

## EMERGENCY PRESERVATION AND RESUSCITATION

National media outlets were abuzz with the news of an unprecedented clinical trial that aims to buy time—**up to an hour with NO heartbeat or circulation**—for victims of cardiac arrest from extreme blood loss.

**A** patient with severe trauma and massive blood loss who is also in the throes of cardiac arrest needs special care. But what to focus on? The quickly bleeding wound? The arrest? Emergency medicine physicians and trauma surgeons could use a few extra minutes.

Cue EPR, emergency preservation and resuscitation. Pitt's late Peter Safar, MD (Distinguished Professor of Resuscitation Medicine), with colleagues, including Samuel Tisherman, MD (former Pitt professor of critical care medicine and of surgery), developed the procedure in preclinical studies. EPR involves flushing out the patient's blood and pumping cool saline into the aorta. With no blood, brainwaves, or breathing, this paused state will allow surgeons to repair damage, Tisherman predicts. He'll know more as clinical trials unfold at UPMC Presbyterian and at several other academic medical centers.

The Department of Defense-funded trial of EPR officially began in April at UPMC Presbyterian. So when the right patient comes into the emergency department, the EPR team is primed to "race against the clock," says Tisherman.

**"WE WANT TO MAKE A SUBSTANTIAL CONTRIBUTION TO BIOMEDICAL RESEARCH GLOBALLY. THE GOAL IS NOT ONLY TO DO WORLD-CLASS SCIENCE, BUT ALSO TO DO THE KIND OF SCIENCE THAT WILL LEAD TO THE EMERGENCE OF A BIOTECHNOLOGY INDUSTRY IN SOUTHERN ITALY."**

ARTHUR S. LEVINE, MD, PETERSEN DEAN OF PITT'S SCHOOL OF MEDICINE AND THE SCIENTIFIC DIRECTOR OF THE BRBC

THE 334,000-SQUARE-FOOT RESEARCH FACILITY IN CARINI IS EXPECTED TO OPEN IN 2016. BRBC WILL INCLUDE A CORPORATE INCUBATOR TO SHEPHERD ITS DISCOVERIES TO MARKET.



## EXPORTING MEDICAL EXCELLENCE

The University of Pittsburgh School of Medicine is expanding its global reach in multiple ways. Two ongoing projects with international partners are bringing Pitt expertise—in biomedical research, medical education, and clinical training—to Italy and Kazakhstan.

### CARINI, ITALY

**A** partnership that includes Pitt, UPMC, and the Italian government brought solid-organ transplantation to Sicily in 1999. That project got a permanent home in 2004, when a 70-bed hospital opened in Palermo.

In the coming years, a similar public-private partnership will result in the construction of the Ri.MED (*Ricerca Mediterranea* or Mediterranean Research) Biomedical Research and Biotechnology Center (BRBC) in nearby Carini. The 334,000-square-foot research facility is expected to open in 2016. BRBC will include a corporate incubator to shepherd its discoveries to market. Ri.MED investigators who train in research at Pitt will ply the fields of structural biology, computational biology, drug discovery, vaccine development, biomedical device development, regenerative medicine, tissue engineering, molecular imaging, and neuroscience.



AN ARTIST'S RENDERING OF THE FUTURE HOME OF NAZARBAYEV UNIVERSITY SCHOOL OF MEDICINE, WHICH IS UNDER CONSTRUCTION IN ASTANA, KAZAKHSTAN.

### ASTANA, KAZAKHSTAN

**I**n 2013, the University of Pittsburgh School of Medicine was selected to guide the Republic of Kazakhstan's Nazarbayev University (NU) as it establishes its own medical school, which aims to educate physician-scientists to become that nation's next leaders in health care, medical education, and biomedical research. Pitt will partner with NU to institute a U.S.-style curriculum; design and develop teaching facilities; recruit and mentor school leadership and faculty; plan organizational and administrative structures, policies, and procedures; and develop courses, syllabi, and clinical experiences with the participation of physician-educators from hospitals in Kazakhstan.

Massimo Pignatelli, MD, PhD, a distinguished pathologist and biomedical scientist, was recruited through an international search process to serve as founding dean of Nazarbayev University School of Medicine (NUSOM), which will open with its first class of students in August 2015. Previously, Pignatelli was at the University of Glasgow School of Medicine in Scotland, where he served as international lead in the College of Medical, Veterinary, and Life Sciences and head of the School of Medicine, which includes the Schools of Medicine, Dentistry, and Nursing and Health Care. He also held the St. Mungo-Notman Chair as head of pathology. Pignatelli earned his MD *summa cum laude* from the University of Bologna, Italy, and his PhD from University College, London. He is a noted and well-published physician-scientist whose research focuses on epithelial adhesion molecules and particularly on their exploitation as biomarkers for tissue diagnosis, prognosis, and response to treatment.

"My hope is that NUSOM will become a model for every medical school in the nation," said Pignatelli. "This is the goal of the project—to create the hub of medical education and biomedical research in Central Asia. The project has all the necessary components, including infrastructure, resources, and political stability."



THOMPSON

## AWARD-WINNING EDUCATORS

**A** few of Pitt's leading medical educators brought home hardware from recent conferences of the Association of American Medical Colleges (AAMC). **Cynthia Lance-Jones, PhD**, assistant dean for medical education, was honored with the 2013 Alpha Omega Alpha Robert J. Glaser Distinguished Teacher Award, a singular honor recognizing her role in both curricular design and basic science education. As block director of the first-year basic science core curriculum, Lance-Jones oversees six courses covering principles of anatomy, biochemistry, genetics, cell biology and pathology, immunology, and microbiology. **John Mahoney, MD**, associate dean of medical education, earned an Outstanding Reviewer Award for his work on AAMC's MedEdPORTAL publications section.

Finally, former vice dean of the medical school **Steven Kanter, MD**, was honored with the Merrell Flair Award in Medical Education, the highest honor for medical education awarded by AAMC. The award recognizes an individual who has made major contributions over a significant period of time to medical education in North America. Kanter

has been a firm, guiding hand on the curriculum at Pitt for 23 years. From 2008 to 2012, he was editor-in-chief of *Academic Medicine*, the top journal in the field. Kanter, having earned a stellar reputation in his 23 years at Pitt, departed in 2014 to assume the deanship at the University of Missouri–Kansas City School of Medicine.

**Ann E. Thompson, MD**, former associate dean for faculty affairs, has been named vice dean of the School of Medicine. In her new role, Thompson will serve as a senior deputy to **Arthur S. Levine, MD**, Pitt's senior vice chancellor for the health sciences and John and Gertrude Petersen Dean of Medicine, in the management and advancement of the medical school.

"Dr. Thompson's many achievements include building and maintaining successful clinical and academic programs with exceptional records for fellowship training and research productivity," Levine said. "She has held leadership roles as a medical school administrator and in her clinical field of critical care medicine and has consistently advocated for the recruitment and promotion of outstanding women at Pitt and in academic medicine as a whole."

Thompson is professor and vice chair (professional development) of critical care medicine and medical director for clinical resource management at Children's Hospital of Pittsburgh of UPMC. She served as chief of pediatric critical care from 1981 to 2009 and was interim chair of critical care medicine from 2006 to 2008. She is a past president of the Society of Critical Care Medicine—only the second woman to hold that position—and she is a senior editor of *Pediatric Critical Care Medicine*.

Thompson received her bachelor of arts in biology from the University of Chicago in 1969 and her medical degree from Boston's Tufts University School of Medicine in 1974. In 2003, she received a master's degree in health care policy and management from Carnegie Mellon University.

### Q&A WITH A TOP MEDICAL EDUCATOR, STEVEN KANTER, MD

#### How do you describe Pitt's approach to medical education?

**KANTER** We want our students to become creative and critical thinkers. We want them to be good, collaborative problem solvers. So we've developed different experiences around that. For example, we blend lectures with other types of teaching modalities like small-group learning and team-based learning.

The Scholarly Project is a great example. People say that medical school is a mile wide but only an inch deep. In some ways, it does need to be a survey of a very broad set of information. But if that's all you do, then you've missed opportunities. If you give med students a few opportunities to go deep on something, they come face-to-face with unanswered questions in medicine. Students ask themselves, "How do scientists even develop a question that is answerable?"

That's actually very difficult, and the students have a chance to grapple with that in the Scholarly Project. They focus on an area that intrigues them, and they design and execute meaningful, hypothesis-driven research on that topic. [For more on the Scholarly Project, see page \_.]

#### How does the curriculum react to changing realities in medicine?

**KANTER** We maintain the curriculum as a living, dynamic entity that evolves over time. The curriculum committee is charged, in part, with viewing the curriculum in that way. That's why a number of new things have been introduced, even though it always involves some rearranging. We've developed a culture among both faculty and students—this is just a part of what we do. Recently, we've introduced sessions on health care finance. We've introduced interprofessional education, and we're able to do that in a relatively short period of time because that's the culture.

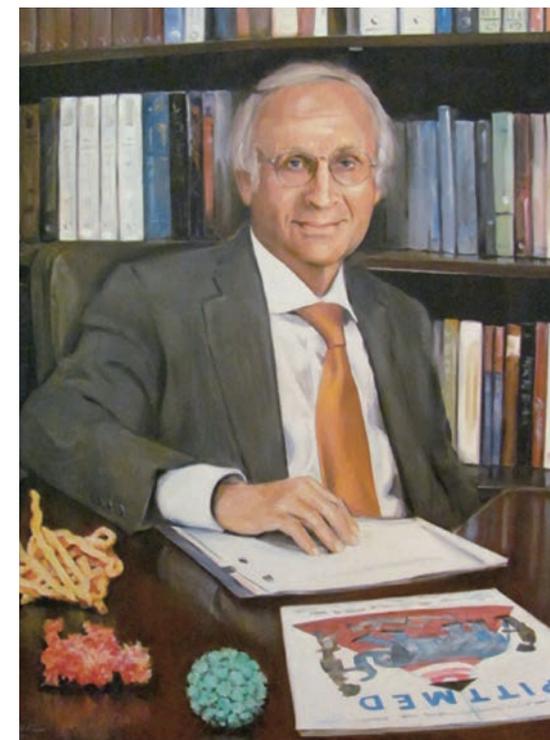
#### Students at Pitt begin clinical observation and interacting with patients in the first few weeks of med school. What are the benefits of that early exposure to patients?

**KANTER** We started that back in the early '90s, and what we heard from students right away was, number one, they loved it. And they said things like, "Gee, seeing patients even makes the biochemistry seem more relevant." It was interesting to us that there wasn't necessarily a direct relationship between the particular biochemistry or cell biology or genetics they were studying that day and the type of patients they were seeing. But somehow, seeing patients and their problems helped students make connections and see a clear purpose to what they were doing in class. On some level, it made the science overall more compelling and relevant.

Med students at Pitt often say that, while med school is challenging and rigorous, they haven't found the cutthroat competition they anticipated.

#### Why is that?

**KANTER** Our curriculum leaders have worked hard to create a collaborative, cooperative work environment. Small-group learning is a part of that. The students, to their credit, have responded by developing a welcoming, supportive ethos. Also, we recently moved to a different grading system in the first two years. We used to have three options: honors, pass, and fail. We've moved to just the pass/fail option for those years because, with the work that's done in the first two years, there's a certain competency that students need to develop. But memorizing every minute detail may not be better than spending the evening at the theater and coming back refreshed.



### INAUGURAL DEANSHIP

**H**e's not just senior vice chancellor for the health sciences and dean of the med school anymore. Arthur S. Levine, MD, is now the John and Gertrude Petersen Dean of Medicine; he holds the first endowed deanship in the history of this medical school. Chancellor Emeritus Mark A. Nordenberg conferred the honor at a ceremony this May with a proud handshake, a little ribbing, and a medal worthy of an Olympian.

Levine, dean since 1998, has led the med school into the ranks of the top five institutions receiving NIH funding. He has appointed 30 of 31 department chairs, created 10 new departments, and lured five National Academy of Sciences members to join the faculty.

"The institution transcends departments," Levine said of the present-day school, increasingly known for its

interdisciplinary collaborations. At the event, Levine gave a lecture recounting both his and the School of Medicine's histories, referring back to his great-grandfather and the first diploma granted by the school in 1887.

Levine attributed his and the school's strength, in part, to stellar faculty, donors like the Petersens, and first-rate staff like his assistant, Gina Deible. He said he's "a catalyst dependent upon substrate." His portrait, painted by Greg Kavalec, was unveiled after the lecture and will hang in the Scaife Hall auditorium.