SUNY UPSTATE MEDICAL UNIVERSITY
& UNIVERSITY HOSPITAL
Syracuse, New York

Clinical Update
September 2008

New Neurosurgeon Brings Rare Skill Set to Upstate

Eric Deshaies MD, formerly of the Albany Medical Center, is one of only a few neurosurgeons in the country with fellowship training in cerebrovascular, endovascular and skull-based surgery.

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Upstate First to Offer Cardiac Hormone Test

In Central New York, SUNY Upstate offers the only laboratory testing of NT-proBNP, a hormone that helps diagnose congestive heart failure and predict the risk of cardiac events in patients with stable coronary artery disease.

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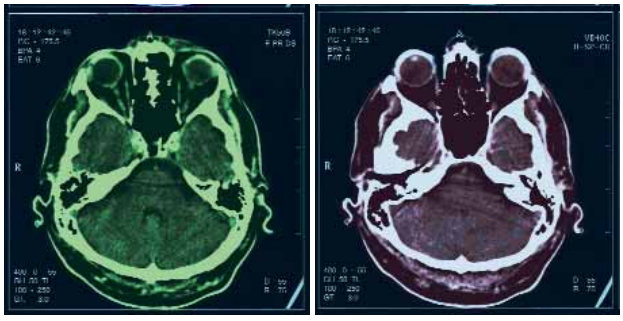

Department of Neurosurgery Welcomes Eric Deshaies MD

Fellowship Trained in Cerebrovascular, Endovascular and Skull-Base Surgery

Eric M. Deshaies MD has joined the Department of Neurosurgery at SUNY Upstate Medical University as assistant professor of neurosurgery, effective August 1, 2008.

Dr. Deshaies is fellowship-trained in skull-base and cerebrovascular surgery as well as in neuroendovascular surgery. Nationally, he is one of only a few neuro-surgeons with this dual expertise – and the only one practicing in the region bordered by Albany, Rochester, the Canadian border and the Southern Tier.

"Vital Collaboration"

At SUNY Upstate, Dr. Deshaies' clinical practice will focus on the most advanced – and often inter-disciplinary – treatment of hemorrhagic and ischemic stroke, aneurysms, arteriovenous malformations

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Eric M. Deshaies MD
Assistant Professor
of Neurosurgery

Defining His Mission

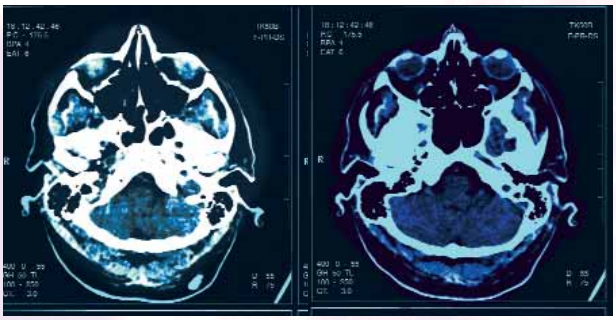
For Eric Deshaies MD, the path to neurosurgery began in the middle of a 12-acre apple orchard...

...in Bristol, Conn., where he fondly recalls gardening in his grandfather's fields. "I liked watching plants develop from planted seed to harvested fruits and vegetables – the science element," he remembers. With the loving support and devotion of his father, a tool and die maker, and his mother, a hair stylist, he was the first in his family to attend college.

In junior high, while working after school as a janitor, he stumbled upon the book, So You Want to Be a Doctor? "It occurred to me that medicine would combine science with the everyday care of people," says Dr. Deshaies, who kept his eyes open for opportunities to learn about medicine. As an undergraduate at Trinity College, he took a course on brain chemistry. "I found it very intriguing," he remembers. In medical school, he saw his first brain tumor surgery and "knew that neurosurgery would be a most satisfying career." During his second year of residency, he saw his first operation to treat a brain aneurysm. "It was like diffusing a time bomb under the microscope – the most elaborate and delicate surgery you can imagine," he says. "I knew that this is what I wanted to do for the rest of my life." He pursued two fellowships – one in cerebrovascular and skull-base surgery and a second in endo-vascular neurosurgery – to become one of a handful of physicians in the country who could offer patients the most appropriate procedure for vascular diseases of both the brain and spinal cord.

Throughout his undergraduate and medical education, residency and fellowship training, Dr. Deshaies made research a priority. During his senior year at Trinity College, he earned a full-tuition scholarship for excellence in biochemistry and research. At the University of Connecticut School of Medicine, he earned the Abbott/Kline Laboratory Award for Outstanding Medical Student Research. It was always his plan to make research a central part of his career. "By doing research, I see new opportunities to improve clinical care," he explains. "By treating patients, I see new research opportunities."

At SUNY Upstate, Dr. Deshaies sees the opportunity to continue his journey and combine his passions – for surgery and patient care, research and teaching. "I love teaching neurosurgery," he notes. "By training others to do what I do, I can help many more patients than I could alone." ■



Neurosurgeon – *continued from A2*

(AVMs), skull-base tumors, cranio-facial tumors and other complex disorders. He will work in concert with Upstate's ENT surgeons, ophthalmologists, neurologists, interventional radiologists and other subspecialists. According to Dr. Deshaies, "Collaboration between subspecialties is increasingly vital to optimized patient care."

Albany Residency

Dr. Deshaies' most recent position was with the Albany Medical Center in Albany, NY, where he was a clinical instructor of neurosurgery and senior fellow in neuro-endovascular surgery. Prior to that appointment, he was a fellow in cerebrovascular and skull-base surgery at the University of Miami in Miami, Fla. He completed his neurosurgical residency – and served as chief resident – at Albany Medical Center. Dr. Deshaies earned a medical degree from the University of Connecticut School of Medicine in Farmington, Conn., and graduated *magna cum laude* from Trinity College in Hartford, Conn.

Widely Published

Dr. Deshaies is the associate editor and author of three chapters in the 2008 textbook, *The Primary Care of Neurological Disorders.* He is currently editing a second textbook – *The Handbook of Neuroendovascular Surgery* – due to be released at the end of 2009. He has also published more than 20 articles in such journals as *Neurological Research, Contemporary Neurosurgery* and the *Journal of Neurosurgery.* Since 2007, he has presented papers at such prestigious forums as the World Academy of Neurological Surgery in Verona, Italy; the American Stroke Association International Stroke Conference in San Francisco; and the South Asian Neurosurgical Society Congress in New Delhi, India. He serves on a number of neurosurgical committees and editorial boards for both the American Association of Neurological Surgeons and the American College of Surgeons.

Research Focus

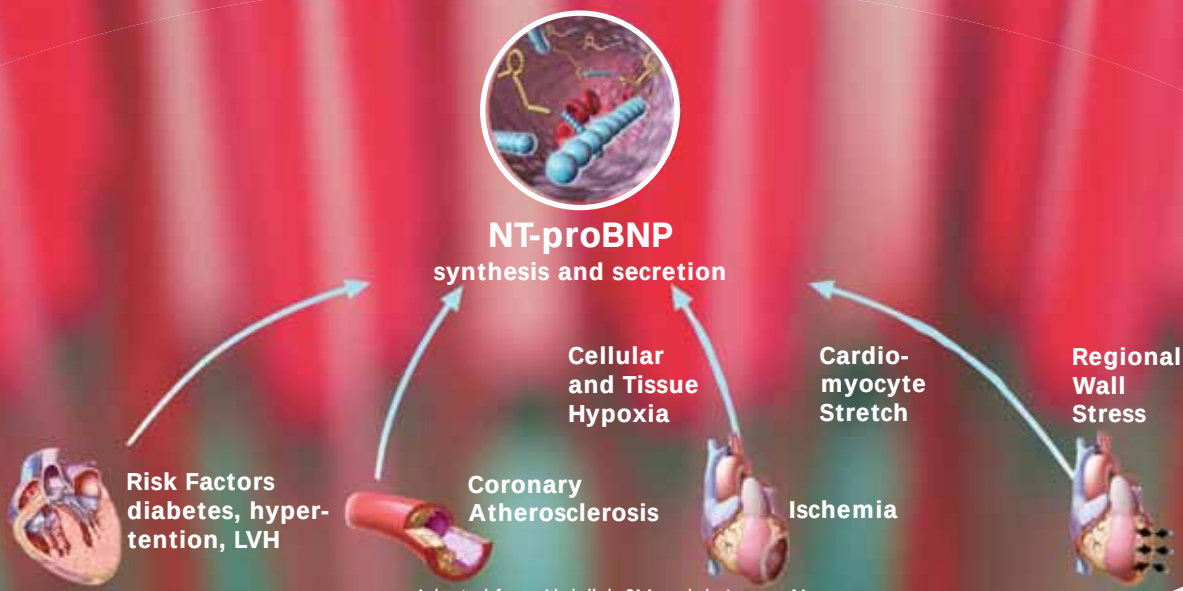
The use of neuroprotectants in stroke treatment and embolization of intracranial aneurysms are two focal points of his basic science and clinical research. As director of Upstate's Skull Base Laboratory, he will pursue new minimally invasive techniques and surgical approaches to tumors of the brainstem and cranio-facial regions.

Seamless Integration

Dr. Deshaies says he was drawn to Upstate's Department of Neurosurgery by its strong reputation, "brilliant colleagues and seamless integration of science, medical education and outstanding patient care."

He often operates in complex anatomical regions, such as the skull base, so he was impressed by Upstate's pioneering use of such technologies as intraoperative MRI, cerebral angiography and the Gamma Knife.

Building on these strengths, Dr. Deshaies will collaborate with his neurosurgical and endovascular partners to develop centers of excellence in neuro-vascular disease and skull-base surgery at Upstate. ■



Adapted from Abdullah SM and de Lemoe JA. "Natriuretic Peptides in Acute and Chronic Coronary Artery Disease." In: Morrow DA, ed. Cardiovascular Biomarkers: Pathophysiology and Disease Management. Totawa: Humana Press, 2006

Upstate First to Offer Test for Heart Failure, MI & Stroke

NT-proBNP levels aid diagnosis & risk assessment

SUNY Upstate's pathology laboratory is the first in Central New York to offer testing of the cardiac hormone NT-proBNP, a reliable marker for heart failure. The test is also approved to help assess the risk of cardiac events in patients with stable coronary artery disease.

"THE NT-proBNP (see next page) blood test is an important prognostic as well as diagnostic tool," reports Gregory Threatte MD, chair of Upstate's Department of Pathology. "It was originally used – often in the emergency room – for patients with acute symptoms of congestive heart failure. The concentration of NT-proBNP in the bloodstream helps confirm – or rule out – a diagnosis of congestive heart failure."

Recent studies show that NT-proBNP levels can also be used proactively, to identify patients at high risk for heart failure, myocardial infarction and stroke. In patients with hypertension, high cholesterol and other indicators of coronary artery disease, high NT-proBNP levels have been linked to subsequent cardiac events. "Higher concentrations of this hormone alert physicians to patients who require close monitoring or early intervention," explains Dr. Threatte.

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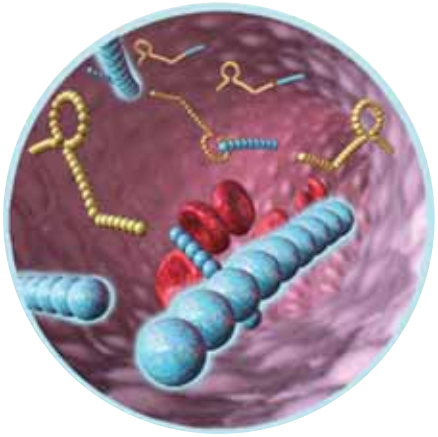


NT-proBNP synthesis and secretion

BNP vs. NT-proBNP

Released when the heart is under stress, BNP and NT-proBNP are cardiac hormones known as natriuretic peptides. While they are released together, as a single molecule, they separate in the bloodstream. The BNP molecule is biologically active, rapidly cleared from the system – and relatively unstable. When collected for testing, BNP levels drop significantly during the first 24 hours.

The more reliable NT-proBNP is not biologically active, remains in the bloodstream for a longer period and is therefore more accessible for testing. It is significantly more stable than BNP and can be measured for at least 72 hours after collection.

Test for Heart Failure – *continued from A5*

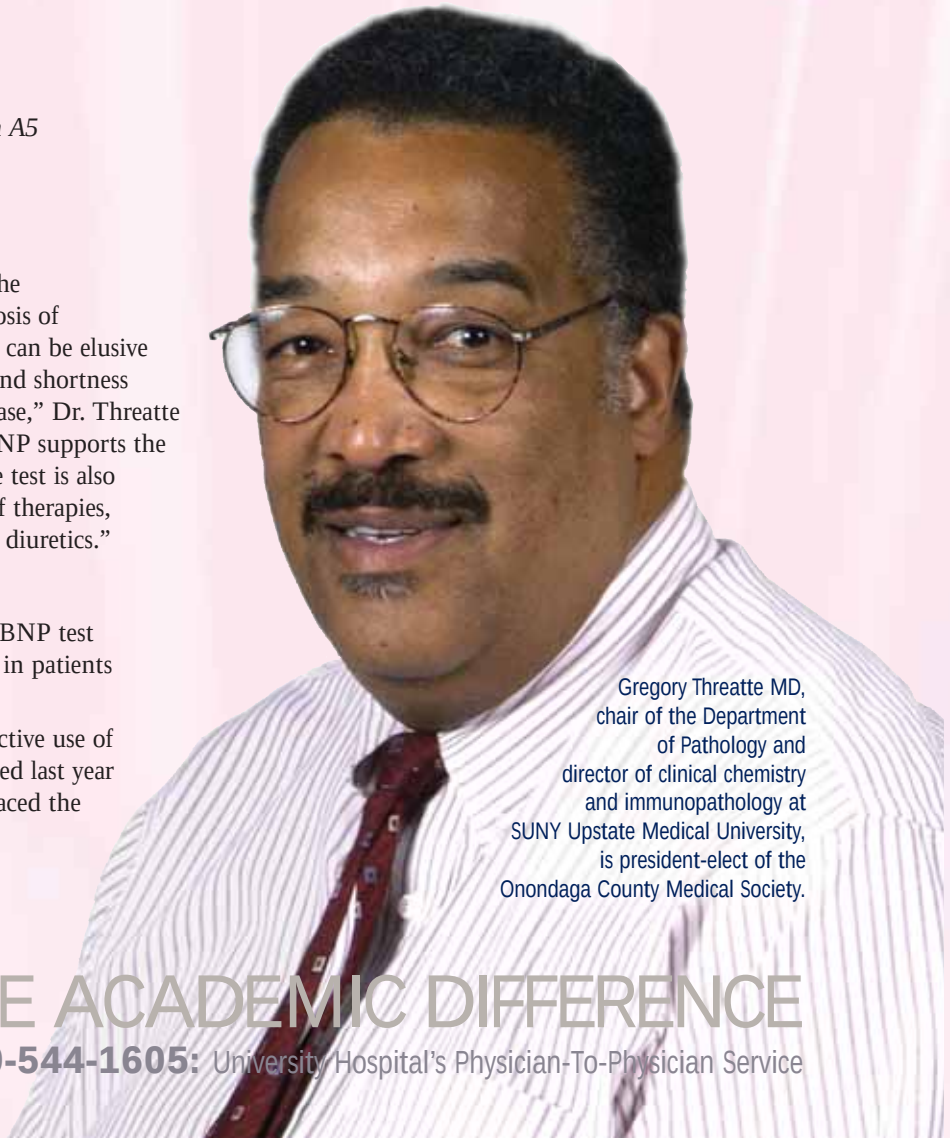
FDA-Approved

In 2002, the FDA approved the use of the NT-proBNP blood test to aid the diagnosis of congestive heart failure. “This condition can be elusive to diagnose. Symptoms such as fatigue and shortness of breath are also suggestive of lung disease,” Dr. Threatte says. “A high concentration of NT-proBNP supports the diagnosis of congestive heart failure. The test is also useful for monitoring the effectiveness of therapies, such as ACE inhibitors, beta blockers or diuretics.”

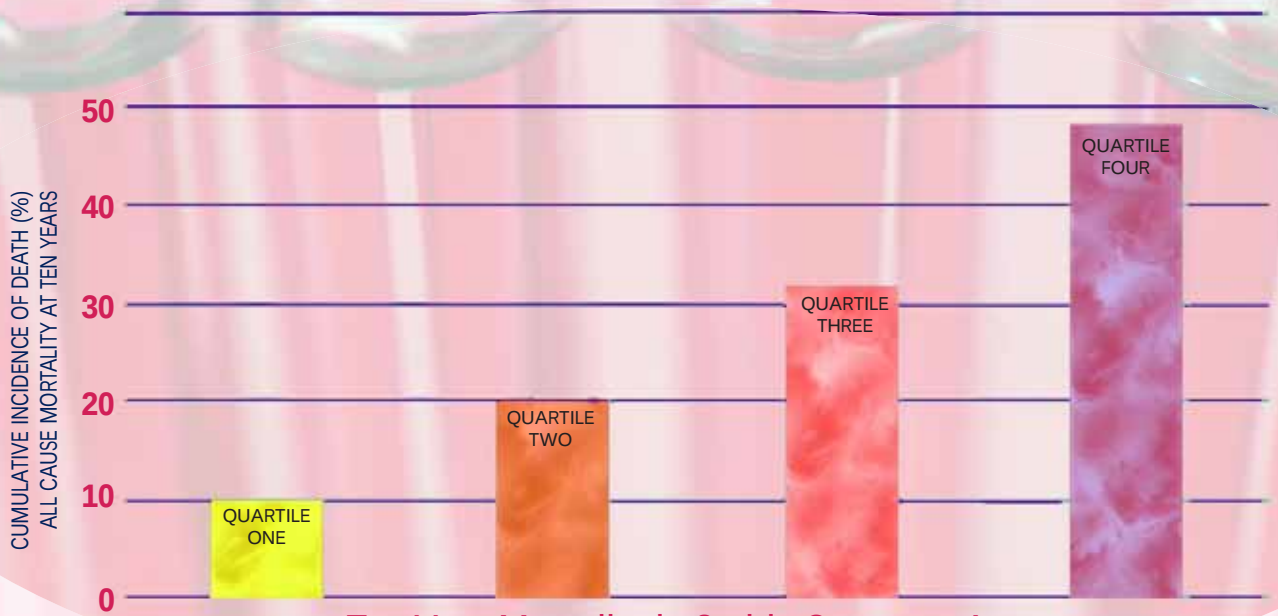
Wider Application

In 2005, the FDA approved the NT-proBNP test to help predict the risk of cardiac events in patients with stable coronary artery disease.

Extensive clinical research supports proactive use of NT-proBNP testing. One study, published last year in the *Journal of American Cardiology*, traced the



Gregory Threatte MD, chair of the Department of Pathology and director of clinical chemistry and immunopathology at SUNY Upstate Medical University, is president-elect of the Onondaga County Medical Society.



Ten Year Mortality in Stable Coronary Artery Disease According to NT-proBNP Quartile

NT-proBNP Quartile at Baseline

Adapted from Kragelund C. et al. N. Eng. J. Med 2005: 352:666-75

hormone's levels in low-risk patients with stable coronary artery disease and preserved ventricular function. The authors conclude that the "BNP and NT-proBNP levels were strongly related to the incidence of cardiovascular mortality, heart failure and stroke…. BNPs provide strong and incremental prognostic information to traditional risk factors."

Another study, published in the May 2008 issue of *Clinical Chemistry*, suggests that NT-proBNP may be a useful marker for assessing cardiovascular risk in patients who routinely use anti-inflammatory drugs. In the study, patients with NT-proBNP levels ^100ng/L were shown to be at higher cardiovascular risk. Patients on COX-2 inhibitors had more than seven times the risk of cardiovascular events.

Accepted Practice

According to Dr. Threatte, it is now generally accepted that an elevated NT-proBNP level suggests increased cardiovascular risk and warrants further investigation and close monitoring. Additional tests may also be recommended.

For patients with stable coronary artery disease, the NT-proBNP test is recommended on a yearly basis and is typically ordered by cardiologists or primary care physicians.

For more information about the test, please contact University Hospital's Clinical Pathology Customer Service Department, 315.464.4462. ■