Keeter



New Surgery Center Tailored to Pediatric Patients

Michael Ratner MD



DAN DIPPEL

Children who require surgery have unique needs: medical, social, emotional and environmental. To meet these needs at the highest possible level, University Hospital has created a comprehensive Center for Children's Surgery.

The center, on the third floor of University Hospital, accommodates the vast majority of the hospital's pediatric surgeries.

The new center reflects the high degree of specialization in pediatric surgery at University Hospital. It is staffed by fellowship-trained pediatric surgeons and anesthesiologists, as well as highly specialized nurses, technicians, child-life specialists and administrators. "The people who work in this center have a singular focus: they're trained to work with

children, and they love to work with children," says Michael Ratner MD, pediatric surgeon and director of the center.

"We've taken all the specialists who play a role in pediatric surgery and concentrated them in one place," he adds. "This concentration can only elevate the quality of care we deliver."

The vast majority of services related to pediatric surgery are also concentrated within the Center, minimizing intra-hospital travel.

Pediatric patients are especially vulnerable to the stress of surgery. "Clinical studies show that children who are not anxious about surgery recover faster and require less medication for pain," according to Ratner. "We bring this awareness to bear on the way we approach pediatric surgery.

Every member of our staff understands the behavior and development of children and is trained to help relieve their anxiety."

The Center for Children's Surgery offers surgical services for children from birth to 18 years and is designed to be child- and family-friendly. "Walk through our door, and you'll understand the difference," says Ratner. "It's everything from the height of the pictures on the walls to the friendly, child-focused attitude of every staff member, from surgeon to housekeeper."

In addition to its cheerful decor and child-sized surroundings, the center takes a more relaxed approach to certain hospital policies, such as visitation and parental involvement in preoperative and recovery care. For instance, anesthesia is delivered in an upbeat setting, where parents are welcome, and child-life specialists are available to help reduce stress levels.

—Denise Owen Harrigan

A Kinder, Gentler Approach to Heart Surgery

For decades, repairing the heart has inevitably meant opening the chest and often stopping the heart and putting the patient on a heart/lung bypass machine.

Now cardiac surgeons at University Hospital perform far less invasive heart procedures, which dramatically reduce the risks, recovery and discomfort associated with traditional heart surgery.

Cardiothoracic surgeon Anthony Piccone MD performs minimally invasive valve repair surgery, which involves small (2 and 1/2 inch) incisions and eliminates the need to open the chest and break ribs. Piccone performs the cutting-edge procedure with the aid of a voice-activated Ethicon thoroscope.

"It's a very cosmetic alternative to a full sternal split," he explains. "It doesn't get any better for patients. They feel more comfortable after surgery and go home faster.

"Recuperation from conventional valve repair is six to eight weeks, and the patient

is sore and uncomfortable," adds Piccone. "With this minimally invasive approach, patients are back on their feet in a couple of weeks."

Cardiothoracic surgeon Charles Lutz MD performs coronary bypass surgery without stopping the patient's heart. Instead, a new device known as the Medtronic Octopus® Stabilizer suctions and stabilizes the beating heart while Lutz performs the bypass. "It's known as 'beating heart' or 'off-pump' bypass, and it's much less traumatic to the patient," explains Lutz. "Follow-up clinical studies have found no difference in the patency rate of the vessels."

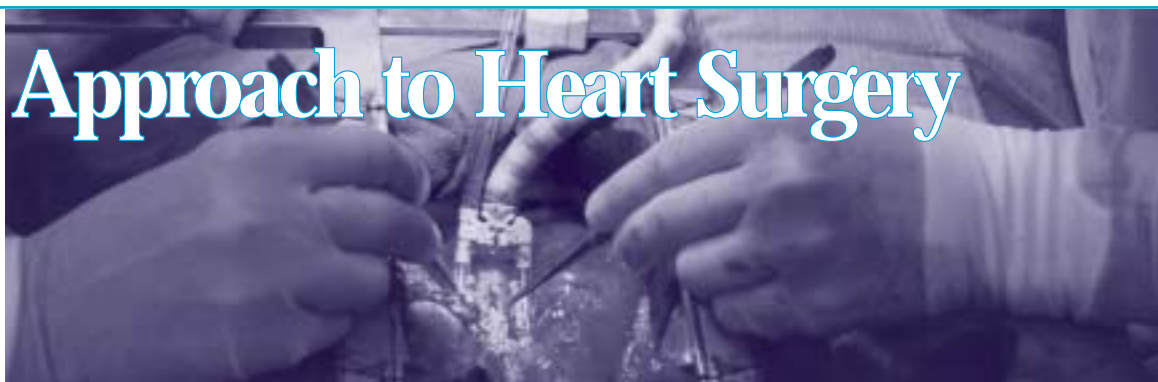
Lutz, who has performed more than 40 "off-pump" procedures, estimates that about 20 percent of U.S. cardiac surgeons are using the approach. "More and more

data show it's better. Patients go home sooner – in three to four days, as opposed to six or seven days. They lose less blood and have a lower risk of stroke and renal failure."

As a precaution, Lutz notes, the heart/lung bypass team is always present for the "beating heart" procedure.

University Hospital heart surgeons are also performing an even newer type of minimally invasive surgery: endoscopic A-traumatic CABG, which utilizes endoscopic approaches to harvest internal mammary arteries and a mini-chest incision for performing the coronary bypass operation. The technique offers patients the safety of beating heart surgery as well as much more rapid recuperation.

—Melanie Rich



SUSAN KAHN

University Hospital Earns Elite Cancer Accreditation

University Hospital's comprehensive cancer care program has earned the prestigious seal of approval from The American College of Surgeons' Commission on Cancer. Only one in four hospitals nationally merit this distinction. University Hospital is the only hospital in the Syracuse region to earn it.

In the rigorous approval process for teaching hospitals, University Hospital – which delivered care to more than 14,000 cancer patients last year – earned the highest possible score, plus a commendation for its strong clinical trials program.

The approval was awarded after an onsite evaluation and in-depth performance review of all cancer-related services, including screening, imaging, radiation oncology, medical oncology, support services, research, rehabilitation and prevention.

The American College of Surgeons' Commission on Cancer has set and monitored standards for cancer care since the 1930s. Approximately 1,500 facilities have earned Commission approval of their cancer programs.

Eighty percent of newly diagnosed cancer patients seek treatment at sites with Commission on Cancer approval. The designation permits University Hospital to appear on the website of the American Cancer Society (www.cancer.org) as a recommended site for state-of-the-art cancer care.

Ranked With Best

"While no one can guarantee outcomes for cancer patients, this confirms that our cancer patients receive the best in diagnosis and treatment," says oncologist Sheila Lemke MD, chair of the Cancer Committee at University Hospital. "On every one of the 47 mandatory standards, University Hospital earned the highest score possible. Only 27 percent of approved hospitals score this high."

The new Commission on Cancer approval – combined with the volume of patients treated and its affiliation with Central New York's only academic medical

center – cements University Hospital as the epicenter of cancer treatment, research and education for 17 Central New York counties.

University Hospital is home to hundreds of cancer specialists, from surgeons and scientists to nurses and therapists. It has 90 board-certified physicians involved in cancer diagnosis and management, including surgeons, medical oncologists, radiation oncologists, interventional radiologists and pathologists.

Team Approach

These physicians often tackle cancer in multidisciplinary teams – an approach that is highly encouraged by the Commission on Cancer. University Hospital offers multidisciplinary assessments for pediatric, breast, orthopedic, head and neck and gynecologic cancers. It has also developed formal multidisciplinary programs for lung, brain, thyroid and genitourinary cancers. These programs can compress weeks of urgent cancer consultations into a single session, increasing collaboration among specialists and allowing patients to see a range of specialists on the same day, in the same place. At less integrated facilities, such plans can take weeks to design.

The Research Connection

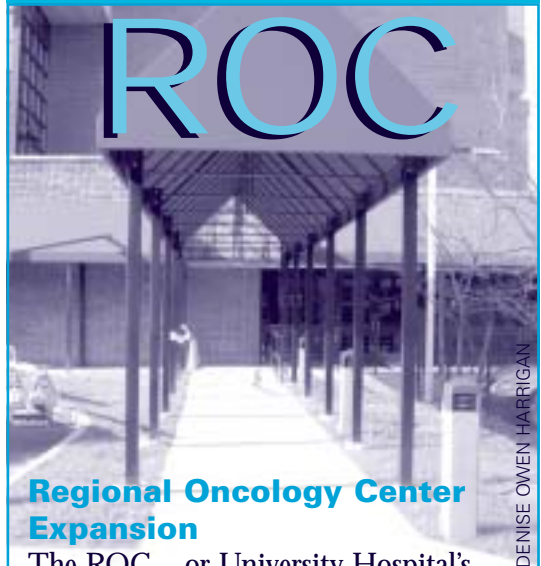
Due to its strong research commitment, University Hospital offers patients the largest number of clinical trials available in Central New York. At any given time, cancer patients have access to approximately 150 new treatment protocols offered in conjunction with the nation's leading clinical trial organizations: the Cancer and Leukemia Group B (CALGB), Gynecologic Oncology Group (GOG), American College of Surgeons Oncology Group (ACOSOG) and Pediatric Oncology Group (POG). In addition, patients of University Hospital physicians routinely have access to privately sponsored trials.

The Commission on Cancer singled out University Hospital's clinical trials participation for special commendation.

–Denise Owen Harrigan



ROC



DENISE OWEN HARRIGAN

Regional Oncology Center Expansion

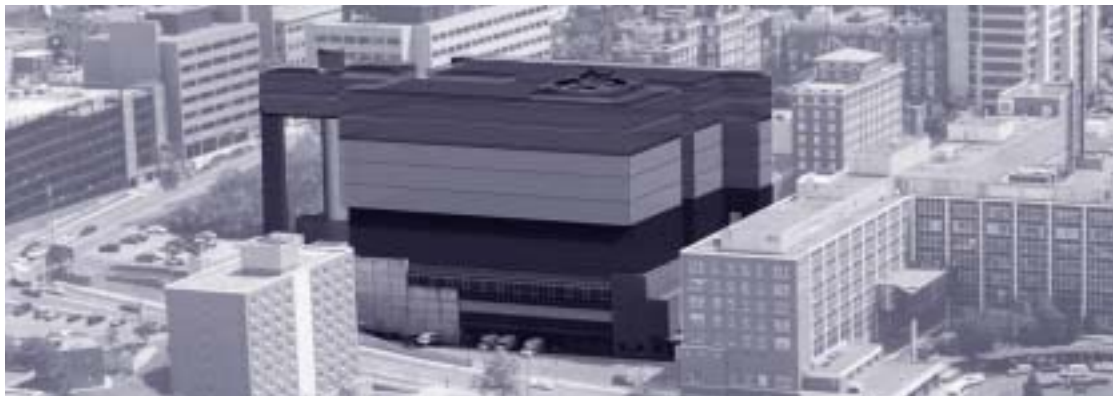
The ROC – or University Hospital's Regional Oncology Center – is approaching completion of a \$4.8 million expansion that will double the facility's capacity. The expansion will add 10 infusion rooms (for a total of 19), as well as a pharmacy, exam rooms and isolation rooms. In 1985 – the ROC's inaugural year – 4,500 patient visits and procedures were recorded. Today, that number is 22,000 per year.

Why a Tumor Registry?

Much of what we know about cancer today – including the fact that Central New York has higher than average lung cancer rates – is based on data collected by tumor registries. University Hospital's Tumor Registry – which significantly exceeds the Commission on Cancer's minimum follow-up rate of 90 percent – maintains lifetime records of cancer patients, including their medical histories, diagnoses, treatments and outcomes.

This is critical information as our community – and our nation – seek to document cancer occurrence and survival rates, evaluate treatments and allocate resources to cancer programs. While it takes tremendous energy – and skill – to collect, interpret and maintain this information on thousands of patients, a strong tumor registry is the only way to track trends, measure outcomes and benchmark University Hospital's data against national data.

Support Systems



Conceptual three-dimensional model of the CNY Children's Hospital at University Hospital. The top two floors of the six story addition represent the Children's Hospital. Karlsberger Architects, Columbus, Ohio.

Heartwarming Response to Children's Hospital Appeal

Plans for The CNY Children's Hospital at University Hospital have been circulating throughout Central New York this fall – and generating a swell of support.

The proposed children's hospital will crown the new east wing expansion of University Hospital, with two floors dedicated to the concentrated delivery of world-class, family-friendly pediatric care.

The need for a local children's hospital has been discussed for decades. The issue went public last summer at the New York State Fair, where more than 60 University Hospital nurses and staff members – plus three endearing cartoon characters, created by SUNY Upstate's Dan Dippel – expounded on the theme, "Children Are Not Just Small Adults."

University Hospital will cover the majority of the construction costs for the CNY Children's Hospital. The community will be asked to cover the costs of a separate entry, state-of-the-art equipment and programmatic endowments requiring an estimated \$15 million in philanthropic support. A \$15 million fundraising campaign for the children's hospital was formally launched at the Upstate Medical University Foundation Gala Dec. 12.

Behind the scenes, however, more than \$6 million has already been pledged. "A lot of people have been doing a lot of things to move this campaign forward," reports Eileen Pezzi, Upstate's vice president for development. "Everyone wants to be part of such a positive project."

The Upstate Foundation has pledged \$2 million to the campaign: \$1 million

from the Children's Miracle Network and \$1 million from gala proceeds over the next several years.

An internal campaign for Upstate faculty and staff, powered by a high-spirited network of 90 volunteers, has already generated close to \$700,000 in pledges.

Meanwhile, a 12-member campaign cabinet, led by Mary Ann Shaw, campaign general chair, is orchestrating the efforts of numerous volunteers, who will approach potential donors for gifts of all sizes.

Jumpstarted

A number of fundraising initiatives took place even before the public campaign formally began. On Oct. 31, a Clear Channels radiothon raised almost \$100,000 for the campaign. Through the "Buy a Brick" campaign, the offices of many local pediatricians are already covered with paper "bricks" (see back cover), sold to raise funds for the Children's Hospital.

Local students are also finding creative ways to support the cause. For example, Cicero-North Syracuse High School art students sponsored a "Pots for Tots" event at Carousel Center, selling 400 pieces of handcrafted pottery to raise money for the Children's Hospital.

"A lot of people who have never surfaced as fundraisers have enlisted for the campaign," reports Pezzi. "It's such a good cause that many people are considering very generous, leadership-level gifts.

"This is going to make a real difference to our community," Pezzi concludes.

–Denise Owen Harrigan

What's So Special About the CNY Children's Hospital?

Scheduled to open in 2007, the proposed children's hospital will occupy the top two floors of the five-floor expansion of University Hospital's east wing.

It will feature:

- a separate entrance, lobby and elevator with access from Irving Avenue
- 18,000 square feet of space dedicated to family-centered pediatric care (triple the current size)
- 60+ pediatric beds
- all private rooms with baths and beds for family members
- family consultation center
- family resource center with library, computers
- family dining rooms
- family laundry rooms
- patient classrooms
- pediatric chapel
- seven age-appropriate playrooms
- separate procedure rooms (so patient rooms will remain "safe havens" for children)



Anatomy of a Fundraiser

One mother's quest to help her son raises the level of rehabilitation available in Central New York.

Ruth Wood of Dewitt says she's "just a mom" – a mom on a mission. That mission is maximizing the welfare of her son, David DelNero of Syracuse, who suffered an incomplete C5-C6 spinal cord injury in a 1994 ski accident.

But in the course of helping her son, Wood has helped many other patients and raised the bar for physical rehabilitation in Central New York.

Several years ago, Wood's mission brought her to University Hospital in search of a weight-assisted therapy program for DelNero. University Hospital didn't have the necessary equipment – at that time, the use of weight-assisted therapy was restricted to research studies into nerve regeneration. But Wood, not easily deterred, resolved to change that.

"I didn't have a clue about how this machine worked," she admits. "But as I said to Dr. Robert Weber (chair of Physical Medicine and Rehabilitation at University Hospital), 'I will get you that piece of equipment if I have to write the check myself.'"



David DelNero and physical therapists work with the new therapy equipment available at University Hospital thanks to the efforts of Ruth Wood.

DAVID FEILING

In fact, Wood jumpstarted the fundraising campaign with a generous personal gift. Then she enlisted the help of five friends – "people with a passion for making good things happen," she says. The high-energy team set a date for a fundraising auction, "then started selling raffle tickets and hustling like crazy to get auction items donated."

Less than two months later, the lobby of the Institute for Human Performance was filled with raffle and silent auction items. "It was awesome," Wood reports. "By the end of the evening, we had raised \$87,000 – more than we needed. A tremendous number of people were very eager to make this happen for my son David and for other patients at University Hospital."

It took time for the machine to arrive and for University Hospital physical therapists to be trained. Fortunately, Wood says, "we raised enough money to fly in trainers from California and Florida."

"Then we had to clear more obstacles," she continues. "University Hospital was the first to use this machine in a clinical setting – as a rehabilitation, rather than a research tool."

Proactive Patient

It was David DelNero – who is very proactive about his rehabilitation – who read about weight-assisted therapy in *The New York Times*. The therapy involves a minimum of three physical therapists and a machine that bears the weight of the patient's upright body.

The three therapists move the patient's arms and legs in an effort to stimulate nerve memory. "The spinal cord is the same as the brain, in terms of its ability to learn and remember," explains DelNero. "The idea behind this machine is to activate these nerves through exercise and restore neurological communication along the spinal cord."



SUSAN KAHN

Ruth Wood and her son, David DelNero.

"This is not a cure," DelNero stresses. "But there are some studies on patients with chronic injury that show you regain some function. It's also an excellent piece of rehabilitation equipment. It is physically demanding, and it keeps the joints loose, which is beneficial. And because it's weight bearing, it helps with bone density."

Weight assisted therapy is not only for spinal cord injury, but also for patients with multiple sclerosis, brain injury, stroke, cerebral palsy, Alzheimer's and Parkinson's disease.

DelNero has yet to see any significant return of function from working with the machine, but he remains hopeful – and grateful for the conditioning benefits. The therapy is also used regularly on University Hospital's Physical Therapy and Rehabilitation floor, and is making a difference for other University Hospital patients.

And that's a big part of the reason Ruth Wood raised the money – to make good things happen.

"It's people like Ruth Wood who make life here special," notes Dr. Weber. "Thanks to her energy and her resources, many individuals with disabilities now have an opportunity to gain skills and mobility that would otherwise be impossible."

–Denise Owen Harrigan

Foot Note



Leonard Levy MD with nurse Sue Ashworth and Upstate medical student Svetlana Kotova in the brick-lined waiting room of his Fayetteville child and adolescent medicine practice.



SUSAN KAHN

ROBERT MESCAVAGE



DAN DIPPEL

Building Blocks For Better Pediatric Care

The waiting room of pediatrician Leonard Levy MD looks as if it's under construction. The walls are stacked with paper bricks that will help change the way pediatric medical care is delivered in Central New York.

More than 400 bricks have been purchased so far – primarily by Dr. Levy's patients and their families – to support the campaign for the Central New York Children's Hospital at University Hospital, scheduled to open in 2007.

The brick campaign, sponsored by the CNY Children's Miracle Network of the Upstate Medical University Foundation, was launched this fall in the offices of about 20 local pediatricians. The campaign continues to spread – to other physicians' offices, as well to daycare centers, nursery schools, health clubs and businesses. "The community has embraced the need for a children's hospital and has been very supportive," reports Toni Gary, director of the Children's Miracle Network. "We're rolling out the brick campaign in phases, but people are also calling and asking for bricks."

For Dr. Levy, who is also chair of pediatrics at Community General Hospital, the brick campaign is the latest stage of a longstanding, professional commitment to building a children's hospital. "Those of us in private practice have been pushing for this for years," he reports. "Actually, this conversation began long before I came on the scene in 1965. My predecessors understood that sick children are best cared for in a dedicated children's hospital, and that pediatric subspecialists should be concentrated in one place. Through the years, this concept has had many supporters, and now it is finally coming to fruition.

"That's why I ask for support from everyone who comes through my door, including the FedEx guy and the mailman," reports Dr. Levy.

For more information about the brick campaign, please call the CNY Children's Miracle Network at 315-464-KIDS (5437).



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