Markus Meyer, M.D., presents his proposal to the SPARK Pilot Grant Program panel. See SPARK Pilot Grant Program pg. 6.
Prospero Gogo, M.D.

Kim Dittus, M.D., Ph.D.

at Fletcher Allen Health Care during Match Day on March 15. Class of 2013, celebrates her match to an Internal Medicine residency.

Susanna Thach, center, a member of the UVM College of Medicine, how he uses a smart phone app for ECGs.

Heart Monitor: A Possible Game Changer for Rural Health. “Published March 18, 2013, Gogo’s story talks about assistant professor of medicine, regarding screening for breast cancer.

Mammogram for Older Women,” highlights a national study, co-authored by Laurie Leclair, M.D., associate professor of medicine, and pulmonologist, commented for a story aired February 14, 2013.

A February 5, 2013 story in Science Daily, titled “Mammogram Every Two Years Has Same Benefit as Yearly Mammogram for Older Women,” highlights a national study, co-authored by Kim Dittus, M.D., Ph.D., assistant professor of medicine, regarding screening for breast cancer.

PROSPERO GOGO, M.D., associate professor of medicine, wrote a story for Health 2.0 News titled “AliveCor’s Heart Monitor: A Possible Game Changer for Rural Health.” Published March 18, 2013, Gogo’s story talks about how he uses a smart phone app for ECGs.

I love spring—even the dandelions are beautiful. It also offers the opportunity to reflect back at what the department accomplished over the winter and what is planned for the months ahead. In this era of incredible change and challenges in all of our missions, clinical care, research, education and service there are several possible approaches to take. They range from burying one’s head in the sand and hoping that all the changes will go away to the old adage, “when you have lemons make lemonade”. I am very grateful that the entire department has taken an innovative approach to cope with all of the challenges. To address changes in research funding the department developed a Translational Award program and launched a new research initiative, SPARK\textsuperscript{12} highlighted in this issue of the Chart. As noted in the last edition of the Chart, we have embraced the challenge of eliminating those tests/procedures that are potentially unnecessary or even harmful from our clinical practice based on the national Choosing Wisely campaign. This has engaged faculty, fellows and residents, and one of the projects was a highlight of the FAHC Quality Forum. The education of our students, residents and fellows is central to everything that we do as a department. As noted in previous issues of the Chart the residency program has been completely reorganized to enhance the educational experience. As we prepared for the recent visit by the LCME Accreditation committee, we realized we had opportunities to significantly improve the medical student experience in our department, and faculty and residents worked collaboratively to make that happen. With all of this, faculty, fellows, residents, students and staff continued to publish high impact articles, obtain major new research funding, provide outstanding patient care, be nationally recognized for their contributions, and be creative members of our community (see the Who Knew, page 13). Once again, there was no shortage of information to include in the Chart.

Polly E. Parsons, M.D., E.L. Amidon Professor and Chair, Department of Medicine.
new and notable

welcomE faculty

JENNIFER BOROFSKY, M.D.
Assistant Professor, Primary Care Internal Medicine

SHADEN ELDAKAR-HEIN, M.D.
Assistant Professor, Primary Care Internal Medicine

E. ROSY HILL, M.D.
Assistant Professor, Primary Care Internal Medicine

E. ROSY HILL, M.D.
Assistant Professor, Primary Care Internal Medicine

FARRAH KHAN, M.D.
Assistant Professor, Hematology/Oncology

C. MATTHEW KINSEY, M.D.
Assistant Professor, Pulmonary and Critical Care Medicine

LAURA McGVENA, M.D.
Assistant Professor, Dermatology

PREMA MENON, M.D.
Assistant Professor, Pulmonary and Critical Care Medicine

JOSEPH PIERSON, M.D.
Assistant Professor, Dermatology

The following Department of Medicine faculty will serve as mentors for the Medical Student Summer Research Fellowship:

DHANANJAY GUPTA, PH.D., to mentor Shane Greene

RALPH BUDD, M.D., to mentor Russell Landry

ANNE DIXON, M.D., to mentor Sonam Kapadia

JACK LEAHY, M.D., to mentor Nishan Bingham

ANNIS MARNEY, M.D., to mentor Daryl Selen

CORY TEUSCHER, PH.D., to mentor Christopher Ting

research notables

DANIEL WEISS, M.D., PH.D.
Received $200,000 from United Therapeutics Inc. to study ex vivo lung bioengineering using pig lungs as a xenogeneic transplant model.

NAOMI FUKAGAWA, M.D., PH.D.
Received the $50,000 UVM Center on Aging Armin Grants Memorial Research Award for Community-Based Nutritional Intervention in Affordable Housing for Elders. Fukagawa/Klodinsky are Co-PIs. 03/01/13

CHRIS HUSTON, M.D.
Awarded $190,625 for the first year of a two-year award totalling $419,375 for his project titled Novel approaches to overcome cryptosporidiosis treatment failure.

HAROLD DAUERMAN, M.D.
Receiving $100,000 in estimated funding for the ABSORB Trial – A Resorbable Drug Eluting, Stent.

MARKUS MEYER, M.D.
Awarded $70,000 for Medtronic Tachyremodeling for the Treatment of Heart Failure with Preserved Ejection Fraction.

DAVID SCHNEIDER, M.D.
Received $220,000 for a study of the Transition from Cangrelor to Ticagrelor, and Ticagrelor to Cangrelor in Patients with Coronary Artery Disease.

ANNIS MARNEY, M.D.
Received $72,244 for research titled The Utility of Continuous Glucose Monitoring (CGM) in Detecting Cardiac Autonomic Neuropathy (CAN) and its Impact on Glucose Variability and Cardiac Function in Patients with Type 2 Diabetes Mellitus and Heart Failure.

FACULTY NEWS

POLLY PARSONS, M.D., was the recipient of the Distinguished Achievement Award from the American Thoracic Society. She was presented with the award at the ATS meeting in May, 2013.

DAVID SCHNEIDER, M.D., has been appointed to a new role in Fletcher Allen Partners to coordinate cardiovascular care in the system. The goal is for patients to experience a seamless continuum from locally provided services to specialty tertiary and quaternary cardiovascular services at Fletcher Allen. Initial efforts will include building a regional quality assurance program for invasive and noninvasive cardiac services, and enhancing the sharing of information by deploying cardiology ePACs that combines primary cardiac images with reports.

THEODORE MARCY, M.D., was invited to represent clinicians on a working group to develop national standards for eReferrals to tobacco quit lines, particularly in relation to ONC’s Step 3 of meaningful use initiatives.

ELIZABETH S. CHEN, PH.D., serves as Study Section Chair, Special Emphasis Panel, National Institutes of Health/National Library of Medicine.

MATTHEW POYNTER, PH.D., has been appointed as a permanent member of the NIH’s Lung Cellular, Molecular, and Immunobiology Study Section (LCMI). LCMI reviews investigator initiated grant applications designed to study the genetic, molecular, and cellular basis of normal respiratory biology, and the alterations in these processes in inflammatory and immune lung disorders.

CHARLES IRVIN, PH.D., was named Assistant Dean for Faculty at the College of Medicine. In this role, he is responsible for faculty development and advancement and reports directly to the dean. He will manage the orientation and education of new faculty, establish a program to assist faculty in developing their academic careers, and oversee the promotion and tenure process. Irvin’s role in these activities will support the nearly 800 basic science and clinical faculty on the UVM/Fletcher Allen campus, as well as the teaching faculty throughout Vermont and New York, and at the College’s clinical teaching sites.

KIM DITTUS, M.D., PH.D., and Cancer Center Services Assistant Director Susan Webber represented the Vermont Cancer Center at the New England Cancer Survivorship Research Symposium held in Boston on May 1, 2013.

Hospital medicine cme course

Hospital Medicine CME course was delivered February 7-9, 2013, in Stowe, Vermont. Caroline Lyon, M.D., Steven Grant, M.D. and Allen Repp, M.D., directed the course. Numerous Department of Medicine members served as course faculty, including Kemper Alston, M.D., Eric Ganguly, M.D., David Kaminsky, M.D., Bonita Libman, M.D., Annis Marney, M.D., Mark Pasanen, M.D., Prospero Gogo, M.D., Alan Segal, M.D., Jasindar Sra, M.D., and Joseph Winget, M.D. Seventy-five physicians and health care providers from across the country were in attendance and the early feedback has been exceptional.
Nephrology

With outpatient clinics and dialysis units from Newport to Rutland, the Division of Nephrology has a “pretty broad footprint in the state,” says Director Richard Solomon, M.D. Members of the division also conduct leading edge research and contribute to the education of medical students, residents and fellows.

The division includes nine physicians, four fellows, a nurse practitioner, two registered nurses, a dietitian, and several staff members. Of the nine dialysis units in the state, six are operated by Fletcher Allen Health Care, and for the remaining three, the group also provides patient care. Experienced staff members train patients eligible for home dialysis therapies, and they offer 24-hour phone support. In cooperation with the Department of Surgery, about 25 to 30 renal transplants are conducted annually. The division follows patients during hospitalization and provides outpatient care at the Fletcher Allen nephrology clinic.

With a mission to “keep as many people off of dialysis as possible,” Solomon says preventive care and education are important to the division’s work. The group has been recognized for their success: The division’s dietitian, Desiree de Waal, M.S., R.D., C.D., was named the 2013 Vermont Dietitian of the Year by the Vermont Academy of Nutrition and Dietetics, and Sue LaPointe, R.N., has presented on the year by the Vermont Academy of Nutrition and Dietetics, and Sue LaPointe, R.N., has presented on the

The division is involved in many educational initiatives as well. With many division members involved in educational programs and radiology conferences around the world. Wolfgang Weise, M.D., and John Gennari, M.D., have contributed to the education of medical students. The community benefits from the expertise of the Nephrology Division as well, as a former president of the American College of Physicians, Hood is asked to speak nationally and internationally on topics related to kidney care, as well as on policy issues regarding the accountable care model and medical homes. Solomon frequently travels to give presentations at nephrology, cardiology and radiology conferences around the world. Wolfgang Weise, M.D., and John Gennari, M.D., have found success working with division fellows on submitting case reports to medical journals.

The division also partners with industry leaders. Solomon has been involved with a project to bring to the Northeast Kingdom of Vermont a South Korean biotech company that manufactures wearable dialysis units. The project is privately funded through a federal program (officially named the Immigrant Investor Program, but more commonly known as “EB-5”) that allows foreign investors to receive a conditional green card after a $500,000 investment in a rural or impoverished area of the country. According to recent news reports, the biotech company is expected to create more than 500 jobs in Vermont.

“It’s a good example of a university/industry partnership,” Solomon says.

The division has a long tradition of educating the next generation of specialists. A two-year fellowship program, founded in 1972, trains two fellows annually in all aspects of clinical nephrology. An optional third year allows for additional experience in lab research. Residents are on the service of the division, and faculty members participate in the Vermont Integrated Curriculum through the Intro to Clinical Decision Making course as well as the Cardiac/Respiratory/Renal course. They also offer a fourth-year elective. Monthly nephrology teaching rounds are given for residents and medical students. The community benefits from the expertise of the Nephrology Division as well, with many division members involved in educational programs on hypertension, kidney disease prevention, and other topics.

From left to right: Virginia Hood, M.D., F. John Gennari, M.D., Christopher Rich, M.D., Richard Solomon, M.D., Margaret Butler, A.P.R.N., Wolfgang Weise, M.D., Jeffrey Remmer, M.D., Dana Negoi, M.D.; missing - Varun Agrawal, M.D., Shirley Chang, M.D., Alan Segal, M.D.
Out of the Lab, Into the Market

One idea is a simple and inexpensive test of heart function. The other promises to treat a condition that racks up roughly $25 billion in ICU costs annually.

Both inventions now have better chances of making it to the patients who would benefit from them thanks to the Department of Medicine’s new SPARK pilot grant program.

Based on a program developed at Stanford University, the department put out a call to its faculty members and researchers in late 2012 for proposals aimed at translating novel ideas into therapies, diagnostics, or devices that could “advance rapidly into clinical care through commercialization or other pathways.” This left a wide berth for any number of ideas – from therapeutic devices and medical applications available on smart phones to new chemical compounds or pharmaceuticals.

On May 3, an invited panel of nine leaders from biotech, pharmaceutical, business, and legal fields gathered at UVM’s Davis Center for presentations on five proposals they pre-selected in March. The panel asked questions, challenged presenters on the details of their plans and ultimately offered suggestions for next steps. Two projects – one presented by Markus Meyer, M.D., and the other by the team of Renee Stapleton, M.D., Ph.D., and Ben Outatt, M.D. – each received a $50,000 seed grant to help move their research from bench to bedside.

Meyer is developing a simple device to administer a small dose of nitrogen to a patient; timing its flow through the body would be a fast and inexpensive way to test for heart function. Stapleton and Suratt are researching leptin – a protein hormone – as a therapy for Systemic Inflammatory Response Syndrome (SIRS). This syndrome includes sepsis and shock, and may result from trauma or infection.

For this pilot year, under the direction of Department Chair Polly Parsons, M.D., SPARK received ten applications, says Mercedes Rincon, Ph.D., who is a professor of medicine and a member of the SPARK Organizing Committee that includes department business manager Eric Gagnon and BioMosaics President and Chief Scientific Officer Mark Allegretta. All applicants – even those not chosen to present – received advice on how to move their projects forward. “There’s a lot of research going on but few things are getting to the bedside,” says Rincon. The hope is that SPARK, through the feedback from business leaders, helps to bridge the gap between research and commercialization. And the education extends beyond presenters to audience members. Cory Teuscher, Ph.D., said in an email to organizers that although he didn’t submit a proposal, he appreciated the opportunity for basic science researchers to “see a side of the biomedical research enterprise that we are less familiar with.”

Organizers anticipate some SPARK winners will apply for two NIH grant mechanisms that have seen an increase in funding at a time when many programs are being cut: the Small Business Innovation Research (SBIR) and the Small Business Technology Transfer (STTR) grants. Both programs ask small businesses to collaborate with research institutions to “increase private sector commercialization of technology.” With help from UVM’s Office of Technology Commercialization, SPARK recipients could use their funding to do the preliminary work necessary to file for a patent and submit grant applications.

After evaluating the pilot program, Rincon says there’s the potential for SPARK to expand beyond the Department of Medicine in future years.

SURATT, M.D. — each received a $50,000 seed grant to help move their research from bench to bedside.
Invention to Venture Conference
The annual Invention to Venture (I2V) Conference, held April 4, brought together academic researchers, students, entrepreneurs and business leaders from across the state to collaboratively focus on entrepreneurship, job creation, and economic growth. The 2013 event attracted a record 140 attendees and offered a new, highly interactive, roundtable discussion format offering discussion on a wide variety of topics, and an awards session at which several College of Medicine faculty were recognized.

Presented by the UVM Office of Technology Commercialization, the Vermont Technology Council and the Vermont Center for Emerging Technologies, the conference is in its eighth year. The 2013 keynote presentation was delivered by Rich Tarrant, Jr., founder and CEO of MyWebGrocer.

Among the faculty members who received awards were: PETER SPECTOR, M.D., and JASON BATES, PH.D., for their newly-licensed company Visible Electrophysiology, LLC; MERCEDES RINCON, PH.D., and Wendy Neveu, M.D., Ph.D., a resident at Emory University, were inducted into the Hall of Fame for their research presentation at the ACP Meeting in San Francisco, CA, April 2013.

As a result of the conference, several residents presented their work on a variety of topics. A survey of U.S. Internal Medicine Training Programs. Evans L, Uppal. A Patient Handoffs in the Medical ICU: A Journey from the bench to the bedside. Diabetes Care. 35(10):1961-1967, 2012. Critical Care Secrets, Fifth Edition. PARSONS PE and WEINER-KRONISH JP (editors); Elsevier, Mosby, St. Louis Missouri 2013. This book included 37 authors from the University of Vermont, 11 of which were residents and fellows.

Residents Present

PATRICK HOHL, D.O., M.P.H., ROBERT LOBEL, M.D.
Lyne Cadit is in an Elderly Man with Native Conduction Disease: A Treatment Dilemma. Abstract presentation at the National ACP Meeting in San Francisco, CA, April 2013.

SAMREEN RAZA, M.D., JASMOL JAYAPRAKASH
SARDAN, D.O. When biopsy prevails and therapy fails – a fascinating case of Rheumatoid Meningitis (necrotizing granulomatous meningitis) while on TNF blocking therapy. Abstract presentation at the ACP Meeting in San Francisco, CA, April 2013.


JUSTIN GINNETT-DONNELLY M.D., PATRICIA BOUCHARD R.N. M.S., VIRGINIA HOOD M.D.

Recent Publications


Critical Care Secrets, Fifth Edition. PARSONS PE and WEINER-KRONISH JP (editors); Elsevier, Mosby, St. Louis Missouri 2013. This book included 37 authors from the University of Vermont, 11 of which were residents and fellows.

Masters of the Physical Exam: Return to the Bedside
The Residency Program has a new initiative titled “Masters of the Physical Exam: Return to the Bedside.” These consist of weekly physical exam rounding sessions where one master attending rounds with a team of residents and medical students and demonstrates proper physical exam techniques. We have utilized new technology for these teaching rounds, including new electronic stethoscopes for real time simultaneous auscultation for the entire team, handheld bedside ultrasound and the new Harvey 5 physical exam simulators. The Clinical Simulation Laboratory has helped to integrate physical exam teaching and tools with the findings of our patients at the bedside.
Welcome New Fellows

CARDIOLOGY
Sreedivya Chava, SUNY Upstate Medical University, Syracuse, NY
Mohammed El-Haddad, Wayne State University, Detroit, MI
Preeth Sundaran, Fletcher Allen Health Care
Srinath Yeshwant, Rush University Medical Center, Chicago, IL

DERMATOLOGY
Aelayna Meyer, University of Oklahoma

ENDOCRINOLOGY
Sree Susmitha Garapati, Saint Joseph Hospital, Chicago, IL

GASTROENTEROLOGY
Mario Velez, University of Illinois, Chicago, IL

HEMATOLOGY/ONCOLOGY
Inder Lal, St. Barnabas Hospital, Bronx, NY

INFECTIONOUS DISEASE
Vinod Mohan, Saint Vincent Hospital, Worcester, MA

NEPHROLOGY
Ziad Arabi, St. Joseph Hospital, Chicago, IL

PULMONARY
Lucas Mikulic, North Shore Medical Center, Salem, MA
Sivajothish Kanagalingam, St. Elizabeth Medical Center, Brighton, MA

RHEUMATOLOGY
Scott Legunn, United Health Services Wilson Hospital, Johnson City, NY

NEW DIABETES INITIATIVE
After a year of concerted effort, a consortium of Endocrinology, Primary Care Internal Medicine, Family Medicine, community care educators, information system professionals, Jeffords Quality Institute staff, and Medical Group leadership have rolled out the Diabetes Initiative. The Diabetes Initiative is a seamless diabetes management roadmap that supports best practices for diabetes education, clinical care, and communication among the physicians, providers, and professionals treating and educating patients with this prevalent and chronic condition. The initiative will allow for enhanced diabetes control in our population, improved communication between specialty and primary care, and a smoother referral process, all in an ongoing effort to improve diabetes outcomes. The initiative integrates with the Patient Centered Medical Home concept in primary care by, for example, placing Certified Diabetes Educators from Endocrinology into primary care practice locations. The primary care sites at Colchester, Essex and Hinesburg are the first practices to use the initiative in conjunction with the Transforming Primary Care Project. The initiative will serve as a model for future collaborative efforts between primary and specialty care as we tackle improvements in the care process for other chronic conditions. Many thanks to Department of Medicine members and others for their leadership in this effort: Dr. Jennifer Gilwee, Dr. Joel Schnure, Dr. John King, Dawn Godaire, RN, Brandie Benoit, Karen Mcintosh and Tammy Stockton, R.N.

ENDOCRINOLOGY
The diabetes self-management education program in the Fletcher Allen Endocrinology & Diabetes has consistently met the rigorous standards set by the American Diabetes Association for recognized diabetes self-management education programs since 1998. In October of 2012 our site was selected for a random on-site audit by the American Diabetes Association, and on January 31, 2013, we were notified that the diabetes self-management education program met the standards evaluated by this audit.

OSTEOPOROSIS CENTER
The Osteoporosis Center is one of three sites in the U.S. participating in studies using a technique called “Trabecular Bone Score.” Developed in Lausanne, Switzerland, it is a method of determining the likelihood of fracturing based on imaging of the spine using bone densitometry, which relies on estimated trabecular volume in the vertebral body. It has been found to be independent of bone density and more predictive of fracture. We have been sending scan data for analysis, but will have on hand the software to perform our own clinical studies in the near future.
IN MEMORIAM

University Distinguished Professor of Medicine Burton E. (Burt) Sobel, M.D., died May 3, 2013. An inspiring and internationally-recognized leader in cardiovascular medicine, he was also a mentor, colleague and friend. After graduating from Cornell University, Dr. Sobel obtained his M.D. from Harvard Medical School followed by a residency in Internal Medicine at Peter Bent Brigham Hospital and cardiology training at the National Institutes of Health. He began his career on the faculty at the University of California San Diego and then joined Washington University in St. Louis as Director of the Cardiovascular Disease. In 1994, Dr. Sobel relocated to the University of Vermont to become the E. L. Amidon Professor and Chair of the Department of Medicine. Dr. Sobel was the consummate scholar. Research he led was responsible for enzymatic sizing of myocardial infarction and subsequently thrombolytic therapy for the treatment of ST elevation myocardial infarction. During the past 2 decades Dr. Sobel focused his energy on diabetes and particularly the role of plasminogen activator inhibitor type-1 (PAI-1). He published 581 peer-reviewed original investigations, 367 invited reviews, editorials, and chapters, 37 books and monographs and 36 single-authored mini-reviews for current medical literature. Dr. Sobel’s contributions were nationally recognized through numerous honors and awards including election to the Society of Clinical Investigation, and the 2010 Distinguished Scientist Award from the Society for Experimental Biology and Medicine, who also honored him with the named Burton E. Sobel Annual Young Investigator Award.

Tisdale Lectures 2013-14

The goal of the Tisdale Lecture Series is to highlight our Medical Grand Rounds Conference by bringing national and international leaders who are involved in relevant and cutting edge translational research. There is particular emphasis on the translational component, demonstrating the bench to bedside or bedside to practice aspect of the work.

September 13, 2013

Erol Fikrig, M.D., Waldemar Von Zedtwitz Professor of Medicine (Infectious Diseases) and Professor of Epidemiology (Microbial Diseases) and of Microbial Pathogenesis; Investigator, Howard Hughes Medical Institute; Section Chief, Infectious Diseases, Yale University. Host: Mercedes Rincon, Ph.D.

October 11, 2013

Donna Arnett, Ph.D., Professor and Chair Department of Epidemiology, University of Alabama at Birmingham (UAB), currently president of the American Heart Association. Host: Mary Cushman, M.D.

January 17, 2014

Mark Moss, M.D., Professor and Critical Care Director, University of Colorado. Host: Gil Allen, M.D.

The UVM/Fletcher Allen Intensive Care Team Takes the Plunge

With a name inspired by a device that cools down heart attack patients to reduce neurological damage risk, the “Artic Suns” raised nearly $2,000 for Vermont Special Olympics at the 2013 Penguin Plunge held in Burlington on Saturday, February 2. Hearty souls from across the region, including members of the Artic Suns team, took a dip in the frigid waters of Lake Champlain for the cause.

The University of Vermont/Fletcher Allen Health Care team, which represented the Medical Intensive Care Unit and pulmonary academic units, included Gil Allen, M.D., Mark Bachand, respiratory therapist at Fletcher Allen; Sean Diehl, Ph.D., assistant professor of medicine; Peter Kassell, R.N., staff nurse, Fletcher Allen SICU/PICU; Jed Loomis, R.N., staff nurse, Fletcher Allen SICU/PICU; Sandra Michaud, R.N., staff nurse; Fletcher Allen MICU; Jos van der Velden, Ph.D., UVM postdoctoral fellow in pathology; Daniel Weiss, M.D., Ph.D., professor of medicine and pulmonary and critical care specialist at Fletcher Allen; and Sarah Weiss, UVM undergraduate student.

Notable National News

Beth Kirkpatrick, M.D., was accepted into the 2013-2014 class of fellows for the Hedwig van Ameringen Executive Leadership in Academic Medicine (ELAM) program. This year-long program, founded in 1995, helps senior women faculty members develop the skills required to manage and lead in academic medical and complex healthcare environments.

Polly E. Parsons, M.D., is a member of the NIH: National, Heart, Lung, Blood Advisory Council.

Prema Menon, M.D., was recently awarded a National Palliative Care Research Center Career Development Grant for her proposal entitled: Telemedicine as a Tool for Early Palliative Care Consultations in Critically Ill Patients.