

## MEDIA MENTIONS: GEISEL IN THE NEWS

**A**mong the people and programs coming in for prominent media coverage in recent months was Dr. **James Bernat**, the Louis and Ruth Frank Professor of Neuroscience at Geisel. Bernat, an expert on death



determination, talked to *Time* magazine about how physicians decide to declare that a person is dead. "A person is declared dead when their heart stops beating, they are no longer breathing and they have no circulation for several minutes and they are not on any sort of life support," Bernat told *Time*. "The other, neurological definition is 'brain dead.' This means that all brain functions and abilities have ceased irreversibly, even though the person may be breathing on a respirator or ventilator. In practice there are relatively few issues with this," says Bernat. "Some countries and some religions do not accept brain death, but the majority do."

"Should men get routine PSA tests to screen for prostate cancer?" asked the *Los Angeles Times*. "It's controversial. In May, a government advisory panel—the U.S. Preventive Services Task Force—recommended against the screens for men of any age. A new study . . . tries to figure out whether the test serves men by incorporating how they would feel about the things that could happen to them once they get the test. . . . How men feel about outcomes is a very important thing to know if one is to decide what to recommend regarding PSA screening, commented Dr. **Harold Sox** of the Dartmouth Institute for Health Policy and Clinical Practice [TDI]. . . . For now, Sox concludes that 'guidelines should . . . recommend shared decision-making' between patient and doctor, thus ensuring that each individual's feelings about all the things that may or may not happen to him can be taken into account."

United Press International covered research led by Dr. **Nancy Morden**, a Geisel assistant professor of community and family medicine, about the care of cancer patients near the end of life. "The best hospitals in the United



States don't do much better than local community hospitals when it comes to caring for dying cancer patients," UPI reported. "The study, published in the journal *Health Affairs*, said hospitals in general consistently fail to meet recommendations for end-of-life care. . . . 'Each hospital needs to examine the care it provides to patients believed to be nearing death, and question its alignment with patient preferences—whether they be for early supportive care or aggressive treatment in the last days of life,' Morden said."

"An estimated 1.58 million patients received hospice care from more than 5,000 programs nationwide in 2010, more than double the number of patients served a decade earlier," noted the Associated Press. . . . One expert in end-of-life issues says the hospice industry and American society as a whole are far from ready for the aging baby boom generation. Unless caring for people at the end of life becomes a larger part of the national agenda, the rising tide of elders is bound to result in a flood of unmet needs, said Dr. **Ira Byock**, director of palliative medicine at New Hampshire's Dartmouth-Hitchcock Medical Center.



"Post-traumatic stress disorder and traumatic brain injury can increase a person's anger and hostility and diminish his or her self-control. But the link between those disorders and outright violent be-

havior is weak and hard to pin down with certainty," reported the *Washington Post*. "That's what the research suggests about the effects of post-traumatic stress disorder (PTSD) and traumatic brain injury (TBI), two medical conditions suffered by tens of thousands of U.S. soldiers who fought in the Iraq and Afghanistan wars. . . . 'The closer we get to trying to understand how PTSD relates to extreme violence, the more we get anecdotal,' said **Paula Schnurr**, Ph.D., a research professor of psychiatry and deputy director of the Department of Veterans Affairs' National Center for PTSD."

"Quality-of-life questions are becoming increasingly important in medical care, especially when it comes to helping patients make decisions about treatments," reported



the *Wall Street Journal*. "At Dartmouth-Hitchcock Medical Center . . . researchers are developing their own quality measurement tools, including one that uses a 'feeling thermometer' to compare how doctors and their patients perceive the impact of Crohn's disease, an inflammatory bowel condition, on health-related quality of life." Gastroenterologist Dr. **Corey Siegel** told the *Journal* that "The optimum use of this tool would be for patients to track the burden of symptoms and treatment so that their providers can understand how they are really doing overall as opposed to focusing on symptoms alone—which is only part of their experience with chronic disease."

"We have developed a system of deeply fragmented health care, where many physicians are not even talking to the other members of the team that is providing care for the patients," Dr. **Elliott Fisher**, the director of the Center for Population Health at TDI, told

## INVESTIGATOR INSIGHT

**Nicholas Shworak, M.D., Ph.D.**  
**Associate Professor of Medicine and**  
**of Pharmacology and Toxicology**



Shworak is director of the Heart and Vascular Research Center at Dartmouth. His lab studies the role of a specific type of polysaccharide within the cells of arteries. He joined the faculty at Geisel in 2001.

**Can you describe your research?**

The polysaccharide that we study (called HS<sup>AT+</sup>) coats the inner surface of blood vessels. We are testing an “anti-inflammatory theory” that HS<sup>AT+</sup> protects blood vessels from inflammation. For these studies, we treat mice with a compound that rapidly induces blood-vessel inflammation. We find that mice lacking HS<sup>AT+</sup> develop much more inflammation than mice that have HS<sup>AT+</sup>. We are now working on identifying the molecular mechanisms by which HS<sup>AT+</sup> protects against inflammation. We believe this work will help in developing new diagnostics and therapeutics for cardiovascular disease.

**What's your favorite nonwork activity?**

Running. I've been doing it for several years now, first thing in the morning, usually three or four times a week for about an hour. It's a great way to clear the head and put things into perspective. Besides, if you study cardiovascular disease and know the health benefits of exercise, you really should “walk the walk” (“run the run”?).

**What is a talent you wish you had?**

I wish I could play a musical instrument by ear. That is something my father and brother can do, but I never got those genes.

**What has been your research team's best idea or theory?**

It's known that inflammation drives the development of blood-vessel plaques, which are the cause of heart attack and stroke. Our mouse studies indicate that HS<sup>AT+</sup> protects blood vessels from inflammation, so we predict that humans' HS<sup>AT+</sup> should normally protect against the development of blood-vessel plaques. We further predict that some people with cardiovascular disease may have genetic variations that reduce blood-vessel production of HS<sup>AT+</sup>. We're presently testing if cardiovascular patients have variations in the gene responsible for HS<sup>AT+</sup> production. If we are correct, then

our findings could contribute to personalized diagnostic approaches to identify and treat patients before they develop blood-vessel plaques. Such a preventative approach could save millions of lives.

**When you were very young what did you think you wanted to be?**

It seems like I always wanted to be a doctor and initially I went to college with that as my career objective. Then in the summer of my second year I worked in the lab of a reproductive biologist and got bitten by the research bug. My mentor was also a rancher and applied techniques of in vitro fertilization that were worked out in his lab to the process of importing exotic European cattle strains. In Europe, he arranged for cow eggs to be fertilized in a petri dish then inserted in the uterus of rabbits. The pregnant rabbits were shipped to his ranch in Canada where the cow embryos would be harvested from the rabbits, and then inserted into foster mother cows. Needless to say, the money saved by shipping rabbits instead of cows made this process extremely cost effective. So, since seeing the practical application of science, my goal has always been to try to make new scientific discoveries and then use them to improve diagnosis or treatment of disease.

National Public Radio. “I think we need to help physicians learn the importance of practicing as a high-functioning team. You know, we do not think of health care as a team sport yet. We practice as individuals. We walk into the room. We talk to the patient. We go back out. We write our orders, and assume the nurse is going to translate those, and that the next physician will come along and read that order. That simply is not the case in most settings.”



A New York Times blog on parenting covered a study showing that “taking some antidepressants during pregnancy doubles the risk of a baby developing pulmonary hypertension. Researchers have long suspected a link between the use of selective serotonin reuptake inhibitors, or

S.S.R.I.'s, and the condition, but previous studies have been small and inconclusive. . . . Pulmonary hypertension, Dr. **Juliette Madan**, a pediatrician at the Dartmouth Hitchcock Medical Center explained, is diagnosed when an infant struggles to get enough oxygen into her lungs, and therefore into her bloodstream. The condition can be deadly, although Dr. Madan said that it's usually treatable—with possible lifelong consequences.