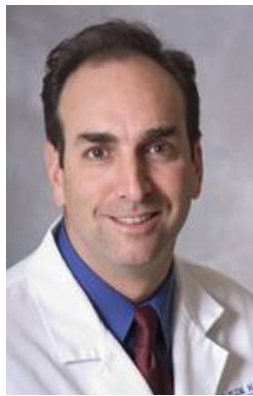


SURGERY Synopsis

Dr. David Flum: Becoming the Premier Home for Surgical Research



David R. Flum, MD, MPH
Professor & Associate Chair
for Research and
Medical Director of SORCE
University Medical Center
UW School of Medicine

Dr. David Flum, Professor, Associate Chair for Research in the University of Washington's Department of Surgery and Medical Director of the Surgical Outcomes Research Center (SORCE), was recently interviewed about the history of research in the Department, the vision and future of research for the Department as well as current issues and trends in research, particularly as they affect the Department. Dr. Flum was formally appointed to the position of Associate Chair for Research in the Department of Surgery in February 2011. Recently two faculty members, Heather Evans, Assistant Professor, Division of Trauma/Critical Care & Burns, and Kris Calhoun, Associate Professor, Division of General Surgery, Surgical Oncology, sat down with Dr. Flum to discuss his vision and goals as Associate Chair.

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Q: “It has been stated that the research goal is for the ‘UW Medicine, Department of Surgery to be the premier home for surgical research.’ What does this research vision mean to you as the recently appointed Associate Chair of Research?”

A: “First, research has always been a key component of the Department. There is a proud history that spans decades – back to the first randomized placebo controlled trial in cardiac surgery. There are creative out-of-the-box approaches by some of our research ‘stalwarts’ –[Eu] **Gene Strandness, MD** (deceased; Professor and former Chief of Vascular Surgery), **Alec Clowes, MD** (Professor & the V. Paul Gavora/Helen and John Schilling Endowed Chair in Vascular Surgery) and **Ron Maier, MD** (Professor & the Jane & Donald Trunkey Endowed Chair in Trauma Surgery; Chief of Trauma/Burns) come immediately to mind.”

“So, I wasn’t asked to take this position for lack of research productivity, lack of researchers or lack of creativity within the Department. **Dr. Carlos A. Pellegrini** (The Henry N. Harkins Professor & Chair, Department of Surgery), working with leaders in the Department, created this role and asked me to head this effort in order for the Department to rededicate and refocus our research efforts.”

Friends & Colleagues of the Department of Surgery:

I am pleased to present to you the Spring 2012 edition of *Surgery Synopsis*.

In this issue we focus on the Department's research mission. During the last year the Department's leadership has spent considerable time discussing our research mission. We have always had a strong research program, but at this point in time we wanted to refocus and rededicate the Department's energies with the hopes of setting a strategy that would take us to "the next level" and the goal of making the UW Department of Surgery the premier home for surgical research.

To that end, in February 2011, Dr. David Flum was appointed the Associate Chair for Research for the Department. We have interviewed him for the lead story in this issue. The article "*Becoming the Premier Home for Surgical Research*," will further elaborate on our research mission and the ways we are refocusing the Department's energies and resources in that regard.

The theme of research is further developed in this issue, with an article describing this year's Schilling Lecture – always a highlight of our research in the year, but especially so with this new commitment. We also feature the work of one of our most consistently productive researchers, Dr. Raymond Yeung.

On April 11th we officially launched the "Inspiring Quality Campaign," of the American College of Surgeons in the state of Washington. This event took place at the Rainier Club and was well attended by representatives of the hospitals of our state as well as the Executive Director of the American College of Surgeons. Congressman Jim McDermott (WA 7th district) honored us with his presence and expressed his sincere appreciation for our efforts to improve quality and decrease cost of surgical services. The unique flavor of this event was further enhanced by the presence of two representatives from the aviation world: Mr. Bradley Tilden (CEO-elect, Alaska Air Group) and Mr. Keith Leverkus, (Vice President of Engineering, Boeing Commercial Airplanes) who shared their perspective on making and operating aircraft, emphasizing their focus on safety, standardization and simulation. The Department of Surgery was the in-town host for this inspiring event. I know you will enjoy reading about it.

Our faculty continue to be exceptional; moving healthcare forward in every way: clinical care, research and education. The awards and academic honors received by them since our last issue of *Surgery Synopsis* are numerous and reveal the strength and depth of our faculty.

Finally, it is with great sadness that we remember one of our distinguished residents, Dr. Tom Anthony (graduate of the residency 1993). He was killed in an automobile accident in March, 2012. A tribute to him by his classmates can be found in this issue.

I hope that you enjoy this issue of *Surgery Synopsis*. We look forward to bringing these to you every 3 months, focusing on what is new within the Department and providing you some in-depth looks into the Department over time.

Sincerely,

Carlos A. Pellegrini, MD, FACS, FRCSI (Hon.)
The Henry N. Harkins Professor & Chair
Department of Surgery
University of Washington



Carlos A. Pellegrini, MD, FACS,
FRCSI, (Hon.)
The Henry N. Harkins
Professor & Chair
Department of Surgery
University of Washington

“But, unless you have a clear vision for it, it’s very hard to know whether you’ve accomplished it. In Spring/Summer of 2011 I did qualitative research, in the Department. I talked with our folks at all levels - junior, mid-level and senior - asking, ‘what is it that research success would look like to you?’ What emerged was this notion of a ‘home’ - a place that you could spend your whole career, a place that really led the nation. When I talk about how to focus our energy, how to develop new programs, how to get resources - it’s all organized around this notion of being a premier home for surgical research.”

Q: “It sounds like there’s been a tremendous amount of research done on our background and ‘what makes a premier home for research.’ So, how do you see this [vision] becoming a reality?”

A: “First, to really reinvent research in the department, we need to approach the structure differently; perhaps see research like we do clinical divisions in the department. If you think about the research within the department, it really is made up of about 10 research ‘pods’ or divisions that are linked in some way whether thematically or through personnel. Organizing research in this way allows us to thoughtfully recruit researchers, bring the right resources and intentionally promote research, not just sort of accidentally.”

“We have an obligation to the junior faculty and also some of the midlevel faculty who are feeling like they need/wish they had more direction. I think this sort of structure helps in this regard.”

Q: “Could you to talk a little bit more about the leadership infrastructure to support this?”

A: “We’re developing a research executive group that is going to be key to advising Dr. Pellegrini on how to balance the goals and the resources available around research. This research executive group, for the most part, is made up of more senior department investigators who have had successful extramural funding for 20-30 years. They know the ropes, the barriers and they know the opportunities. But, we’ve also included mid and more junior level folks as part of that group. It’s a ‘recommending group’ to Dr. Pellegrini. My job as leader of that group is to simply marshal and help focus their energy.”

“Then, there are two other work groups that are key. One is an operations leadership group, and the other is a metrics leadership group.”

“The operations leadership group addresses many of the important issues that we deal with in research - how to promote it, how to talk about it, how to run conferences - like the modified Schilling Lecture and Research Symposium that we saw this year for the first time. This group will help to operationalize the research reinvestment activity with the department.”

“The metrics group equally has an important role. They are helping to define what success is for researchers. For instance, do we value researchers who bring in grants as much as researchers who don’t bring in grants but make publications? How do we measure our investment in research as a Department? The metrics group grapples with those issues.”

“These three groups are helping guide the Department’s research activities.”

Q: “How do you see research becoming more transparent and promoted within and outside the Department?”

“The concept of “elevate” is important to achieving our research goal. My goal is to make research part of the daily life of being a faculty member in the Department of Surgery. How might that work? I see many activities that elevate research. From email alerts coming from Dr. Pellegrini when a paper gets published to our Departmental website and social media outlets all highlighting our research - awards, papers, and the like. This entire issue of Surgery Synopsis is on research. Then there are events like the Schilling Lecture. The Schilling Lecture this year, in addition to all the wonderful work by the residents and fellows, included presentations by several faculty members who described their research.”

“Another way we are elevating research is through Grand Rounds. The leadership of the department agreed to change Grand Rounds to start including more research. Beginning in May, a 20 minute research segment before or during Grand Rounds will reconnect the department with the faculty who are doing research.”

“So, all these activities will elevate research within the Department. It will be a much more organic component of our daily lives.”

Q: “Can you talk a little bit more about how this research reinvestment fund is going to play a role in achieving the research goal of becoming the premier home for surgical research?”

A: “This is a phenomenally exciting activity. The department already commits a significant amount of resources to research in the form of staff, administration, oversight, faculty support, and commitments made during recruitment periods.”

“Reinvestment activity would really allow game changing activities to occur. As I went around talking to the investigators in the department, I asked them all the same thing ‘What is one thing that would allow you to get to the level of research productivity that you want?’ Much of the response was related to resource-related reinvestment. ‘If there was a fund that would allow me to buy a key piece of machinery, that I can’t get a grant to buy, it would be a game changer because it would allow us to do X, Y, and Z, and not just me, but the ten or seven or five of us to use. I also heard people talk about hiring key personnel. I’ll give you an example. You know, each year in the T-32 program over at Harborview, we bring in Fellows who learn PCR analysis (polymerase chain reaction). They learn PCR in their first year and do PCR in their second year. It takes a lot to train people every other year on how to do a technique, and then they’re gone a year later. What if we had core resources that people could use in PCR so that we weren’t always in a learning/losing cycle of support?”

“I also heard, ‘if I only had one day a week for the next three months to work on these grants, I’d be able to get these grants in, but I just can’t. The clinical work is overwhelming me.’ The possibility of reinvesting in people short term - an FTE buy-back was one of the concepts that emerged.”

“Our job as a research leadership group is to give Dr. Pellegrini great advice on how to take this fund and make it not just business as usual, not just replacing what’s already being spent on research in the department, but to be a ‘game change fund.’ So, yes, the idea is that investigators would apply for use of these funds. It would not be an arduous process but enough of a process so that the leadership group that I defined earlier can review the proposals and figure out what’s likely to be a game changer and the metrics of success. Then we will hold them accountable for that work.”

“So think about this investment fund as almost an entrepreneurial prospect for the Department. If you think about

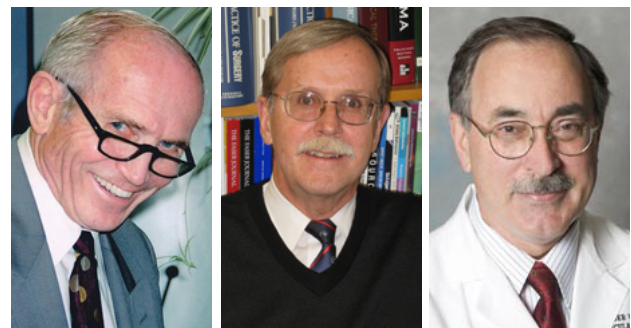
it in that way, it’s a wonderful opportunity to reinvest and redirect.”

Q: “Can we follow up on something that you said about there are these stalwart figures in the history of the department. Their success happened at a different time – in a different funding climate, in a different environment. So how do you see the new environment in which we’re trying to get research funding?”

A: “People look back at research funding and research in the past and say, ‘oh, it was better, easier’ – and I totally disagree. I think we’re in a golden era of research funding. I’ll give you a couple of examples: there’s never been more funding coming out of the NIH for surgical research. There’s never been more recognition about the role of helping junior investigators and there have never been more diverse funding options, everything from AHRQ (Agency for Healthcare Research and Quality) which didn’t exist when Gene Strandness was working, to PCORI (Patient-Centered Outcomes Research Institute) which didn’t exist when I started applying for funding. There are NIH junior-investigator career development awards (K awards) and Training grants (T-32) and a whole cycle of awards aimed at getting people started.”

“It’s true the funding lines are tighter now than they were before. That goes up and down with the financial cycles (and in the 90s it was tight as it is right now). And, the NIH as a government organization is susceptible to all the funding trends that go on in the other Washington.”

“Having said that, what do we learn from stalwarts like Gene Strandness and Ron Maier and Alec Clowes? We learn that nothing’s changed. You still need to have a great idea and you still need to pursue it doggedly. You need to reach out to collaborators who have skills that you don’t have. Success still relies on key leadership skills: being able



Drs. Gene Strandness, Ron Maier & Alec Clowes

to build a team, being able to reach across traditional lines to cross-pollinate your ideas with others.”

“And then you have to be dogged ~ which is something that surgeons have the potential to do better than anybody ~ to be like a dog on a bone, as I sometimes describe it to the residents. Because you know, the ideas worth pursuing are worth the investment of your time and energy. The one thing I think we can learn best from Gene and Alec and Ron is that this stuff does not come easy. And I don’t know why we think it would. The legacy that I take from them is this dogged approach; this day in and day out chasing something that’s important to you and not expecting it to come easy.”

“I don’t think that things have changed that much. The funding environment may be different and the need for reaching across the aisle to other departments has become more important. But, the opportunities to write a grant with world famous experts across the school have only increased. I think in a lot of ways this is a golden era for surgeons to begin doing research, to be getting funded, and to make a career that’s balanced between clinical care and research.”

Q: “Do you think that there are other specific barriers particularly for younger investigators, for new faculty, that we as a department should be focusing on? Mentoring seems like a key element: having good mentors, being a good mentor? Can you speak to that?”

A: “I think mentorship in the department of surgery on the research side really is best exemplified in the T-32 training programs. I mean- you know that expression, ‘money can’t buy you love, but it can buy you some time with a mentor.’ There’s something to be said for that. We’re now lucky enough to have two T-32 grants in the department: The Trauma-inflammation area (led by **Dr. Grant O’Keefe**, Professor in the Division of Trauma/Burns), and then in SORCE (Surgical Outcomes Research Center) for outcomes research (led by Dr. David Flum, Professor in the Division of General Surgery). We now have multiple spots within our department with really focused mentorships. I think this is really important.”

“And, for the first time we’re seeing a wave of K awards (career development awards). Right now we have **Dr. Heather Evans** (Assistant Professor, Division of Trauma/Burns, K12 Comparative Effectiveness Research Scholar) and **Dr. Leah Backhus** (Assistant Professor, Division of Cardiothoracic Surgery, ITHS KL2 Scholar), as well as others who are applying for K Awards. Mentorship is an expectation of both the T-32 and the K awards. People are

coming in dedicating three to five years of their career in a mentored research training environment.”

“You’re also seeing some new faculty recruits coming into the department hired specifically to work at a perhaps a 50 percent research; 50 percent clinical work. Those hires are being made explicitly because they can come into a very structured mentorship relationship. And that’s where I see we do it best – structured mentorship relationships – where mentoring is part of the success of the program.”

Q: “Do you have anything that you want to say in closing?”

A: “Sometimes when you read these articles they’re all high level, rainbows and unicorns. What you forget is that a lot of people who want to be researchers are struggling. One of the reasons that I took this position was because of the 90 department faculty I asked if they felt this was the premier home for surgical research. And they didn’t.”

“The survey went on to explore why. And we found a lot of anxiety at a lot of levels ~ not just junior levels ~ about being a researcher in the department. There’s a lot of pressure pulling us into the clinical realm and pulling us away from the research realm. We can talk about research, but in fact we get paid, in large part, based on clinical volume. And, we’re a different generation ~ a generation not willing to write grants at nights and weekends, because you know what? We have family and friends and hobbies. Work-life balance is important and different than it was maybe in a different era.”

“I recognize those anxieties. We’re trying to build something that’s actually going to help people. But at its core, the message is: ‘have faith.’ None of us learned how to operate overnight. We had to stick with it. We were forced to stick with a residency training program despite lots and lots of things that made it hard and made us discouraged and made us feel like we were maybe not on the right path.”

“It’s the same thing in research. And, it’s okay that not everybody wants to be a researcher. But, if you do, chase it with passion and the department’s there to help. That’s the message that I want to send to the people who want to know about what it’s like doing research in the Department of Surgery.”

Department of Surgery

Researcher Profile: Dr. Raymond Yeung



Raymond Yeung, MD
Professor of Surgery &
Adj. Professor of Pathology
University Medical Center
UW School of Medicine

A leading basic science researcher focusing on tumor development and liver physiology, **Dr. Raymond Yeung** is a National Institute of Health (NIH) funded researcher producing groundbreaking work. His work in basic science is translational in focus, meaning that the findings on the bench can lead to practical and important changes in clinical practice.

Dr. Yeung is an expert on the study of tuberous sclerosis (TSC), a genetic condition

that, among other manifestations, can cause patients to develop “multiple tumor-like lesions that exhibit aberrant phenotypes in cell size (growth), proliferation, differentiation and spatial distribution.” The NIH currently funds Dr. Yeung as his lab studies how mTOR, a protein that, among other functions, regulates cell growth, affects the fundamental processes of tumor biology. While TSC is a rare condition, understanding the role that mTOR may play in disrupting normal cell processes may shed light in understanding cell abnormalities in other pathologies, including our basic understanding of cancer, diabetes, vascular disease and aging.



UW Medicine surgeon Dr. Raymond Yeung participating in a liver resection surgery.

Building on his findings thus far, Dr. Yeung has applied for nearly two million dollars of NIH funds to study mTOR’s role in the development of liver tumors. Hepatocellular carcinoma (HCC) is a devastating cancer of the liver. While generally a somewhat rare cancer in the United States, its prevalence is increasing rapidly—some studies showing a near 20-fold increase from 1996-2006. The prognosis of patients with HCC can be grim; only a small percentage of patients are candidates for surgical

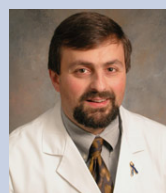
interventions: transplant or resection. Because of this, targeted therapies to disrupt the tumor pathways may prove to be effective in treating HCC. Dr. Yeung’s research seeks to “identify the key players in order to provide a framework for designing combination therapies targeting multiple relevant pathways to achieve the desired clinical response.”

Dr. Yeung is also an early adopter of minimally invasive image-guided therapies for liver treatment. While laparoscopic procedures have been used frequently for some time in many areas of surgery, minimally invasive surgical techniques for liver procedures are less common. The University of Washington began a multidisciplinary Liver Tumor Clinic in 1998 and has seen more than 300 laparoscopic radiofrequency ablations. A laparoscopic hepatic resection program began more recently and, has benefitted surgical candidates with less bleeding, less intra-operative pain and shorter hospital stays.

Dr. Yeung’s pioneering research is an important pillar of the Department of Surgery’s research enterprise. The discoveries from his lab may very well lead to important changes in the way cancer development is understood...and possibly cured.

Surgery photo by Clare McLean

New Colorectal Surgeon to Join UW Department of Surgery in July



Dr. Alessandro Fichera, our new colorectal surgeon, will be joining the faculty at the University of Washington Medical Center in the Department of Surgery, July 1, 2012. Dr. Fichera grew up in Italy and completed his MD at the Catholic University of Rome followed by surgical residency training in Italy and then at the University of Chicago. He did his Colorectal Fellowship training at Mt. Sinai School of Medicine in New York City. Since 2002, he has served on the faculty at the University of Chicago, most recently becoming Program Director for the University of Chicago Colorectal Surgery training program. He comes to the University of Washington with his wife, Lia, and twin sons, and brings a national reputation for clinical excellence and innovation. Dr. Fichera’s clinical areas of focus will include endoscopic diagnosis, surgical treatment of colon and rectal diseases including inflammatory bowel disease and colorectal cancer, disease of the anorectum, endoscopic and robotic colorectal surgery, and minimally invasive procedures for colorectal disease.

Department of Surgery Recent Events

Aviation and Surgical Healthcare Come Together at American College of Surgeons *Inspiring Quality: Strong for Surgery* Event

Seattle hosted the latest stop in The American College of Surgeons' (ACS) Inspiring Quality national tour on April 11. The event joined two major Washington industries ~ aviation and surgical healthcare ~ to discuss ways to accelerate the spread of aviation-like safety, standardization and simulation across the practice of surgery. The evening also featured the launch of *Strong for Surgery*, an initiative aimed at expanding the use of checklists into surgeon's offices to improve patient outcomes. **Dr. Carlos A. Pellegrini**, FACS, FRCSI (Hon.), the Henry N. Harkins Professor and Chair, Department of Surgery, and the immediate past Chair of the ACS Board of Regents moderated the event.

Congressman Jim McDermott, US Representative Washington State's 7th district, provided opening remarks strongly endorsing *Strong for Surgery* and the partnership of aviation and surgery. The 12-term Congressman told the audience that "ideas like these are what I can bring back to Washington D.C. and say, 'this is happening in my state [and] this is the solution to health care change.'"

Dr. David Hoyt, the Executive Director of the ACS, also commended the work that has been accomplished in Washington State to advance healthcare quality. Dr. Hoyt commented that successful quality programs succeed with four key principles: use evidence based standards; provide the right infrastructure; use rigorous data; and, continuously verify results.

Alaska Airlines CEO-Elect Bradley Tilden talked about the ways in which surgery and aviation are remarkably similar. He strongly emphasized the need for using checklists that start early in the process, noting that a pilot would never start going over a checklist when the plane is already headed down the runway. Similarly, surgeons need to begin the checking process well before the patient comes for surgery.

Echoing the themes of Mr. Tilden, Vice-President of Engineering at Boeing Commercial Airplanes Keith Leverkusen stressed the importance of standardization. He described how Boeing's standardization efforts have allowed them to greatly increase output while continuing to innovate—which would not have been possible without standardization. Mr. Leverkusen challenged the assertion that standardization stifles innovation. Instead, he argued, the only way to truly innovate in any field, including surgery, is to standardize processes and procedures in order to provide the platform where innovation can thrive.

Following the leaders in aviation, **Dr. David Flum** (Associate Chair for Research and Professor in the Division of General Surgery) described and celebrated the successes within Washington State through the Surgical Care and



Back row: David Hoyt, MD, FACS, ACS Executive Director ~ Morris Johnson, MD, FACS Skagit Regional Clinics ~ David R. Flum, MD, MPH, FACS ~ Richard Billingham, MD, FACS Swedish Medical Center ~ Bradley Tidlen, CEO-Elect Alaska Air Group

Front row: Ellen Farrohki, MD, FACS, SCOAP Medical Director, Providence Regional Medical Center Everett ~ Keith Leverkusen, VP of Engineering and General Manager of Propulsion Systems for Boeing Commercial Airplanes ~ Carlos A. Pellegrini, MD, FACS, FRCSI (Hon.), the Henry N. Harkins Professor and Chair, Department of Surgery ~ Thomas K. Varghese, Jr., MD, FACS, ~ Stephen P. Zieniewicz, UWMCExecutive Director

Outcomes Assessment Program (SCOAP, www.scoap.org) and CERTAIN (www.becertain.org), the research network built on the SCOAP platform. Washington State has become a leader in safe, cost-effective surgery by getting the Surgical Checklist into operating rooms all across the state. This effort needs to be expanded to the start of the surgical process—something that will be accomplished with the launch of *Strong for Surgery*.

Dr. Thomas Varghese (Assistant Professor in the Division of Cardiothoracic

Surgery) presented the details of *Strong for Surgery*, a multi-tiered plan to shine the spotlight on the doctor's office. The first stage of the initiative's checklist campaign will be to focus on the pre-surgical patient's nutrition; strong evidence links a patient's nutritional status to his or her chance of developing post-surgical complications.

The evening's event ended with a panel of some of the most renowned surgical leaders in Washington State who further discussed how the surgical community might join together to create change. The panel was composed of SCOAP Medical Director Dr. Ellen Farrohki of Providence Regional Medical Center, Dr. Richard Thirlby of Virginia Mason Medical Center, Dr. Scott Steele of Madigan Healthcare System, Dr. Morris Johnson of Skagit Regional Clinics, and Dr. Richard Billingham of Swedish Medical

Center. The panelists were joined by Mr. Tilden and Mr. Leverkusen and engaged the audience in a number of topics, including the difficulty of changing culture and rallying behind the right evidence based practices.

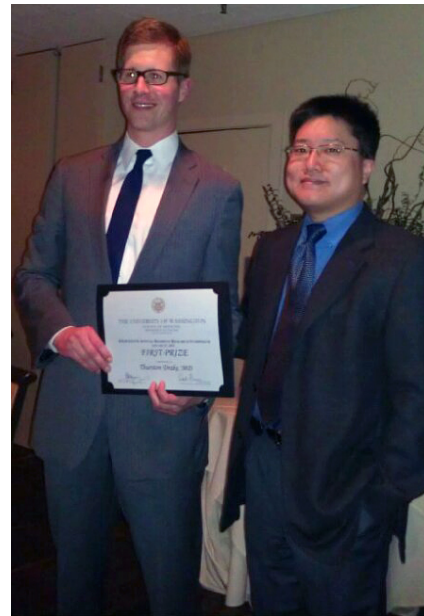
The ACS Inspiring Quality Tour promotes programs across the country that improve quality and increase value of health care services. The tour has been promoted in cities with major surgical institutions such as Chicago and Baltimore and will continue throughout the year.

2012 Schilling Research Symposium

Residents and fellows play an integral role in the vibrant research community of Department of Surgery. Each year, the most outstanding research projects are presented by surgical trainees at the John and Helen Schilling Research Symposium. January 27th marked the 18th year of the symposium. One indicator of our renewed focus on and ongoing growth of research within the Department was the submission of 31 abstracts—the most submissions for the Schilling Symposium in recent history.

Gerald Fried, MD, FRCS(C), FACS, the Adair Family Chair of Surgical Education at Montreal General Hospital was the distinguished guest lecturer and co-moderated for this year's symposium with Carlos A. Pellegrini, MD FACS, FRCSI (Hon.), the Henry N. Harkins Professor and Chair, Department of Surgery. Dr. Fried, in conjunction with several research faculty leaders from the department, evaluated each of the 22 presentations on multiple criteria; the top three presenters were each awarded honors and a cash amount to be used for academic endeavors. Dr. Thurston Drake, R3 in Dr. David Flum's lab, took first place with his presentation entitled *The ACGME Caseloads: Changes Over Two Decades*. Dr. Patrick Phelan, R3 in Dr. Michael Mulligan's lab, took second place with his presentation entitled *Toll-Like Receptor 4 Mediated Lung Ischemia-Reperfusion Injury: Signaling Beyond MYD88*; and, Dr. Callie Thompson, R3 in Dr. O'Keefe's lab took third place with her presentation, *Toll-Like Receptor 1 Polymorphisms and Associations with Outcomes in Sepsis Following Traumatic Injury*.

A new feature for the Schilling Symposium was the introduction of five Department faculty presenters. **Drs. Saman Arbabi** (Professor, Division of Trauma & Critical Care Medicine); **Eileen Bulger** (Professor, Division of Trauma & Critical Care Medicine); **Alec Clowes** (Professor & V. Paul Gavora/Helen and John Schilling Endowed Chair in Vascular Surgery); **David Flum** (Professor & Associate Chair for Research); **Michael Mulligan** (Professor, Division of Cardiothoracic Surgery



Drs. Thurson Drake and Kenneth Gow

& The UW Medicine Distinguished Endowed Professorship in Lung Transplant Research) and **Raymond Yeung** (Professor, Division of General Surgery). The faculty presentations described the work taking place within their respective research units and highlighted the many successes of their faculty colleagues in addition to providing framing remarks for trainee presentations. Participants at the Research Symposium found that the addition of the faculty review of research to the day's program helped to emphasize and promote the importance of research within the Department.

Following the symposium, Dr. Fried gave the event's keynote lecture, *Teaching Johnny How to Operate: Answering the "Bell."* Dr. Fried's lecture focused on the importance of giving residents the right tools and experience during their education to ensure these future surgeons are equipped to treat a patient population of increasing complexity.

The Helen and John Schilling endowment was created to enhance the Department of Surgery's commitment to the highest standards in patient care, teaching, research and scholarship. The endowment enables the Department of Surgery to continue to foster the development of trainee research and supports an annual lectureship that features a renowned visiting scholar. The Schilling's legacy continues to be honored each year through this day devoted to celebrating meaningful research.

Remembering Thomas Anthony, MD



Dr. Thomas Anthony

Dr. Tom Anthony was a UW surgical resident from 1988 and graduating in 1993. He died tragically on March 24, 2012 as a result of an automobile accident. Tom was recently appointed Chief of Surgery at the Boise, Idaho VA Hospital. Previously, he had served as Vice Chairman and Professor of Surgery in

the division of surgical oncology at the University of Texas Southwestern School of Medicine and Chief of Surgical Service at the Veterans' Administration North Texas Health Care System. Tom is survived by his wife of 28 years, Connie Carpenter Anthony, and daughters Carly and Andie.

Dr. Anthony graduated with honors from the University of Kansas School of Medicine, completed general surgery residency at the University of Washington, a surgical oncology fellowship at the Roswell Park Cancer Institute in Buffalo, New York, and a Master of Science in Epidemiology at the Harvard University School of Public Health

His area of specialization was gastrointestinal oncology, and his research was published in numerous professional journals. A respected teacher and mentor, Tom was honored to receive the Laycock-Snyder Award for Outstanding Achievement in Resident Teaching at UT Southwestern Medical School multiple times. At the time of his death he was president of the national council of VA surgical chiefs, and chairman of the VA's General Surgery Advisory Board. Tom trained a generation of surgeons, many of whom became close friends (and fishing partners). In his personal life, Tom was most proud to have received the Father of the Year award from the Lake Highlands Family YMCA.

Tom had just become the Chief of Surgery at the Boise VA and the UW Surgery Department was looking forward to working with him in that capacity. His untimely death is a loss to his family, to our greater family of graduates, to surgery, and to the Veterans Administration. Our sincere condolences go to his family.

Many tributes have been received at the UW Department of Surgery from the residents he trained and trained with. Below are some of the thoughts expressed by these individuals:

"He was one of 'us.' He was my Chief Resident when I was a new intern, and he described to me who 'we' are and why it is important to be a part of 'us.' People that come together during surgical residency have a special bond, the bond that makes 'us.' Like any family, we get support, criticism, happiness, and sorrow from 'us.'" We always remember that we are connected together by a special process that was/is forged through many years of residency together." *Sam Arbabi, MD; Professor, Trauma, Burns & Critical Care, University of Washington.*

"Tom had incredible equanimity. He created near-serene calmness whether taking care of a critically injured patient or being questioned by faculty at M&M. His thoughtfulness reflected a personal commitment to achieving excellence through his thoughts, words, and actions. His leadership style made it clear that he held high expectations for everyone on his team, including himself. But when it came time for recognition of a job well done, he was the first to point out that 'it was a team effort.'

"Tom's life has taught us the value of working hard and appreciating the immeasurable aspects of life - family, friends, and meaningful conversation. We will miss him dearly." *Thomas T. Sato, M.D., Professor of Pediatric Surgery Medical College of Wisconsin (UW Surgery resident class 1995).*

"I remember Tom for his easy-going manner, clinical smarts, and ability to carry himself in the midst of chaos. He was calm in crisis, and always engaging with others. In remembering Tom now, I am thankful for sharing this time with him together many years ago, and pass on my thoughts and prayers to his family." *Henry E. Rice, MD, Division Chief, Pediatric General Surgery, Duke University Medical Center (UW resident, class of 1996).*

"Tom was quiet and steady and rock solid. He exemplified the adage that: 'Still waters run deep.' It was that aspect of his personality that impressed me the most when we were chief residents together. It's a shame that future colleagues and patients won't enjoy the benefit of his quiet confidence and genuine compassion." *Larry Kraiss, MD; Professor and Chief, Division of Vascular Surgery, University of Utah (UW Surgery resident, class of 1993).*

"Tom was absolutely dependable and reliable. You never had to ask him twice, never had to wonder if you were getting the full story from him. He was rock solid. Smart too. He had a dry, incisive, and insightful sense of humor. I always breathed a little sigh of relief when I knew he was coming onto a service. *David Magnuson, MD, Department Chair, Pediatric Surgery, Cleveland Clinic, Cleveland, OH (UW Surgery resident, class of 1991).*

Department of Surgery - In the News

UWMC First in Pacific Northwest to Discharge a Total Artificial Heart Patient

University of Washington Medical Center has become the first hospital in the Pacific Northwest to discharge a patient implanted with the world's only approved Total Artificial Heart. The device, manufactured by SynCardia Systems, is approved for use as a bridge to transplant in the United States, Canada and Europe. The UW Medicine Regional Heart Center is the first Western Washington heart-care service to offer this technology.

The patient, Christopher Marshall, of Wasilla, Alaska, was discharged from the hospital on March 21st. He was implanted with the Total Artificial Heart during a six-hour procedure on February 6th.



Chris Marshall with his "Freedom Pack" portable device and "Big Blue," the machine to which he was connected after the implantation of his artificial heart. With him are his nurse Shauna Andrus and his surgeon Dr. Nahush A. Mokadam.

The surgeon was **Dr. Nahush A. Mokadam**, the hospital's co-director of heart transplantation and director of mechanical circulatory support. He was assisted by Dr. Awori J. Hayanga, chief resident in cardiothoracic surgery. Mokadam is the LeRoss Endowed Professor in Cardiovascular Surgery, UW Department of Surgery.

"Mr. Marshall has done remarkably well on the device. I'm very pleased with its performance and his recovery. We continue to support him as we await his heart transplant," Mokadam said.



The Total Artificial Heart, seen at the lower left, awaits placement during Mr. Marshall's surgery.

Marshall, 51, was admitted to UW Medical Center in January with a heart performing barely well enough to keep him alive, Mokadam said. Marshall had been diagnosed in 1999 with idiopathic cardiomyopathy, a deterioration of heart function with an unknown cause, and ventricular tachycardia, an irregular, fast heartbeat. The conditions progressively reduced his heart muscle's pumping capacity.

Originally designed as a permanent replacement heart, the SynCardia device is approved by the Food and Drug Administration as a temporary solution until a donor heart becomes available. The device is available to patients at risk of imminent death from biventricular failure. This is an irreversible state affecting both chambers that pump blood away from the heart.

In the implantation procedure, the surgeon removes the patient's failing left and right ventricles and all four heart valves. The implanted device consists of two bulbous, polyurethane chambers that act as ventricles. Each chamber has an in-flow and out-flow valve and a four-layer diaphragm. They are sutured into the remaining heart structure: the left and right atria, the aorta and pulmonary artery.

The implanted device has no sensors, motors or electronics. It is powered by a pneumatic driver outside of the patient's body, which is connected by two tubes that exit the patient's abdominal wall. The driver supplies vacuum pressure to pull the diaphragm to the bottom of the ventricle, allowing blood to enter, then produces a precisely calibrated pulse of air that pushes the diaphragm to the top of the ventricle to fully eject the blood.

Currently, the only FDA-approved driver for powering the Total Artificial Heart weighs 418 pounds and confines patients to the hospital while they wait for a matching donor heart. SynCardia's portable driver, which weighs only 13.5 pounds, is undergoing an FDA-sanctioned clinical study to determine whether it can safely be used at home. This driver is battery-powered, rechargeable, and can be carried in a backpack, shoulder bag or rolling caddy.

The manufacturer has certified UW Medical Center to implant the device, and the hospital is a study site for the portable driver. Marshall met study criteria to be switched to the portable driver and was discharged – although to Seattle instead of Wasilla so that he is close by when a donor heart becomes available.

At a press conference, Marshall said, “At first the idea of having my valves and ventricles cut out was unnerving: Do I need all of this? But after I collapsed the day before the surgery, I understood the great need and was able to wrap my mind around it.”



UW Medicine heart transplant surgeon Dr. Nahush A. Mokadam puts the Total Artificial Heart into Mr. Marshall's chest.

Now Marshall is looking forward to taking hikes in the Seattle area with his wife, and his dog who recently was flown down from Alaska, “though I'm limited by my battery power as to how far I can go.” Last Saturday he enjoyed seeing the boats at the Ballard Locks on his first trip out of the hospital since he was admitted in January. He was accompanied by UWMC nurse Shauna Andrus, who has special training in the care of patients with the device.

“Chris has been smiling and upbeat throughout all of this,” said his wife Kathy. “He is my hero.”

For the past 20 years, the supply of donor hearts in the United States has remained flat, averaging about 2,200 per year. At the start of February, more than 3,100 Americans awaited a heart transplant, including 91 in Pacific Northwest states, according to the U.S. Organ Procurement and Transplantation Network and Scientific Registry of Transplant Recipients. Heart transplant candidates can wait months or years due to the shortage of donor organs.

During the 10-year clinical study of the Total Artificial Heart that led to its FDA approval in 2004, 79 percent of patients survived until transplant. The Total Artificial Heart has been implanted in more than 1,000 people worldwide, said Michael Garippa, SynCardia's CEO. The current longest-supported patient received a transplant after 1,374 days with the device.

During the clinical study, 65 percent of patients who received the SynCardia device were out of bed within five days of surgery, and a similar percentage were walking more than 100 feet within 21 days of implant, the company reports.

The implant continues UW Medicine's achievement in advanced heart care:

- Its surgeons have implanted more than 280 patients with bridge-to-transplant, circulatory-support mechanisms, including ventricular assist devices, since 1997. More than 90 percent of implanted patients are successfully transplanted.
- Its surgeons performed the region's first heart transplant, in 1985, and have performed 534 such procedures since 1988, more than any other Pacific Northwest cardiac care service.
- Its surgeons performed the first adult heart-lung transplant in western Washington in 2007.
- Its heart-transplant patients' 1-, 5- and 10-year survival rates are among the best in the United States.

Story by Brian Donohue / Photos by Clare McLean - UW Health Sciences/UW Medicine

Promoting Diversity: Proposal Approved for SBAS Annual Meeting Scholarships



Leah Backhus, MD, FACS
Assistant Professor

Dr. Leah Backhus, Assistant Professor in the Cardiothoracic Division of the Department of Surgery, whose practice is at the VA, recently presented a proposal to the Chair and Director of the Department of Surgery (**Dr. Carlos A. Pellegrini** and Ms. Margaret Gilshannon) entitled "Society of Black Academic Surgeons Annual Meeting Scholarship." The scholarship proposal establishes 1-2 awards per year to support the attendance of Department of Surgery under-

represented faculty or surgical residentsⁱ to attend the annual meeting for Society of Black Academic Surgeons (SBAS). The maximum amount for each Scholarship is \$2,000 and funds will be used to offset the costs of airfare, registration and lodging. In addition, junior faculty who are selected will also be nominated for the SBAS Leadership Institute for faculty development and formal mentorship.

After careful review, the proposal was determined to be one that would enhance our efforts to foster diversity in our faculty and trainees. Dr. Pellegrini stated that he is delighted to announce that this proposal has been accepted and the Scholarship process will be in effect for the coming year (applications accepted on or until February 1, 2013).

Dr. Pellegrini and Dr. Backhus further stated that they hope the Department of Surgery, in sponsoring these Scholarships, will prompt other surgical specialties to consider similar sponsorship for under-represented junior faculty or trainees in their departments.

Under the leadership of Dr. Carlos A. Pellegrini, the University of Washington has established a strong history with the Society of Black Academic Surgeons. The University of Washington has demonstrated ongoing support as an institutional member and Dr. Pellegrini has been inducted as an honorary member of SBAS. The greatest showing of support was in 2009 when the University of Washington hosted the Annual Meeting for SBAS in Seattle.

Since then, the Department of Surgery has sponsored several faculty, residents, and medical students to attend the

annual meetings for SBAS and all attendees have reported tremendous benefit from this enriching experience. The Leadership Council offered by SBAS is a one-day forum designed to focus on leadership development, mentorship, and developing critical skills for academic success. It is an adjunctive program embedded within the larger annual meeting that focuses on junior faculty who are nominated by their home institution. The University of Washington has had several faculty accepted for this program.

ⁱ Under represented includes Hispanic, African-American, American Indian/Alaskan Native and Women.

Department of Surgery Strongly Represented in UW School of Medicine Diversity Strategic Planning Initiative

The Department of Surgery would like to recognize and thank **Drs. Carlos A. Pellegrini and Leah Backhus** for their work on diversity planning on behalf of the School of Medicine. Each has and is contributing in very important and on-going ways to further the School's commitment to becoming a truly diverse organization.

In February 2010, Dr. Paul Ramsey charged a large committee to develop a new diversity strategic plan for the School of Medicine. The committee, led by Dr. Pellegrini, submitted its report in April 2011, and the recommendations in the report were discussed extensively in many settings within the School of Medicine community and beyond.

Subsequently, Dr. Ramsey charged a second committee to develop a work plan to implement the key recommendations within three years. The goal is to implement meaningful and tangible improvements toward becoming a truly diverse organization.

The objectives for this important work over the next three years will be to:

- Foster diversity in faculty, education and training settings (undergraduate and graduate), and staff;
- Identify and implement metrics and monitor progress toward diversity, as well as build momentum for culture change to improve diversity; and
- Maintain accountability among leadership for diversity and provide tools to support efforts to measure and improve diversity.

In support of these objectives, the Office of Multicultural Affairs (OMCA) will transition to become the new Center for Equity, Diversity and Inclusion (CEDI). The leader of CEDI will hold the dual title of director of CEDI and chief diversity officer (CDO) for the School of Medicine. OMCA has very effectively focused on increasing and supporting diversity among our medical students. The role of the CEDI will be to promote diversity and inclusion for faculty, trainees, students and SOM staff.

David Acosta, formerly associate dean for multicultural affairs, has agreed to serve as the chief diversity officer and director of CEDI. He began in these roles on Jan. 1, 2012. David's immediate task is transitioning OMCA to CEDI. He will also fulfill many other leadership roles in support of diversity, including: working with departments and units to identify diversity leads; developing department-specific metrics to track diversity and inclusion and to identify and prioritize goals to be measured; surveying SOM units for successful "best practices" initiatives and disseminating these; promoting new initiatives related to diversity; developing a toolkit for widespread use to improve diversity and inclusion in all departments and units; and meeting regularly with chairs and unit leaders to provide assistance in improving diversity.

In addition, Dr. Ramsey appointed an executive steering committee for CEDI, chaired by Dr. Carlos A. Pellegrini. This committee will provide oversight for the CDO to transition the current activities of OMCA to CEDI; provide ongoing advice and direction regarding CEDI; seek input from departments regarding membership of CEDI's Advisory Board; and serve as an executive committee for CEDI's advisory board.

The School of Medicine also recently established a new standing committee, the Committee on Minority Faculty Affairs chaired by Dr. Leah Backhus, UW assistant professor in the Department of Surgery. This committee is addressing the professional and development needs of our faculty from underrepresented groups in medicine and biomedical sciences and highlighting the needs of minority faculty to aid in the recruitment and retention of underrepresented faculty.ⁱ

The Department of Surgery is exceedingly proud of Drs. Pellegrini and Backhus for their work and these appointments and look forward to the future developments from these committees.

ⁱ From Dr. Paul Ramsey's February 3, 2012 Message

UW Spin-out Born Out of Doctor's Frustration with Paper-Based Records



Erik Van Eaton, MD, FACS
Assistant Professor

The University of Washington is spinning out a new startup company by the name of TransformativeMed which has developed a new way for physicians to more effectively communicate about their patients. The technology – currently in operation at more than a half dozen hospitals, including Harborview Medical Center, the University of Washington Medical Center and Sinai Grace Hospital – works with the hospital's existing electronic medical record system. The company – founded by **Dr. Erik Van Eaton**, assistant professor of surgery at the UW, and David Stone – said it plans to have more than 20 customers in its first year and achieve profitability.

Dr. Van Eaton came up with the idea and built an early prototype in 2003 as a first-year UW surgical intern, noting that he was frustrated by the inefficient way daily patient updates were prepared for residents and attending physicians making hospital rounds. "It was clear at the time that we were going to need an electronic solution to manage what would become increasingly complex care-team transitions," said Van Eaton in a press release. "The current process of paper, email and Excel simply wasn't going to be efficient or safe."

The company said that the majority of hospitals in the U.S. do not have an electronic system to manage how physicians sign-out and hand-off patients to one another, with many relying on paper-based systems or Excel spreadsheets. Advisors to the company include Ken Myer, former CEO of the Washington Technology Industry Association, and Rob Arnold, CEO of Geospiza.

Story by John Cook from GeekWire

Awards/Honors/Publications



Dr. Leah Backhus has been awarded a K Award training grant through the Institute of Translational Health Sciences (ITHS). The ITHS KL2 Multidisciplinary Clinical Research Career Development Program is funded through the NIH/NCCR as a part of the CTSA initiative. The grant provides 4-5 years of research and training support which she will use to investigate survivorship following definitive treatment in lung cancer.



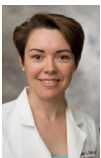
Drs. Joseph Cuschieri and Ron Maier will be publishing “*Benchmarking Outcomes in the Critically Injured Trauma Patient and the Effect of Implementing Standard Operating Procedures*” in the May issue of *Annals of Surgery*. The study’s objective was to determine and compare outcomes with accepted benchmarks in trauma care at seven academic level I trauma centers in which patients were treated on the basis of a series of standard operating procedures (SOPs). It is the latest publication from the investigators involved in The Inflammation and the Host Response to Injury, a National Institute of General Medical Sciences large-scale collaborative project (“Glue Grant”).



The American Society of Transplant Surgeons (ASTS) recognized **Dr. Andre Dick** as a Top Poster of Distinction Awardee at the 12th Annual State of the Art Winter Symposium “*Surgical Challenges, Creative Solutions.*” The title of the abstract he submitted and presented is “*Living Donor Kidney Transplantation: Does Size Matter?*”



At the 2012 Congress of the Society of Critical Care Medicine (SCCM), **Dr. Heather Evans**, Assistant Professor of Surgery in the division of Trauma, Critical Care and Burns at HMC, was awarded a Presidential Citation for her contributions as Chair of SCCM’s Graduate Resident Education Committee. She has been appointed to be the Chair of Strategic Planning for the Surgery Section of SCCM for 2012-13.



Dr. Hugh Foy received the 2012 UW Distinguished Teaching Award. Each year, the University of Washington honors several members of the faculty as Distinguished Teachers. Award-ees are chosen based on a variety of criteria, including: extensive knowledge and mastery of the subject matter, innovation in course and curriculum design; ability to inspire, guide and mentor students through independent and creative thinking; ability to engage students in a variety of classroom settings; and service as a mentor, collaborator and consultant to other faculty and teaching assistants by helping to enrich the scholarship of teaching and learning. The Distinguished Teaching Award may be awarded to a faculty member only once in his/her lifetime.

Dr. Foy has received numerous teaching awards over the years. This is a significant honor from the University and accurately reflects the esteem in which Dr. Foy is held by faculty, medical students and residents. The Department salutes Dr. Foy on this extraordinary award.



Dr. Jennifer Kasten, (PGY-2), has been named a Scientist Scholar by the American Society of Transplant Surgeons (ASTS). Her project, “*Transplantation of Embryonic Stem Cell-Derived Hepatocytes to Treat Single Enzyme Liver Defects*” will attempt to develop a gene therapy vector to palliate congenital metabolic defects which currently require orthotopic liver transplantation.

Each year ASTS selects two residents from across the country to be Genentech Scientist Scholars. The award supports full research funding for two years in the field of transplantation and transplant immunobiology. Previous awardees have included **Drs. David Mathes, Tom Varghese** and Yvonne Carter. The Department congratulates Dr. Kasten on receiving this prestigious award.



Dr. Kimberly Riehle was awarded the Louis Argenta, MD, FACS Faculty Research Fellowship by the American College of Surgeons (ACS) for her research project entitled “*Improving Regeneration in the Fibrotic Liver.*” This fellowship is supported by Kinetic Concepts, Inc. and is targeted to help the award recipient establish an independent research program on wound care.

Cardiothoracic Visiting Professor

THE DIVISION OF CARDIOTHORACIC SURGERY
AT THE UNIVERSITY OF WASHINGTON

presents the

TWENTY-FIRST ANNUAL VISITING SCHOLAR IN
CARDIOTHORACIC SURGERY

“The Tricuspid Valve in Congenital and
Acquired Heart Disease”



Pedro del Nido, M.D.
Chief of Cardiac Surgery
Children’s Hospital Boston
Boston, Massachusetts

Friday, May 11, 2012

K-069 Health Sciences Building

3:30-4:30 pm

Reception immediately following lecture

Save the Dates

19TH ANNUAL PETER K. BUEHLER VISITING
PROFESSORSHIP IN PLASTIC SURGERY

Dr. William Kuzon

Chief of Plastic Surgery at the University of Michigan

“Ventral Hernia is a Classic Plastic Surgery Challenge”

Wednesday, June 6, 2012, 6:30am

Room K-069, Magnusson Health Sciences Building

63RD ANNUAL ALFRED A. STRAUSS LECTURE

Dr. Michael Zinner

Moseley Professor of Surgery at

Harvard Medical School and Surgeon-in-Chief and

Chairman of the Department of Surgery at

Brigham and Women’s Hospital

Friday, October 12, 2012, 4:00pm

Hogness Auditorium,

Magnusson Health Sciences Building

Reception immediately following lecture.

UW Medicine

DEPARTMENT OF SURGERY

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