

SPRING/SUMMER 2014

Volume 4, No.2

**THIS NEWSLETTER IS INTERACTIVE**

The table of contents, web addresses, and e-mail addresses in this newsletter are interactive.

News from the Roberta and Stephen R. Weiner Department of Surgery  
at Beth Israel Deaconess Medical Center

# INSIDE SURGERY

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## TEAMING UP FOR PATIENTS

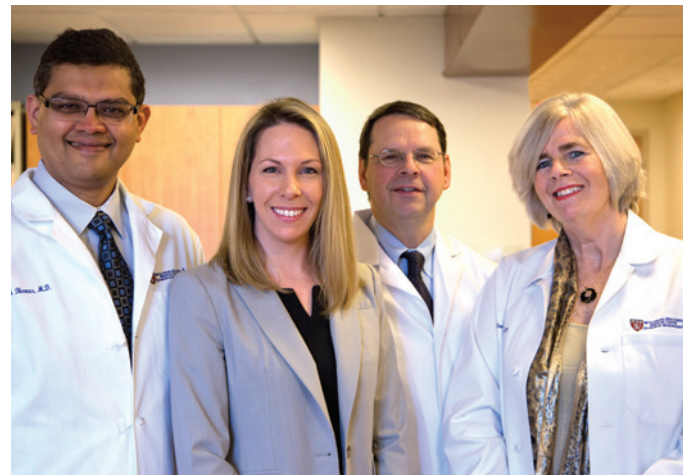
### *The BIDMC Brain Aneurysm Institute*

Every 18 minutes, someone in the U.S. suffers a ruptured brain aneurysm — a weak bulging area in an artery of the brain that, unable to withstand the pressure of blood pressing against it walls — finally bursts. In nearly half of all cases, the person dies. Of those who survive, nearly seven in ten will have some permanent deficit such as cognitive, visual, or speech problems.

It is estimated that six million people in the United States — one in every 50 people, the majority of whom are women — have an unruptured brain aneurysm. Because most have no symptoms, they have no idea they are harboring a potentially deadly condition.

That was the experience of Jess Voskanian, 33, a manager at an educational technology firm who lives in Watertown with her husband and dogs. Fit and seemingly healthy, Ms. Voskanian was cleaning her house last spring when, out of the blue, she was overcome with pain in her head so intense “it felt like I’d been shot in the head,” she says. Thankfully, her husband and father-in-law were home and called 911.

Taken by ambulance to BIDMC, Ms. Voskanian was soon diagnosed with a subarachnoid hemorrhage caused by a ruptured brain aneurysm. She was rushed to the OR, where she underwent treatment by neurosurgeon **Ajith Thomas, MD**, Co-Director of the BIDMC [Brain Aneurysm Institute](#). The Institute is a new program established by neurosurgeon **Christopher Ogilvy, MD**, Director of the Brain Aneurysm Institute and Endovascular and Operative Neurovascular Surgery in the Department of Surgery. Dr. Ogilvy, one of the world’s foremost neurosurgeons who was previously at Massachusetts General Hospital for almost 30 years, came to BIDMC in late 2013 to establish this unique, multidisciplinary Institute. “We and our patients are very fortunate to have a neurosurgeon of Dr. Ogilvy’s experience, talents, and stature leading this new Institute,” says **Ron Alterman, MD**, Chief of Neurosurgery.



(From left): Ajith Thomas, MD, patient Jess Voskanian, Christopher Ogilvy, MD, and Deidre Buckley, RN, NP.



Beth Israel Deaconess  
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HARVARD MEDICAL SCHOOL  
TEACHING HOSPITAL

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## Message from the Chairman

All meaningful achievements require two essential components — innovation and teamwork. Without innovation, progress is impossible; without teamwork, even the most promising, bold ideas cannot come to fruition.

In this issue, we highlight two BIDMC Institutes that demonstrate the power of innovation and teamwork: the Institute for Hepatobiliary and Pancreatic Surgery and the new Brain Aneurysm Institute.

Each led by a Surgery faculty member but comprising surgeons, physicians, nurses, and many other specialists throughout BIDMC, these multidisciplinary specialty care centers reflect the reality of 21st-century health care — that to achieve the best possible outcomes, patients with complex, serious conditions like cancer or brain aneurysms require innovative, evidence-based treatment provided by an entire team of specialists working together on their behalf.

Indeed, patients who come to these institutes benefit from treatment plans that reflect the combined expertise of specialists in multiple disciplines who are leaders in their fields. They have access to the latest, most promising clinical trials and cutting-edge minimally invasive therapies that, in some cases, are simply not available elsewhere. Most importantly, all receive well-coordinated, compassionate care that reflects BIDMC's "Human First" philosophy.

The development of innovative, effective new treatments such as those we offer our patients cannot proceed without laboratory and clinical research, which today is increasingly dependent on funding from sources other than the federal government. In this issue, we share the story of a patient who, grateful for the superb care he received from urologist Andrew Wagner, MD, made a generous gift to support Dr. Wagner's prostate cancer research program. Mr. Cotter made an investment in the future by supporting the groundwork needed to benefit subsequent generations of patients. We are all grateful for his and many others' vision, generosity, and support of our mission.

This issue features a profile of one of our many accomplished General Surgery Residency Program alumni, Dr. Lorelei Grunwaldt, a pediatric plastic surgeon who heads two major clinical centers at Children's Hospital of Pittsburgh. It also includes an interview with Dr. Lijun Sun, who leads our new Center for Drug Discovery and Translational Research. A renowned scientist, Dr. Sun has taken multiple small molecules from bench to late-stage clinical trials.

I hope you will find this issue of *Inside Surgery* interesting and informative and, as always, encourage you to contact us with any suggestions or comments.



Elliot Chaikof, MD, PhD



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The mission of the  
Department of Surgery:

- Provide care of the very highest quality
- Improve health through innovation and discovery
- Prepare future leaders in American surgery
- Serve our communities with sensitivity and compassion

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[bidmc.org/surgery](http://bidmc.org/surgery)



## Harvard Medical School Faculty Promotions

Congratulations to the following faculty members on their well-deserved promotions at Harvard Medical School.

### PROMOTED TO: PROFESSOR OF SURGERY



#### Mark P. Callery, MD

*Area of Excellence:* Clinical expertise and innovation, with significant supporting activities in administration and institutional service.

Mark P. Callery, MD, Chief of the Division of General Surgery and Chair of the Department of Surgery's Leadership Council, is an internationally recognized expert in complex pancreatic and hepatobiliary surgery. He joined BIDMC in 2001 and built General Surgery into a world-class division that, among other achievements, established it as a pioneer in advancing minimally invasive and laparoscopic methods to treat a range of GI conditions. In 2012, Dr. Callery and colleagues performed the first robotic pancreatectomy in Massachusetts.

Dr. Callery's research includes widely recognized studies evaluating quality assessment in high-acuity pancreaticobiliary surgery. He has received numerous awards for teaching including, in 2013, the S. Robert Stone Award for Excellence in Teaching of Harvard Medical School students.

Dr. Callery serves in leadership roles in many professional societies, and has been honored for his leadership contributions with a Melzer Award from BIDMC's Board of Trustees. Dr. Callery has had more than 130 peer-reviewed papers published and is frequently invited to speak at national and international conferences.

*Continued on page 9 >*

## New Faculty



#### Martina Stippler, MD

Director of Neurotrauma

**Division:** Neurosurgery

**Medical School:** Leopold Franzens University, Innsbruck School of Medicine, Austria

**Internship:** General Surgery, Pennsylvania Hospital, Philadelphia, PA

**Residency:** Neurological Surgery, University of Pittsburgh Medical Center, Pittsburgh, PA

**Clinical Interests:** traumatic brain injury, complex and minimally invasive spine surgery, endoscopic skull base surgery, endoscopic pituitary surgery

**Research Interests:** multimodality monitoring in traumatic brain injury, advanced imaging in mild traumatic brain injury

**Phone:** 617-632-7246



#### Tahira Mirza, MBBS, FACS

**Division:** Acute Care Surgery, Trauma, and Surgical Critical Care

**Medical School:** Rawalpindi Medical College, University of the Punjab, Pakistan

**Residency:** General Surgery, North Oakland Medical Centers, Pontiac, MI

**Fellowship:** Surgical Critical Care, Massachusetts General Hospital, Boston, MA; Traumatology and Emergency Medicine, Hartford Hospital, Hartford, CT

**Clinical Interests:** trauma, surgical critical care, emergency general surgery

**Research Interests:** outcomes of patients with decompressive hemicraniectomy for traumatic brain injury

**Phone:** 617-632-9922



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### Coiling or clipping

One option for the treatment of a brain aneurysm is clipping, a surgical procedure that entails opening the skull (a craniotomy) and placing a titanium clip or clips at the neck of an aneurysm to prevent blood from entering it.

In Ms. Voskanian's case, however, open surgery was not necessary. Instead, Dr. Thomas treated her using a minimally invasive (endovascular) approach in which a tiny coil is inserted via a catheter in the groin into the aneurysm. Packing the aneurysm with the coil(s) causes the blood within it to clot, which effectively prevents more blood from entering the aneurysm. Several months later when it was safe to do so, Ms. Voskanian underwent the endovascular placement of a stent, or tiny metal mesh tube, to prevent the coil from migrating out of the aneurysm.

Ms. Voskanian suffered no



Brain Aneurysm Institute Director Christopher Ogilvy, MD, is one of the world's foremost neurosurgeons.

lasting deficits from her ordeal and is back to normal in all dimensions of her professional and personal life, which she credits to her healthy lifestyle and the excellent care she received from Dr. Thomas and the Brain Aneurysm Institute team. Calling her recovery "miraculous," Ms. Voskanian says, "Dr. Thomas always took time to patiently explain things to me and my family, and would always personally return my calls within minutes. The care he and his team provided were simply spectacular."

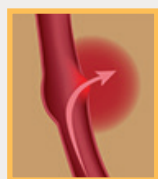
neuroradiology, vascular neurology, and neurointensive care.

"One of the greatest strengths we offer patients is our truly collaborative team approach," says Dr. Ogilvy. "In our weekly multidisciplinary conference, we draw on the expertise and experience of leading experts across many disciplines to develop a personalized treatment plan that offers each patient the best possible outcomes — even if that means close observation rather than intervention." Adds Dr. Thomas, "We evaluate all points of view and develop recommendations as a team with the benefit of patients first and foremost in our minds."

### Multiple options

In many hospitals, neurosurgeons specializing in neurovascular conditions have expertise in one mode of treatment or the other. But both Drs. Ogilvy and Thomas have extensive experience in both endovascular and open treatment of brain aneurysms, so patients who require intervention are treated using the approach (which sometimes involves a combination

### Hemorrhagic Stroke



A hemorrhagic stroke occurs when a blood vessel ruptures and blood leaks into the surrounding area of the brain.

### Strength in collaboration

Providing optimal care to patients with brain aneurysms or the conditions that can cause them is complex and requires a team approach, says Dr. Ogilvy. He and Dr. Thomas work closely together as members of a multidisciplinary team that also includes fellow neurosurgeon **Ekkehard Kasper, MD, PhD**, Brain Aneurysm Institute nurse practitioner **Deidre Buckley, RN, NP**, and a group of BIDMC specialists from a range of disciplines, including interventional neuroradiology,

of therapies) designed to offer the best possible outcomes.

Drs. Ogilvy and Thomas also offer a new flow-diversion treatment (using the Pipeline® device), which is an option for some patients, including those who were previously considered inoperable. Patients treated at BIDMC also have access to CyberKnife®, extremely targeted, high-dose radiation therapy that may be used to treat certain vascular malformations. Dr. Kasper is Co-Director of the Keith C. Field CyberKnife Center.

The Brain Aneurysm Institute provides evaluation and treatment for a wide range of both ischemic and hemorrhagic neurovascular conditions. These include Moya-Moya disease, subarachnoid hemorrhage, unruptured aneurysms, arteriovenous malformations (AVMs), and cavernous malformations (for a complete list of conditions, please visit the Brain Aneurysm Institute [website](#)).

### Research and education

In addition to state-of-the-art care, the Institute also conducts innovative research that spans clinical outcomes studies and basic research.

For example, Dr. Ogilvy is conducting clinical research that is evaluating techniques to minimize ischemic injury during neurovascular procedures, and

laboratory research that involves using tissue-engineering techniques to treat certain types of aneurysms.

Dr. Thomas is looking at how various devices influence the biology of blood vessels and, in collaboration with investigators at Massachusetts Institute of Technology, using non-invasive methods (transcranial Doppler) to measure pressure inside the brain.

The Brain Aneurysm Institute also trains neurosurgical fellows, and is one of only a few programs in the nation offering a truly blended endovascular and surgical experience for fellows.

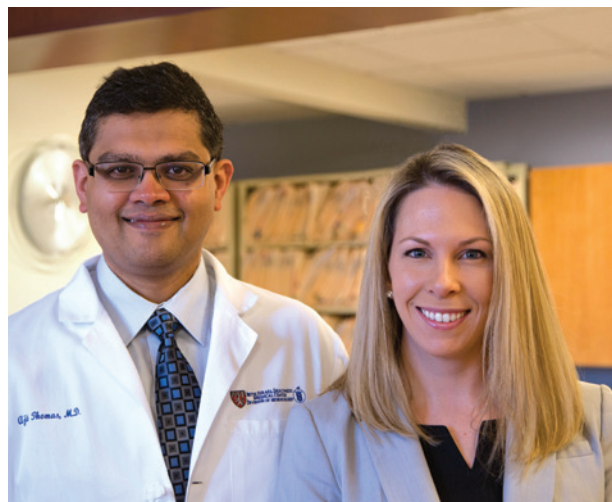
“Every week, and often every day, I go back and forth between the operating room and endovascular suite, which allows me to use both open and endovascular skills on a frequent basis,” says **Matthew Fusco, MD**, a second-year fellow. “When you also add in the volume, breadth, and collaborative working environment, I don’t know of any other program in the country that offers the same opportunity.”

The Institute also offers educational programs for patients and family members. Once a month, for example, patients and those close to them can attend a free educational/support group on topics ranging from “grieving the loss of self” to “new treatments for cerebral aneurysms” taught by

Institute faculty and other experts.

In addition, the Institute educates physicians nationally and internationally about neurovascular conditions through invited presentations and symposia. In May, for instance, Institute faculty will present a daylong continuing-education program for physicians, “Ischemic and Hemorrhagic Update: Current Practices and Future Directions,” sponsored by Harvard Medical School.

As Ms. Voskanian can attest, having a brain aneurysm was a frightening experience. But thanks to the care provided by the Brain Aneurysm Institute’s top-notch team of experts, her prognosis is excellent and she feels “confident, healthy, and ready to face the future.”



*Ajith Thomas, MD, treated Jess Voskanian for a brain aneurysm using a minimally invasive approach.*

### CONTACT THE BRAIN ANEURYSM INSTITUTE

**Direct Transfer Line: 617-667-7000; Page “9COIL”**

**Direct Emergency Department Access: 617-754-2494**

**Non-urgent referrals and appointments: [brainaneurysm@bidmc.harvard.edu](mailto:brainaneurysm@bidmc.harvard.edu) or call 617-632-9940**

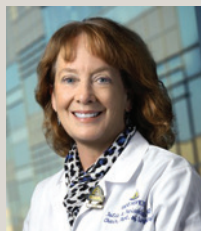
## NEWS BRIEFS



Selena Heman-Ackah, MD, MBA, Otolaryngology/Head and Neck Surgery, was selected to

receive a two-year Faculty Fellowship from the Harvard Medical School (HMS) Office for Diversity Inclusion and Community Partnership. The fellowship is designed to enable HMS junior faculty to pursue activities that enhance their career development as researchers and clinicians/teachers, lead to advancement within the Harvard system, and promote diversity within the HMS community. Dr. Heman-Ackah will use the fellowship funding to investigate preventive therapies for the treatment of age-related and noise-induced hearing loss.

### Distinguished Visiting Professors



In February, Julie A. Freischlag, MD, William Stewart Halsted Professor and Chair of the Department of Surgery at Johns Hopkins Hospital in Baltimore, visited BIDMC as the inaugural William Silen Visiting Professor of Surgery. Dr. Freischlag spoke at Grand Rounds on “Clinical and Personal Comparative Effectiveness.”



In March, Michael W. Mulholland, MD, PhD, was the Capper-Hermanson Visiting Professor of Surgery. Dr. Mulholland, the Frederick A. Collier Distinguished Professor of Surgery and Chairman of Surgery at the University of

Michigan, spoke at Grand Rounds on “Surgical Research in the Wiki World.”

During their two-day visits, Drs. Freischlag and Mulholland participated in roundtable discussions with residents and faculty and were the guests of honor at dinners at the Harvard Faculty Club.



Leading neurosurgeons and neurologists from BIDMC addressed “Rethinking the Brain” at BIDMC’s Palm Beach Gala in January. The annual event highlighted the relatively new concept in neuroscience that the adult human brain is adaptable rather than hard-wired and unchangeable. Featured speakers included **Ron Alterman, MD**, Chief of Neurosurgery (second from left).



Following an on-site review, in January the Trauma Center at BIDMC was re-verified as a Level I Trauma Center by the Committee on Trauma (COT) of the American College of Surgeons. The COT’s Consultation/Verification Program for Hospitals promotes the development of trauma centers that provide the entire spectrum of care — from the pre-hospital phase through rehabilitation — to address the needs of all injured patients.





In March, **Samuel Lin, MD** (left), and **Ahmed Ibrahim, MD**, Plastic and Reconstructive Surgery, and co-

corresponding author **David Kaplan, PhD**, of Tufts University, had a paper published in *Nature Communications* that describes the results of their ongoing research, which found that screws made of silk could be used to fix broken bones. These biocompatible bone screws may offer many advantages over traditional metal-based ones, including the ability to degrade in the body (thus avoiding the need for a second operation to remove them), and less bone degradation that can result from the differences in mechanical properties of bone and much stiffer metal.

Drs. Lin and Kaplan and colleagues synthesized silk bone screws that they implanted into the hind limbs of rats; the screws functioned successfully for the eight-week period investigated, said Dr. Lin, noting that a patent has been filed and that further research is ongoing.



*Silk from silkworms is the source of biocompatible bone screws.*

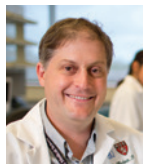


### **BIDMC Doctors First to Implant Aortic Valve Device**

In January, BIDMC became the first institution in the nation to treat a patient with a new minimally invasive medical device (CoreValve) following its FDA approval. The device treats patients with severely damaged aortic heart valves who are too ill or frail to have their valves replaced with traditional open-heart surgery.

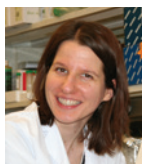
The CoreValve team included cardiac surgeons **Kamal Khabbaz, MD**, Chief of Cardiac Surgery, and **David Liu, MD**; interventional cardiologists Jeffrey Popma, MD, Roger Laham, MD, and Duane Pinto, MD; and program coordinator Kim Guibone, NP. Dr. Popma is the co-principal investigator of the national CoreValve U.S. Pivotal Trial, the clinical study that led to FDA approval of the device. Dr. Khabbaz is the co-principal investigator of the local trial, which took place at BIDMC. For more information, contact Ms. Guibone at 617-632-9729.

## NEWS BRIEFS



In a newscast on WCVB-TV/Channel 5 in February, Surgery researcher **Leo Otterbein, PhD**, described the recent discovery he made with fellow Surgery investigator **Barbara Wegiel, PhD**,

showing that therapeutic levels of carbon monoxide can prevent tumor growth and amplify the effects of chemotherapy in animal models of prostate and lung cancer.



In May, the BIDMC [Brain Aneurysm Institute](#) will offer a daylong course for physicians through Harvard Medical School entitled “Ischemic and Hemorrhagic Update: Current Practices and Future Directions.”

The course directors are neurosurgeons **Christopher Ogilvy, MD**, director of the Brain Aneurysm Institute (top photo), co-director **Ajith Thomas, MD**, and BIDMC neurologist **Magdy Selim, MD, PhD**. To be held in Boston, the course will focus on recent advances in the field of neurovascular disease.



The fourth annual IDEAS™ symposium, “Surgical Robotics:

## Fellowship Matches

The department is pleased to announce the following fellowship matches for members of the 2014 BIDMC General Surgery Residency graduating class.

### Abdominal Organ Transplantation/ Hepato-Pancreato-Biliary Surgery

Martin J. Dib, MD  
*University of Toronto, Canada*

### Trauma/Surgical Critical Care

Stephen Gondek, MD  
*Vanderbilt University, Tennessee*

Elizabeth Turner, MD  
*Massachusetts General Hospital, Boston*

### Cardiothoracic Surgery

Louis Chu, MD  
*Brigham and Women's Hospital, Boston*

Kiran Lagisetty, MD  
*University of Michigan Health System*

### Colorectal Surgery

Jana Simonds, MD  
*Colon and Rectal Clinic of Houston, University of Texas*

### Plastic Surgery

Yuen-Jong Liu, MD  
*University of North Carolina at Chapel Hill*

### Vascular Surgery

Rodney Bensley, MD  
*University of Florida - Gainesville*

From Principles to Practice,” was held April 5 in Boston. The daylong event, co-led by department Chairman **Elliot Chaikof, MD, PhD**, and **Henrik Christensen, PhD**, of Georgia Institute of Technology, featured an international faculty of thought leaders in robotics who addressed topics that included the federal government's priorities in robotics, next-generation surgery systems, and the potential of bionics in human performance. This year's symposium, which attracted attendees from around the world, included a poster session and cocktail hour.



The department's Surgery Research Report, 2012-2013, which features a new format and look, is available online and in print. To request a print copy, please contact: [surgerycommunications@bidmc.harvard.edu](mailto:surgerycommunications@bidmc.harvard.edu) or call 617-632-9581.



< HMS Promotions, continued from page 3

**PROMOTED TO:  
ASSOCIATE PROFESSOR OF SURGERY**



**Lijun Sun, PhD**  
*Area of Excellence:* Investigation

Lijun Sun, PhD, Director of the Department of Surgery's Center for Drug Discovery and Translational Research (see page 10), specializes in small-molecule drug design and development of targeted therapies. With a background in the biotechnology and pharmaceutical industries, Dr. Sun has a national reputation as an innovative leader in the field of drug discovery, particularly in the field of oncology, with profiles of his work in *Nature Drug Reviews*, among other publications. Dr. Sun also has significant expertise in drug product development and translational research, with a patent portfolio that includes more than 100 awarded and pending U.S. patent applications.

At BIDMC since 2012, Dr. Sun has developed a research program in the design of small-molecule targeted therapies for the treatment of metastatic cancer, as well as new collaborative projects in cancer, renal and cardiac disease, immunology, and nanotechnology.

**PROMOTED TO:  
ASSISTANT PROFESSOR OF SURGERY**



**Stephen R. Odom, MD**  
*Area of Excellence:* Clinical expertise and innovation

Stephen R. Odom, MD, Division of Acute Care Surgery, Trauma, and Surgical Critical Care, is a trauma intensivist who has earned a strong reputation for his expertise in critical care management. At BIDMC, he introduced the concept of intensivist-directed echocardiography at the bedside, and lectures nationally on echocardiography and ultrasound in critical care and inpatient settings.

Dr. Odom is a tutor for three Harvard Medical School (HMS) courses, for which he received the "HMS Excellence in Tutoring Award" three times, and created a Central Line Simulation Skills Curriculum that is required of all BIDMC surgery residents. Dr. Odom has twice received the department's John L. Rowbotham Award for Excellence in Teaching, and also received the HMS George W. B. Starkey Award for Excellence in Teaching.

**PROMOTED TO:  
ASSOCIATE PROFESSOR OF SURGERY**



**Samuel J. Lin, MD**  
*Area of Excellence:* Clinical expertise and innovation, with significant supporting activities in investigation

Samuel J. Lin, MD, a member of the Division of Plastic and Reconstructive Surgery, specializes in reconstructive surgical oncology (breast reconstruction and head/neck), post-bariatric body contouring, nasal airway surgery and rhinoplasty, and a wide range of other reconstructive surgical procedures. He also conducts collaborative basic research relating to innovative medical devices that has led to three patent filings, with publications in *Nature Materials* and *Nature Communications*. In addition, Dr. Lin is the principal investigator of three grants and co-editor of four books. Dr. Lin serves as the BIDMC Site Director for the Harvard Combined Plastic Surgery Residency Program, and is also Co-Director of the Harvard Aesthetic and Reconstructive Surgery Fellowship at BIDMC. In 2013, he received the Harvard Medical School Young Mentor Award.

**PROMOTED TO:  
ASSISTANT PROFESSOR OF SURGERY**



**Benjamin Schneider, MD**  
*Area of Excellence:* Clinical expertise and innovation

Benjamin Schneider, MD, Division of General Surgery, specializes in bariatric and minimally invasive general surgery with a particular interest in minimally invasive techniques, technologies, and robotic surgery. Dr. Schneider serves as Director of the BIDMC Weight Loss Surgery Fellowship, helped obtain Level 1A ACS accreditation for BIDMC's Bariatric Surgery Program, and has developed numerous clinical pathways for patients undergoing laparoscopic procedures. He has also performed several robotic "firsts," including the first robotic Lap-Band bariatric operation in Boston.

Dr. Schneider's research focuses on clinical outcomes and resident education. In addition to his teaching activities, he is an active member of many surgical societies, including the Society of American Gastrointestinal Endoscopic Surgeons and the American Society of Metabolic and Bariatric Surgery, serving on the national Program Committee.

## A Conversation with Lijun Sun, PhD

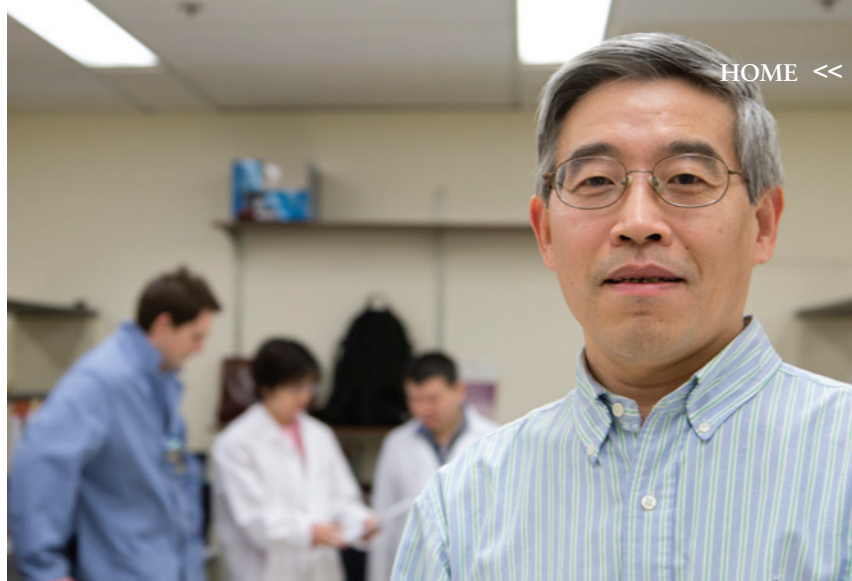
### *Director of the Center for Drug Discovery and Translational Research*

In September 2012, after 15 very successful years in the biotechnology and pharmaceutical industry, chemist **Lijun Sun, PhD**, was recruited to the Department of Surgery to establish and lead the Center for Drug Discovery and Translational Research. By fostering multidisciplinary collaborations throughout the department, BIDMC, Harvard, and industry, the center's goal is to accelerate the translation of basic research into the clinical setting, where it can benefit patients.

In this edited interview, Dr. Sun talks about the center, its services and goals, his own research, and what brought him to BIDMC.

***Q: You were educated in China and later at Georgetown University and then Emory University in Atlanta, where you earned your PhD in Chemistry in 1995. What led you to work in the biopharmaceutical industry focusing on drug discovery and development, versus taking a more traditional route, such as working for a chemical company?***

A: I'd finished my PhD and learned about a post-doctoral research opportunity in the medical school at Emory that sounded interesting, so I pursued it. At the time I knew very little about biology and it was



an eye-opening experience for me to discover that chemistry could make an important contribution to medical research.

After two years of post-doctoral research, I left Atlanta for Cambridge, where I worked at Shionogi BioResearch for five years [Director of Chemistry], later moving to Synta Pharmaceuticals for nearly 10 years [Vice President of Chemistry], and then to Theracrine, a biotech startup [Vice President of Chemistry and Pharmaceutical Sciences], before coming to BIDMC.

During those 15 years, I took on greater responsibilities and participated in the clinical development of a number of first-in-class, novel molecular entities with the potential to treat cancers and autoimmune diseases. I was fortunate to be involved in the entire drug R&D process numerous times, which gave me a unique big-picture perspective that informs my work here at BIDMC.

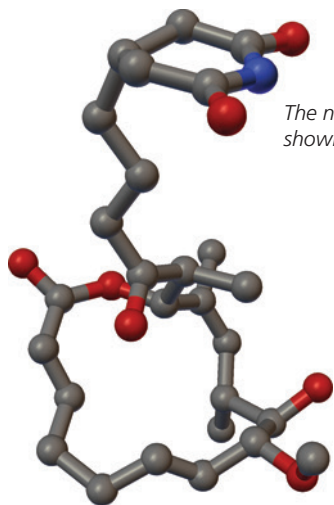
***Q: With such a successful track record in industry, why did you choose to change course and come to an academic medical center?***

A: I believe the best way to discover and develop new drugs that will help patients is to understand the biological targets of those drugs at a deep level. This enables you to design biologically active molecules that take specific aim at those pathways or targets — to design drugs using a rational approach versus taking a less focused approach.

I came to BIDMC because I wanted to collaborate with academic investigators who have this deep understanding so that we could, by combining our complementary skills and knowledge, accelerate their translational research. I also knew that joining the Harvard community of outstanding investigators doing cutting-edge research would present many exciting opportunities for collaboration.

***Q: In what ways does the center collaborate with investigators, and what are some of the results of those collaborations thus far?***

A: I'm grateful that I've been very well-received by investigators in the department and at BIDMC, who are



The natural product migrastatin has been shown to prevent cancer metastasis.

motivated to accelerate their translational research and welcome the opportunity to take advantage of the resources and skills the center provides.

I collaborate with investigators in the development of research proposals, including contributing to study design and identifying future directions. Working with investigators in Surgery and other departments, for example, we have submitted a number of new grant applications that are under review. We [with Vikas Sukhatme, MD, PhD] recently received a major three-year grant from an international pharmaceutical company to pursue drug design for applications in cancer.

We are also working with Surgery investigators **Wolfgang Junger, PhD, Elliot Chaikof, MD, PhD**, and others to develop drug discovery projects relating to cancer, heart disease, kidney disease, immunology, and nanotechnology.

In our current research space, we are building and expanding our capabilities in molecular design, in silico [computer] screening, computational predictive modeling, drug synthesis, and pharmaceuticals, all of which will be available to

investigators we collaborate with. I currently have three post-docs working with me, but by this summer expect to have five, and I'm developing partnerships with core facilities in the Longwood Medical Area and Harvard University, which will further expand our capabilities.

***Q: You also conduct your own independent research. What is the focus of those investigations?***

A: My research involves the natural product migrastatin, which has been shown to prevent cancer metastasis. I hope my research of migrastatin will lead to a better understanding of cancer metastasis, which could help us identify novel treatment and prevention strategies.

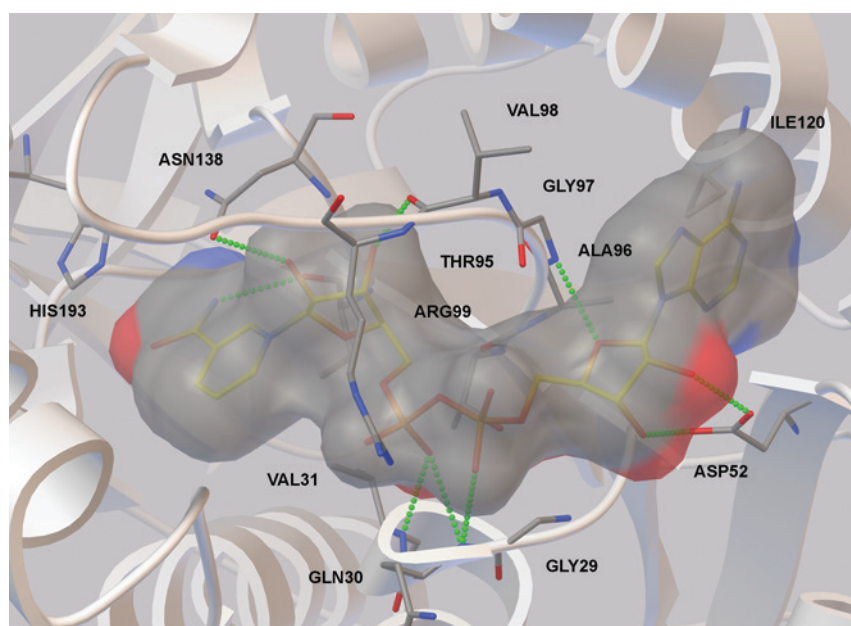
I am also investigating aryl hydrocarbon receptor (AhR), which is a key player in modulating innate and adaptive immunity. AhR is not well understood, but may be a novel target for treating conditions

such as multiple sclerosis, diabetes, and transplant rejection. We have generated encouraging results from a number of new series of molecules.

***Q: How will you define success for the center in the short term and the long term?***

A: In the short term, we want to help generate exciting data so we can sustain ongoing collaborations and, simultaneously, build up the infrastructure of the center so we can be more comprehensive in terms of providing expertise in drug discovery.

In the long term, as a result of both our independent and collaborative efforts, we want to discover and develop new pharmaceuticals — or inspire the discovery of new pharmaceuticals for collaborators in industry to develop — with the ultimate goal of benefiting patients, which is a goal we all share.



Protein co-crystal structures provide templates for computer-aided designs of new inhibitory molecules.



## Selected Faculty Publications

### Acute Care Surgery, Trauma, and Surgical Critical Care

**Junger WG**, Rhind SG, Rizoli SB, Cuschieri J, Baker AJ, Shek PN, Hoyt DB, Bulger EM. Prehospital hypertonic saline resuscitation attenuates the activation and promotes apoptosis of neutrophils in patients with severe traumatic brain injury. *Shock* 2013;40(5):366-74.

Morandell S, Reinhardt HC, Cannell IG, Kim JS, Ruf DM, Mitra T, Couvillon AD, Jacks T, **Yaffe MB**. A reversible gene-targeting strategy identifies synthetic lethal interactions between MK2 and p53 in the DNA damage response *in vivo*. *Cell Rep* 2013; in press.

**Odom SR, Gupta A**, Talmor D, Novack V, Sagy I, **Evenson AR**. Emergency hernia repair in cirrhotic patients with ascites. *J Trauma Acute Care Surg* 2013;75(3):404-9.

### Cardiac Surgery

Black KM, **Masuzawa A**, Hagberg RC, **Khabbaz KR**, Trovato ME, Rettagliati VM, Bhasin MK, Dillon ST, Libermann TA, Toumpoulis IK, **Levitsky S, McCully JD**. Preliminary biomarkers for identification of human ascending thoracic aortic aneurysm. *J Am Heart Assoc* 2013;2(6):e000138.

Warraich HJ, Matyal R, Bergman R, Hess PE, **Khabbaz K**, Manning WJ, Mahmood F. Impact of aortic valve replacement for aortic stenosis on dynamic mitral annular motion and geometry. *Am J Cardiol* 2013;112(9):1445-9.

**Lassaletta AD, Elmadhun NY**, Burgess TA, Bianchi C, Sabe AA, Robich MP, Chu LM, Sellke FW. Microvascular notch signaling is upregulated in response to vascular endothelial growth factor and chronic myocardial ischemia. *Circ J* 2013; in press.

**Sabe AA, Elmadhun NY**, Dalal RS, Robich MP, Sellke FW. Resveratrol regulates autophagy signaling in chronically ischemic myocardium. *J Thorac Cardiovasc Surg* 2013; in press.



### Colon and Rectal Surgery

**Gilmore DM, Curran T**, Gautam S, **Nagle D, Poylin V**. Timing is everything — Colectomy performed on Monday decreases length of stay. *Am J Surg* 2013;206(3):340-5.

**Nagle D, Curran T**, Anez-Bustillo L, **Poylin V**. Reducing urinary tract infections in colon and rectal surgery. *Dis Colon Rectum* 2014;57(1):91-7.

**Nandivada P, Nagle D**. Surgical therapies for fecal incontinence. *Curr Opin Gastroenterol* 2013; in press.

### General Surgery

Adolph TE, Tomczak MF, Niederreiter L, Ko HJ, Böck J, Martinez-Naves E, Glickman JN, Tschurtschenthaler M, Hartwig J, Hosomi S, Flak MB, Cusick JL, Kohno K, Iwawaki T, Billmann-Born S, Raine T, Bharti R, Lucius R, Kweon MN, Marciniak SJ, Choi A, **Hagen SJ**, Schreiber S, Rosenstiel P, Kaser A, Blumberg RS. Paneth cells as a site of origin for intestinal inflammation. *Nature* 2013;503(7475):272-6.

Apovian CM, Huskey KW, Chiodi S, Hess DT, **Schneider BE, Blackburn GL, Jones DB**, Wee CC. Patient factors associated with undergoing laparoscopic adjustable gastric banding vs Roux-en-Y gastric bypass for weight loss. *J Am Coll Surg* 2013;217(6):1118-25.

Arriaga AF, Gawande AA, Raemer DB, **Jones DB**, Smink DS, Weinstock P, Dwyer K, Lipsitz SR, Peyre S, Pawlowski JB, Muret-Wagstaff S, Gee D, Gordon JA, Cooper JB, Berry WR; for the Harvard Surgical Safety Collaborative. Pilot testing of a model for insurer-driven, large-scale multicenter simulation training for operating room teams. *Ann Surg* 2013; in press.

Feldman LS, Brunt LM, Fuchshuber P, **Jones DB**, Jones SB, Mischna J, Munro MG, Rozner MA, **Schwartzberg SD**; SAGES FUSE™ Committee. Rationale for the Fundamental Use of Surgical Energy™ (FUSE) curriculum assessment: Focus on safety. *Surg Endosc* 2013;27(11):4054-9.

Iwayama I, Alfano CM, Mason C, Wang C, Duggan C, Campbell KL, Kong A, Foster-Schubert KE, **Blackburn GL**, Wang CY, McTiernan A. Weight and metabolic effects of dietary weight loss and exercise interventions in postmenopausal antidepressant medication users and non-users: A randomized controlled trial. *Prev Med* 2013;57(5):525-32.

Kang HW, Ozdemir C, Kawano Y, LeClair KB, Vernochet C, Kahn CR, **Hagen SJ**, Cohen DE. Thioesterase superfamily member 2/Acyl-CoA thioesterase 13 (Them2/Acot13) regulates adaptive thermogenesis in mice. *J Biol Chem* 2013;288(46):33376-86.

## Neurosurgery

**Arle JE**, Carlson KW, Mei L, Shils JL. Modeling effects of scar on patterns of dorsal column stimulation. *Neuromodulation* 2013; in press.

Caplan LR, **Thomas AJ**, Inoa V. Interventional treatment of brain ischemia related to intracranial cerebrovascular occlusive lesions. *Curr Opin Neurol* 2014;27(1):1-7.

Honigberg MC, **Papavassiliou E**, Cohen YZ. Primary leptomeningeal melanocytosis presenting as chronic meningitis. *J Clin Neurosci* 2013; in press.

Motlagh MG, Smith ME, Landeros-Weisenberger A, Kobets AJ, King RA, Miravite J, de Lotbinière AC, **Alterman RL**, Mogilner AY, Pourfar MH, Okun MS, Leckman JF. Lessons learned from open-label deep brain stimulation for Tourette syndrome: Eight cases over seven years. *Tremor Other Hyperkinet Mov (NY)* 2013;3.

**Thomas AJ**, Gross BA. Ruptured intracranial aneurysms in young adults: Seeing the forest for the trees. *Clin Neurol Neurosurg* 2013; in press.

## Ophthalmology

Marra KV, Yonekawa Y, Papakostas TD, **Arroyo JG**. Indications and techniques of endoscope assisted vitrectomy. *J Ophthalmic Vis Res* 2013;8(3):282-90.

Yonekawa Y, Papakostas TD, Marra KV, **Arroyo JG**. Endoscopic pars plana vitrectomy for the management of severe ocular trauma. *Int Ophthalmol Clin* 2013;53(4):139-48.

## Otolaryngology/Head and Neck Surgery

**Heman-Ackah SE**, Friedmann DR, Cosetti MK, Waltzman SB, Roland JT Jr. Revision cochlear implantation following internal auditory canal insertion. *Laryngoscope* 2013;123(12):3141-7.

Kim K, **Ibrahim AM**, Koolen PG, **Frankenthaler RA**, **Lin SJ**. Analysis of the NSQIP database in 676 patients undergoing laryngopharyngectomy: The impact of flap reconstruction. *Otolaryngol Head Neck Surg* 2013; in press.

## Plastic and Reconstructive Surgery

**Ashraf AA**, **Colakoglu S**, **Nguyen JT**, **Anastasopoulos AJ**, **Ibrahim AM**, Yueh JH, **Lin SJ**, **Tobias AM**, **Lee BT**. Patient involvement in the decision-making process improves satisfaction and quality of life in post-mastectomy breast reconstruction. *J Surg Res* 2013;184(1):665-70.

Bloom J, **Upton J** 3rd. CLOVES Syndrome. *J Hand Surg Am* 2013;38(12):2508-12.

**Ibrahim AM**, Rabie AN, Borud L, **Tobias AM**, **Lee BT**, **Lin SJ**. Common patterns of reconstruction for Mohs defects in the head and neck. *J Craniofac Surg* 2013; in press.

**Ibrahim AM**, Shuster M, Koolen PG, Kim K, Taghinia AH, Sinno HH, **Lee BT**, **Lin SJ**. Analysis of the National Surgical Quality Improvement Program database in 19,100 patients undergoing implant-based breast reconstruction: Complication rates with acellular dermal matrix. *Plast Reconstr Surg* 2013;132(5):1057-66.

Kim K, **Ibrahim AM**, **Koolen PG**, **Lee BT**, **Lin SJ**. Trends in facial fracture treatment using the ACS-NSQIP database. *Plast Reconstr Surg* 2013; in press.

**Nguyen JT**, Ashitate Y, Venugopal V, Neacsu F, Kettenring F, Frangioni JV, Gioux S, **Lee BT**. Near-infrared imaging of face transplants: Are both pedicles necessary? *J Surg Res* 2013;184(1):714-21.

## Podiatry

McCartan BL, **Rosenblum BI**. Offloading of the diabetic foot: Orthotic and pedorthic strategies. *Clin Podiatr Med Surg*;31(1): 71-88.

**Tecilazich F**, **Dinh T**, **Pradhan-Nabzdyk L**, Leal E, **Tellechea A**, Kafanas A, Gnardellis C, Magargee ML, Dejam A, Toxavidis V, Tigges JC, Carvalho E, Lyons TE, **Veves A**. Role of endothelial progenitor cells and inflammatory cytokines in healing of diabetic foot ulcers. *PLoS One* 2013;8(12):e83314.

**Veves A**, Baltzis D, Eleftheriadou I. Diabetes treatment: Recent developments. *Adv Ther* 2013;30(12):1031-2.

## Surgical Oncology

Arous EJ, McDade TP, Smith JK, Ng SC, Sullivan ME, Zottola RJ, Ranauro PJ, Shah SA, Whalen GF, **Tseng JF**. Electronic medical record: Research tool for pancreatic cancer? *J Surg Res* 2013; in press.

Chau Z, West JK, Zhou Z, McDade T, Smith JK, Ng SC, **Kent TS**, **Callery MP**, **Moser AJ**, **Tseng JF**. Rankings versus reality in pancreatic cancer surgery: A real-world comparison. *HPB (Oxford)* 2013; in press.

**Hasselgren PO**.  $\beta$ -Hydroxy- $\beta$ -methylbutyrate (HMB) and prevention of muscle wasting. *Metabolism* 2013; in press.

Zureikat AH, **Moser AJ**, Boone BA, Bartlett DL, Zenati M, Zeh HJ 3rd. 250 robotic pancreatic resections: Safety and feasibility. *Ann Surg* 2013;258(4):554-9.

**Wegiel B**, Gallo D, **Csizmadia E**, Harris C, Belcher J, Vercellotti GM, Penacho N, Seth P, Sukhatme V, Ahmed A, Pandolfi PP, Helczynski L, Bjartell A, Persson JL, **Otterbein LE**. Carbon monoxide expedites metabolic exhaustion to inhibit tumor growth. *Cancer Res* 2013;73(23):7009-21.

## Thoracic Surgery and Interventional Pulmonology

**Folch E**, Yamaguchi N, Vanderlaan PA, Kocher ON, Boucher DH, Goldstein MA, Huberman MS, **Kent MS**, **Gangadharan SP**, Costa DB, **Majid A**. Adequacy of lymph node transbronchial needle aspirates using convex probe endobronchial ultrasound for multiple tumor genotyping techniques in non-small-cell lung cancer. *J Thorac Oncol* 2013;8(11):1438-44.

**Kent M**, Landreneau R, Mandrekar S, Hillman S, Nichols F, Jones D, Starnes S, Tan A, Putnam J, Meyers B, Daly B, Fernando HC. Segmentectomy versus wedge resection for non-small cell lung cancer in high-risk operable patients. *Ann Thorac Surg* 2013;96(5):1747-54.

**Kent M**, Wang T, **Whyte R**, Curran T, Flores R, **Gangadharan S**. Open, video-assisted thoracic surgery, and robotic lobectomy: Review of a national database. *Ann Thorac Surg* 2013; in press.

**Kent MS**, Wang T, **Gangadharan SP**, **Whyte RI**. What is the prevalence of a "nontherapeutic" thymectomy? *Ann Thorac Surg* 2013; in press.

Odell DD, Peleg K, Givon A, Radomislensky I, Makey I, Decamp MM, **Whyte R**, **Gangadharan SP**, **Berger RL**; Israeli Trauma Group. Sternal fracture: Isolated lesion versus polytrauma from associated extrasternal injuries—analysis of 1,867 cases. *J Trauma Acute Care Surg* 2013;75(3):448-52

Venugopal V, Park M, Ashitate Y, Neacsu F, Kettenring F, Frangioni JV, **Gangadharan SP**, Gioux S. Design and characterization of an optimized simultaneous color and near-infrared fluorescence rigid endoscopic imaging system. *J Biomed Opt* 2013; 18(12):126018.

## Transplantation

**Evenson A**, Wang S, Kunselman AR, Undar A. Use of a novel diagonal pump in an *in vitro* neonatal pulsatile extracorporeal life support circuit. *Artif Organs* 2013; in press.

**Rodrigue JR**, Hanto DW, Curry MP. Substance abuse treatment and its association with relapse to alcohol use after liver transplantation. *Liver Transpl* 2013; in press.

**Rodrigue JR**, Hanto DW, Curry MP. The alcohol relapse risk assessment: A scoring system to predict the risk of relapse to any alcohol use after liver transplant. *Prog Transplant* 2013;23(4):310-8.

**Rodrigue JR**, Paek M, Whiting J, Vella J, Garrison K, Pavlakis M, Mandelbrot DA. Trajectories of perceived benefits in living kidney donors: Association with donor characteristics and recipient outcomes. *Transplantation* 2013; in press.

## Urology

Alemozaffar M, Chang SL, Kacker R, Sun M, **DeWolf WC**, **Wagner AA**. Comparing costs of robotic, laparoscopic, and open partial nephrectomy. *J Endourol* 2013;27(5):560-5.

Delto JC, Kacker R, Bubley G, **DeWolf WC**. Intravesical mitomycin therapy for stage T1 and Tis high-grade squamous cell carcinoma of the bladder. *Clin Genitourin Cancer* 2013; in press.

Gay HA, Michalski JM, Hamstra DA, Wei JT, Dunn RL, Klein EA, Sandler HM, Saigal C, Litwin M, Kuban D, Hembroff L, **Chang P**, Sanda MG; PROSTQA Consortium. Neoadjuvant androgen deprivation therapy leads to immediate impairment of vitality/hormonal and sexual quality of life: Results of a multicenter prospective study. *Urology* 2013;82(6):1363-8.

**Kissick HT**, Sanda MG, Dunn LK, **Arredouani MS**. Development of a peptide-based vaccine targeting TMPRSS2:ERG fusion-positive prostate cancer. *Cancer Immunol Immunother* 2013;62(12):1831-40.

## Vascular and Endovascular Surgery

**Bensley RP**, Curran T, Hurks R, Lo RC, **Wyers MC**, Hamdan AD, **Chaikof EL**, **Schermerhorn ML**. Open repair of intact thoracoabdominal aortic aneurysms in the American College of Surgeons National Surgical Quality Improvement Program. *J Vasc Surg* 2013;58(4):894-900.

Edwards ST, **Schermerhorn ML**, O'Malley AJ, **Bensley RP**, Hurks R, Cotterill P, Landon BE. Comparative effectiveness of endovascular versus open repair of ruptured abdominal aortic aneurysm in the Medicare population. *J Vasc Surg* 2013; in press.

Kumar VA, **Caves JM**, Haller CA, Dai E, Liu L, **Grainger S**, **Chaikof EL**. Acellular vascular grafts generated from collagen and elastin analogs. *Acta Biomater* 2013;9(9):8067-74.

Lee AM, **Chaikof EL**. Is the abdominal aortic aneurysm rupture rate decreasing? *Adv Surg* 2013;47:271-86.

**Lo RC**, Lu B, **Fokkema MT**, Conrad M, Patel VI, Fillinger M, **Matyal R**, **Schermerhorn ML**. Relative importance of aneurysm diameter and body size for predicting abdominal aortic aneurysm rupture in men and women. *J Vasc Surg* 2013; in press.

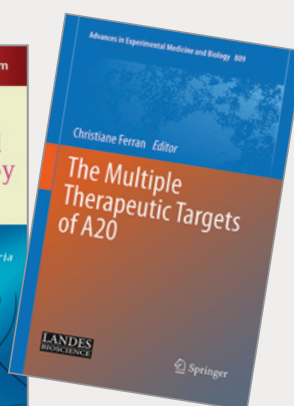
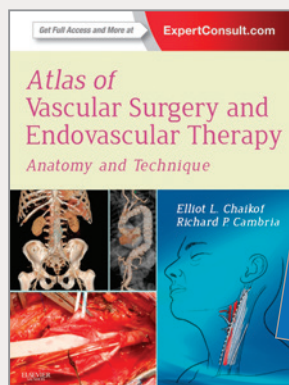
**Pradhan-Nabzdyk L**, Kuchibhotla S, Guthrie P, Chun M, Auster ME, Nabzdyk C, Deso S, Andersen N, Gnardellis C, **LoGerfo FW**, **Veves A**. Expression of neuropeptides and cytokines in a rabbit model of diabetic neuroischemic wound healing. *J Vasc Surg* 2013;58(3):766-75.

## The Bookshelf

A selection of books by our faculty

**Elliot L. Chaikof, MD, PhD**, and Richard P. Cambria, MD, Editors

*Atlas of Vascular Surgery and Endovascular Therapy — Anatomy and Technique*, First Edition. Published by Elsevier (Saunders), 2014

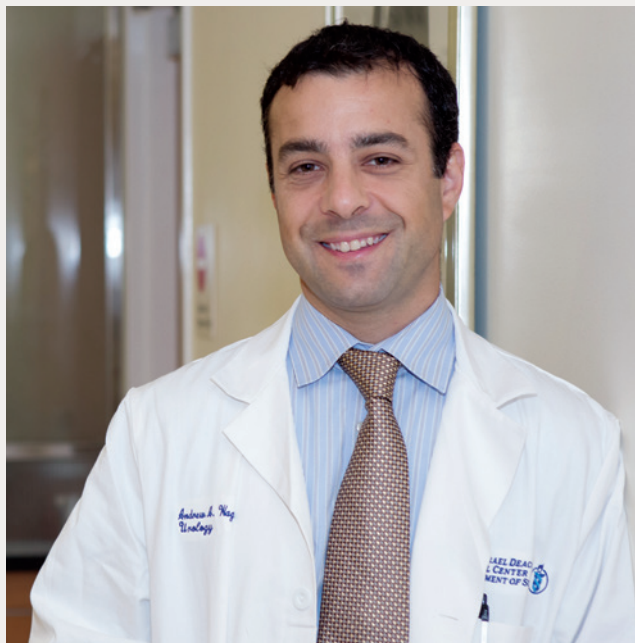


**Christiane Ferran, MD, PhD**, Editor

*The Multiple Therapeutic Targets of A20*. Published by Landes Bioscience, 2014



## MAKING A DIFFERENCE



Andrew Wagner, MD, Chief of Minimally Invasive Urologic Surgery, conducts research of prostate, kidney, and bladder cancer.

As former COO and President of Starwood Hotels and current head of his own hospitality consulting business, Bob Cotter, 62, is used to making strategic, well-informed decisions.

So when he was diagnosed with prostate cancer at age 59 and told by his Boston urologist that he'd need open surgery within the coming year to treat it, he decided to "do some homework" to see what his options were.

Based on his research, Mr. Cotter had a list of the three best urologists on the East Coast — and at the top was **Andrew ("Drew") Wagner, MD**, Chief of Minimally Invasive Urologic Surgery at BIDMC. Mr. Cotter made an appointment to be evaluated by Dr. Wagner and was totally impressed.

"Drew was extremely thorough, which gave me enormous confidence in him, and was widely known for his expertise in minimally invasive prostate surgery, which appealed to me as well," says Mr. Cotter, a married father of three adult children who lives with his wife of 40 years, Betsy, in Florida.

In September 2012, Dr. Wagner performed a minimally invasive, robotic-assisted prostatectomy on Mr. Cotter. "I was in the hospital just one night, my recovery was easy, and I had no complications," he says. Most importantly, his PSA levels (a potential

indicator of prostate cancer) have remained undetectable ever since.

Not long after Mr. Cotter's surgery, he and Dr. Wagner met for lunch, during which they discussed Dr. Wagner's ongoing research, which spans investigations of prostate, kidney, and bladder cancer. In particular, they talked about Dr. Wagner's prostate cancer research, which includes the Prostate Cancer Active Surveillance Study (PASS), the evaluation of quality of life outcomes following robotic versus open surgery, and novel methods to evaluate quality of life following prostate cancer treatment.

Understanding that sustaining and expanding this research required immediate funding, the Cotters made a five-year, \$100,000 grant to Dr. Wagner. "My father and father-in-law had prostate cancer, and I have sons, sons-in-law, and recently a new grandson. Not only was this the right thing to do, it was the right thing to do for my family," says Mr. Cotter. "Drew and his team are doing important work that will have a positive impact on many people's lives, so it's very rewarding to be a resource to them."

"Bob's generous gift has been absolutely vital in helping us move our prostate cancer research program forward," says Dr. Wagner, noting that the majority of support for salary and supplies for his research team comes from philanthropy.

*"Drew [Wagner, MD] and his team are doing important work that will have a positive impact on many people's lives, so it's very rewarding to be a resource to them."*

**Bob Cotter, donor and former patient**

"We are so grateful to Bob and Betsy for their support and generosity. With their and others' help we can continue to find ways to extend and improve the lives of patients with prostate and other urologic cancers as well as improve teaching and training through our Urologic Fellowship Program."

**To learn more about how you can support research in the Division of Urology, please contact Michele Urbancic, Director of Surgery Development, at [murbanci@bidmc.harvard.edu](mailto:murbanci@bidmc.harvard.edu) or 617-632-8388.**

## The Institute for Hepatobiliary and Pancreatic Surgery

***Better, Longer Lives for Patients through Teamwork and Innovation***

For a patient suspected of having a serious illness like pancreatic or liver cancer, time is of the essence. In addition to the very real risks of delaying potentially life-saving therapies, patients also suffer from the anxiety of waiting for a definitive diagnosis and treatment plan.

The physicians and other care providers of the BIDMC Institute for Hepatobiliary and Pancreatic Surgery understand this, and have structured their multidisciplinary program to provide timely, state-of-the-art evaluation and treatment of patients with precancerous or malignant diseases of the pancreas, liver, and bile ducts.

“Our approach is different from the start,” says Institute Executive Director **A. James Moser, MD**. “We have created a specialty care center in which a team of experts works together to provide patients with an integrated approach to care that offers the best opportunity for cure, while supporting our patients and their families at every step of the way.”

### Surgical innovation

One of the Institute’s key strengths is its world-class team of surgical specialists. This includes pancreatic surgeons **Mark Callery, MD**, **Jennifer Tseng, MD, MPH**, **Tara Kent, MD, MS**, and **Dr. Moser**, as well as liver surgeons **Khalid Khwaja, MD**, **Amy Evenson, MD**, and **Kristin Raven, MD**. These surgeons are members of a larger team that includes the BIDMC Advanced GI Endoscopy group, led by gastroenterologist **Ram Chuttani, MD**, which is widely known for its expertise in minimally invasive diagnosis and endoscopic treatment. BIDMC medical oncologists and radiation oncologists, as well as experts in pain



*Tara Kent, MD (left), and A. James Moser, MD (right), perform a robotic-assisted pancreatic procedure. Institute surgeons are widely known for their expertise in advanced minimally invasive and robotic-assisted surgery. Assisting with the procedure is surgical resident Jeff Chang, MD.*

management, palliative care, radiology, pathology, and genetic counseling, also play key roles in patients’ care.

The Institute’s surgeons are also known nationally for their innovation in surgical technology and the development of clinical decision-making tools. Not infrequently, patients considered “inoperable” by physicians at other medical centers come to the Institute and undergo advanced surgical procedures, including resection and reconstruction of the portal vein, with excellent outcomes.

The group is particularly known for its expertise in advanced minimally invasive and robotic-assisted surgery for patients with even the most complex pancreatic and liver conditions, points out Dr. Khwaja. As word has spread about the Institute’s combined strengths in innovative surgery and advanced endoscopy, patients are coming from considerable distances for treatment. In fact, the Institute’s surgeons now perform the highest volume of minimally invasive hepatobiliary (HPB) surgery in New England.

The Institute ensures the best possible outcomes in numerous ways — by emphasizing proficiency and safety through teamwork and high surgical case volume and, as demonstrated in recent studies

conducted by senior surgeons Drs. Tseng and Callery, by implementing predictive clinical tools that assist caregivers in recommending the best course of action for each patient.

### A single visit and CareMap

Institute patients are seen quickly — typically the same week they call or are referred. And they are evaluated not over the course of many days or weeks, as is typical in many medical centers, but rather in a single day and in one location. During that one visit, patients are seen by all the appropriate specialists who may play a role in their care, including surgeons, medical oncologists, gastroenterologists, radiation oncologists, genetic counselors, and others. “At the earliest possible point, we bring everyone into the room who touches the care of the patient,” says Dr. Kent.

The Institute’s clinical coordinator, an experienced nurse practitioner, maintains the focus on quality and is the point person for communication with patients and referring physicians. Following each evaluation, patients are given a CareMap, a summary of treatment recommendations from their specialists. They also are shown how to access PatientSite, an online tool



*Jennifer Tseng, MD, MPH, spends time with a patient.*

developed at BIDMC that provides 24/7 access to their medical records and test results. Each Monday, the entire multidisciplinary team meets to develop comprehensive treatment plans.

### High accrual to clinical trials

In addition to state-of-the-art multidisciplinary evaluation and surgery, patients also benefit from access to BIDMC’s technological resources, in particular its high-volume Keith C. Field CyberKnife®

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## WORLD-CLASS TEAM OF SURGICAL SPECIALISTS



*A. James Moser, MD,  
Executive Director*



*Mark Callery, MD*



*Amy Evenson, MD*



*Tara Kent, MD, MS*



*Khalid Khwaja, MD*



*Kristin Raven, MD*



*Jennifer Tseng, MD, MPH*



## Dr. Cook Joins Department as Chief of Acute Care Surgery, Trauma, and Surgical Critical Care

Charles H. Cook, MD, joined BIDMC and the Department of Surgery in April as Chief of the Division of Acute Care Surgery, Trauma, and Surgical Critical Care.

Prior to coming to BIDMC, Dr. Cook was a member of the Department of Surgery at Ohio State for more than 16 years, where he served as Director of Surgical Critical Care, Program Director of the Surgical Critical Care Fellowship, and Assistant Program Director of the General Surgery residency program. Dr. Cook received his MD from Ohio State University, where he also completed a residency in General Surgery and a fellowship in Surgical Critical Care.

Dr. Cook has published approximately 100 peer-reviewed manuscripts and book chapters, and has active federal funding from the National Institutes of Health as a principal investigator for basic science, as

well as translational studies pertaining to the critically ill surgical patient.

Dr. Cook is the recipient of the Joseph Susman Memorial Award from the Surgical Infection Society; holds leadership roles in the Society of Critical Care Medicine, the Surgical Infection Society, and the Eastern Association for Surgery of Trauma; and has participated in medical missions to Haiti.



## Dr. Lee named Chief of Plastic and Reconstructive Surgery

Bernard T. Lee, MD, MBA, was named Chief of Plastic and Reconstructive Surgery in February. Dr. Lee is an Associate Professor of Surgery at Harvard Medical School and Co-Director of the Peter Jay Sharp Program for Aesthetic and Reconstructive Breast Surgery.

Since joining BIDMC in 2013, Dr. Lee developed a nationally recognized breast cancer reconstruction program focusing on microsurgical perforator flaps (the DIEP flap procedure) in collaboration with Adam Tobias, MD, and Samuel Lin, MD. Dr. Lee's ongoing research focuses on the development of strategies to optimize clinical outcomes and decision making in breast reconstruction. He was also recently awarded a multi-principal investigator grant from the National Institutes of Health to support research examining near-infrared imaging of perfusion in face transplantation models.

Dr. Lee has had more than 100 peer-reviewed articles, case reports, book chapters, and reviews published; is Editor-in-Chief of the *Journal of Reconstructive Microsurgery*; and is an editor of a three-volume textbook on reconstructive surgery.

A mentor to many medical students and trainees, Dr. Lee has received the Young Mentor Award from Harvard Medical School and the Resident Teaching Award from the Harvard Plastic Surgery Residency Program.



## Lorelei Grunwaldt, MD

**L**orelei Grunwaldt, MD, always knew that she wanted to be a doctor. She was inspired by her father, a family practitioner on Shelter Island, a small island off of Long Island with a year-round population of only about 2,000 people. He did everything from deliver babies and suture hunting wounds to perform minor surgery.

It was an early lesson in the importance of being nimble when it came to medicine, one that would be reinforced years later when Dr. Grunwaldt entered the surgical training program at BIDMC. Although eventually she would become a pediatric plastic surgeon, she remains grateful for the program's broad-minded approach.

"Training in general surgery rather than specializing right away was one of the most wonderful things that could have happened to me," Dr. Grunwaldt says. "The program at BIDMC helped me learn not only the fundamentals of surgery but also how to take excellent care of patients."

After graduating from Harvard College and earning her medical degree at Upstate Medical University, Dr. Grunwaldt spent five years in the General Surgery Residency Program at BIDMC. Several mentors stand out in particular, including **Christopher Boyd, MD, Jonathan Critchlow, MD, Daniel Jones, MD, and Nicholas Tawa, MD, PhD.** "They were all great teachers," she says.

Dr. Grunwaldt went on to train in plastic surgery at the University of Cincinnati Medical Center, and completed a fellowship in craniofacial and pediatric plastic surgery at Children's Hospital of Pittsburgh of UPMC, where she continues to practice today. As her career has evolved, Dr. Grunwaldt has focused more on cleft surgery and pediatric plastic surgery, although she continues to perform many types of operations. Currently she directs both the Vascular Anomalies Center and the Brachial Plexus Clinic at Children's Hospital of Pittsburgh and is an Assistant Professor of Surgery in the Department of Plastic Surgery at UPMC.

"I find plastic surgery rewarding because you can see the difference you are making in a person's life," Dr. Grunwaldt says, "whether it means restoring arm movement to a child who has a brachial plexus injury or repairing disfiguring wounds."



*"I'm so grateful for my residency training at BIDMC. I would not be the doctor I am today without that training, which I still draw on all the time."*

**Lorelei Grunwaldt, MD, pediatric plastic surgeon,  
Children's Hospital of Pittsburgh of UPMC**

Recently, for example, she operated on a young boy who was bitten by a dog, losing part of his mouth and cheek. In a two-stage operation, she reconstructed the boy's face and reattached severed facial nerves. Although he will need physical therapy to fully recover, so far his progress has been encouraging.

A particularly heart-rending case involved an infant whose penis was accidentally severed during circumcision. "I wasn't sure if I could help this child, but I knew I had to try," Dr. Grunwaldt says. Using microsurgical techniques, she and a team of doctors reattached the severed organ so well that a urologist who examined the baby said it was hard to tell he was ever injured.

The pressures of her practice don't leave a lot of free time, but Dr. Grunwaldt still manages to relax. She recalls a visit to a pet store to buy fish because they are low maintenance, only to return home with a puppy, Thelma, who is a bit more demanding but also a lot of fun. Dr. Grunwaldt is also passionate about travel and has visited Africa, Switzerland, Denmark, Norway, Sweden, Hawaii, and Australia.

"I'm so grateful for my residency training at BIDMC," Dr. Grunwaldt says. "I would not be the doctor I am today without that training, which I still draw on all the time."

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*Each Monday, the multidisciplinary Institute team meets to develop comprehensive treatment plans.*

Center, which provides the option of stereotactic radiosurgery for patients with tumors involving adjacent blood vessels.

Patients also have access to promising new therapies and clinical trials via the Pancreatic Cancer Research Team (PCRT) within the Dana-Farber/Harvard Cancer Center (DF/HCC). PCRT is a non-profit collaborative organization aimed at eradicating and curing pancreatic cancer by translating genomics research into prevention, diagnosis, and treatment of the disease. “Patients with metastatic pancreatic or liver cancers must have access to cutting-edge clinical trials, so the seamless access to novel, promising therapies that we provide is essential,” says Dr. Tseng.

Behind the scenes, Institute surgeons such as Dr. Kent also work to develop post-operative care pathways for speedy recovery after a patient returns home. Institute team members also educate health care professionals and patients in the community, and collaborate with philanthropic groups, such as Project Purple, to help raise funds to support research of pancreatic cancer and hepatobiliary diseases.

Through all of these innovative clinical, research, and outreach activities, the goal remains the same — “to provide better, longer lives for patients with diseases of the pancreas, liver, and bile ducts,” says Dr. Callery. “That is why we are here.”

**For more information about the Institute for Hepatobiliary and Pancreatic Surgery, please visit: [bidmc.org/surgery](http://bidmc.org/surgery).**

**Referrals and Appointments:**

**617-667-PANC (7262) or 888-975-PANC (7262); or [pancreas@bidmc.harvard.edu](mailto:pancreas@bidmc.harvard.edu)**