VERMONT MEDICINE

THE ROBERT LARNER, M.D. COLLEGE OF MEDICINE AT THE UNIVERSITY OF VERMONT

SUMMER 2019

TEAMING UP

UVM Cancer Center clinicians and laboratory researchers translate new treatments and therapies from bench to bedside.

ALSO FEATURED: • LEARNING IN ACTION • LIFE AFTER POLIO • ALUMNI AWARDEES

PROFILE IN GIVING

Celebrating the College's First Endowed Professorship in Family Medicine

Harriet Goldman and Michael Kaplan

Morris Goldman, M.D.'32 (center) in his class graduation photo.

For **MORRIS GOLDMAN, M.D.'32**, caring for patients meant always having his doctor bag close by, ready for house calls any time of day or night. The resources at his disposal: his five senses and the tools he could fit in his bag. In honor of this legacy of service, Goldman's daughter and son-in-law, **HARRIET GOLDMAN** and **MICHAEL KAPLAN**, have established the first endowed professorship in family medicine at the Larner College of Medicine. The new professorship recognizes the critical need for primary care expertise while celebrating the specialty's roots.

It also acknowledges Dr. Goldman's gratitude to UVM for helping him become a physician at a time when very few medical schools accepted students "without regard to race, creed and religion." The $1 million gift is "intended to support the threefold mission of the department: To provide high quality care and service to our patients; to ensure high quality education programs for our residents and students; and to advance the science and specialty of family medicine through investigation and query."

The University of Vermont
LARNER COLLEGE OF MEDICINE

THE UNIVERSITY OF VERMONT LARNER COLLEGE OF MEDICINE
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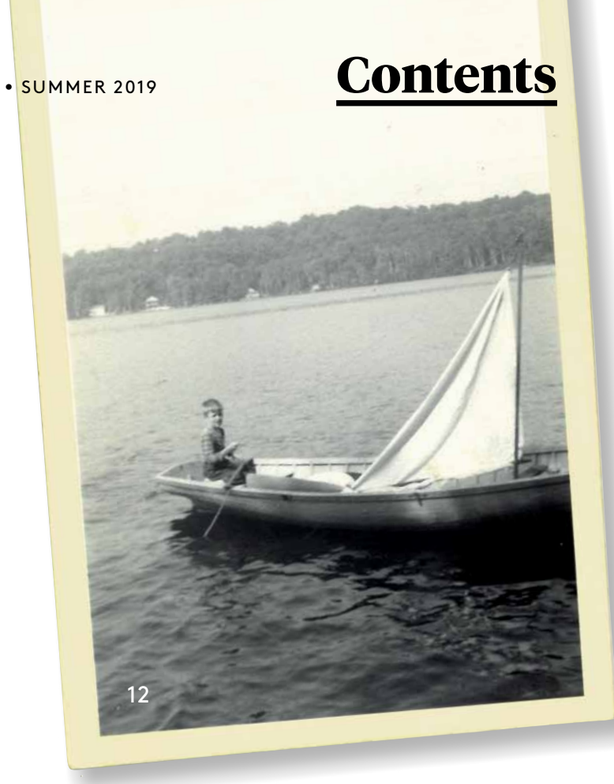

News

Hall A

On the cover: UVM Cancer Center members Marie Wood, M.D., and Jason Stumpff, Ph.D. (Photo by Cat Cutillo)

Features

Web Extras

See more online at med.uvm.edu/vtmedicine/web-extras including videos, photos, and blog posts.

From the Dean

This May, as the academic year came to a close, I took part in my first Medical Commencement as dean—a notable day for me, but even more of a landmark for each of the members of the Class of 2019 to whom I handed a diploma at that ceremony. As I noted to our graduates that day, this event was the culmination of four years of hard work and the beginning of a new chapter, the defining chapter, in each of their lives: the start of their careers as physicians.

Just a couple of months earlier, I joined these graduates on Match Day, and witnessed the excitement and joy as they matched to some terrific residency programs. As they carry with them the lessons learned at the Larner College of Medicine, I know they will make us proud.

Graduation is a tribute to our students' hard work, but it is also a tribute to other important people who were there at commencement, both on the Ira Allen Chapel stage and in the audience: the Larner College of Medicine faculty. Our faculty is world class. We had celebrated that fact earlier in the semester when Russell Tracy, Ph.D., was honored by being named a University Distinguished Professor, UVM's highest faculty honor, and when, in late April, Mark Nelson, Ph.D., also a University Distinguished Professor, was elected to the National Academy of Sciences, the highest national recognition a scientist can receive.

A few hours before our College's ceremony, I took part in the University's main commencement exercises, where I saw another of our faculty members, Emeritus Professor of Pathology & Laboratory Medicine Jackson J. W. Clemmons, M.D., Ph.D., receive an honorary degree in recognition of his decades of work as a nationally known expert in perinatal pathology, his service to the community in retirement, and as a pioneer at this institution as its second African American faculty member. Dr. Clemmons is just one example of our outstanding faculty and the work they do throughout their lives to make this a better world.

As another faculty member, Rebecca Wilcox, M.D., our commencement speaker, said in her address, what we practice at the Larner College of Medicine, and what we show in all our daily interactions, is commitment, a promise to work for the betterment of patients throughout our careers as physicians and biomedical scientists, guided by the spirit of professionalism as we emphasize cultural competence, kindness, and respect in all interactions with patients, their families and our community.

After my first cold winter in Vermont, I have been amazed by the beauty of our spring. Best wishes for a warm and relaxing summer.

RICHARD L. PAGE, M.D.
Dean, The Robert Larner, M.D. College of Medicine at The University of Vermont

VERMONT**MEDICINE**

Summer 2019 • Published June 2019

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National Academy of Sciences Elects Nelson to Membership

On April 30, 2019, University Distinguished Professor and UVM Chair of Pharmacology **Mark Nelson, Ph.D.**, was elected to the National Academy of Sciences (NAS), one of the greatest honors a scientist can achieve. A member of the UVM faculty since 1986, Nelson is internationally recognized for his research on the molecular mechanisms and cellular communication involved in blood flow, particularly in the brain's blood vessels. His extensive research contributions have been recognized with more than 250 peer-reviewed publications and over 360 invited lectureships since 2000. Nelson is the first and only UVM faculty member to be elected as a NAS member.

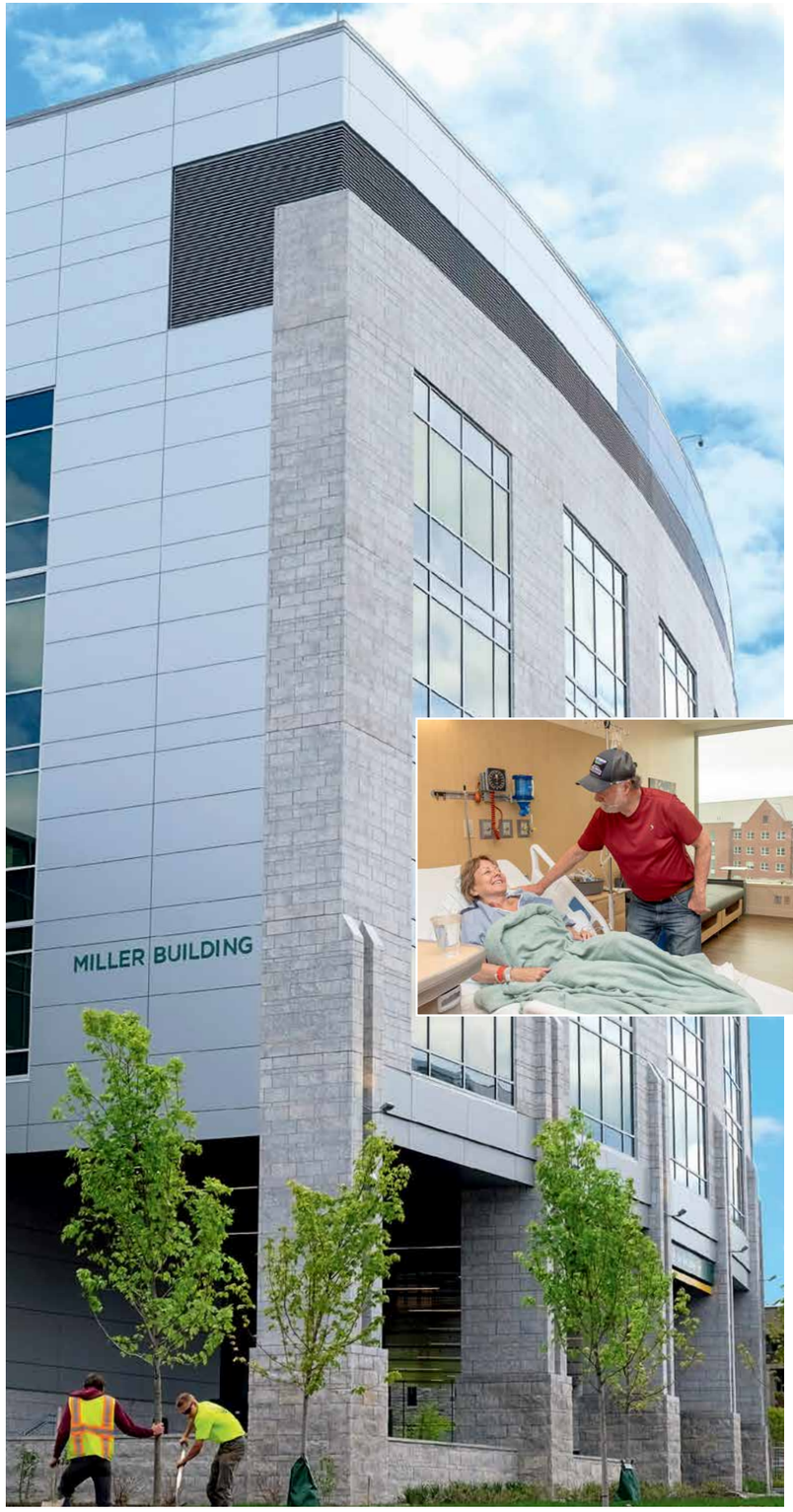
Suresh Garimella Named University of Vermont President

Suresh Garimella, Ph.D., began his tenure as the University of Vermont's 27th president on July 1, 2019. He comes to UVM after serving as Executive Vice President for Research and Partnerships at Purdue University, where he was also the Goodson Distinguished Professor of Mechanical Engineering. In his previous position, he led a world-changing, $660 million per year research enterprise and oversaw Discovery Park, a unique set of facilities and institutes, where disciplines converge to solve global challenges related to health and life sciences, sustainability, food, energy and defense and security. Garimella has a long list of honors and awards, including his 2018 appointment as a member of the National Science Board. In 2010, the U.S. Department of State appointed him as a Jefferson Science Fellow to serve as a Science Advisor in the International Energy Office. He also served for six years as a Senior Fellow in the State Department's Energy and Climate Partnership of the Americas, and as the State Department delegate to the International Energy Agency. He is co-author of over 500 publications and 13 patents. Garimella earned his Ph.D. at the University of California, Berkeley, his M.S. from The Ohio State University and his bachelor's degree from the Indian Institute of Technology Madras. Garimella succeeds former president Tom Sullivan, J.D., who retired after a seven-year tenure and successful completion of a $500 million comprehensive campaign. The University of Vermont Board of Trustees announced Garimella's appointment on February 22, 2019, after a national search.

Stewards of the Art & Science of Medicine

On May 1, 2019, students, faculty, and staff gathered for a celebration of the College's new statement on professionalism—drafted by a 12-member task force chaired by **Debra Leonard, M.D., Ph.D.**, professor and chair of Pathology and Laboratory Medicine:

OUR LARNER COLLEGE OF MEDICINE COMMUNITY UPHOLDS THE HIGHEST STANDARDS OF PROFESSIONALISM AS WE FOLLOW OUR PASSION FOR LIFELONG LEARNING AND IMPROVEMENT. WE DEMONSTRATE PROFESSIONALISM THROUGH INTEGRITY, ACCOUNTABILITY, COMPASSION, ALTRUISM, AND SOCIAL RESPONSIBILITY. WE HONOR THE TRUST OUR SOCIETY HAS PLACED IN US AS STEWARDS OF THE ART AND SCIENCE OF MEDICINE, RELYING ON CULTURAL HUMILITY, KINDNESS, AND RESPECT TO GUIDE OUR DAILY INTERACTIONS. WE EXPECT ALL MEMBERS OF OUR COMMUNITY TO EMBRACE THESE PRINCIPLES OF PROFESSIONALISM AS WE STRIVE TO CONDUCT AND SUPPORT PATIENT CARE, RESEARCH, AND EDUCATION THAT ARE SECOND TO NONE.



SEE ADDITIONAL PHOTOS AND VIDEOS AT: MED.UVM.EDU/VTMEDICINE/WEB-EXTRAS

CELEBRATING THE NEW MILLER BUILDING

On Saturday, June 1, 2019, UVM Medical Center clinical and support staff were all smiles as they moved the first patients into the new Robert E. and Holly D. Miller inpatient building. Under construction since 2016, the project marks the first major upgrade to the medical center's inpatient facilities since the mid-1980s. Over the course of the day, approximately 120 patients moved into the new building.

The seven-level, 180,000 square foot building offers vastly improved spaces for education of medical students and is designed to improve the quality of care and the experience of patients and their families by increasing the number of private patient rooms from approximately 30 percent to nearly 90 percent. Evidence-based studies show that private rooms with ample room for families can promote better healing, reduce medical errors, improve sleep quality and facilitate greater involvement of families and care teams.

"We wanted the patient experience to be as positive as possible," said Frank Ittleman, M.D., professor of surgery and UVM Foundation faculty associate in development. "We wanted the environment to be one that engendered a sense of well-being, a sense of safety, and a sense that we're doing the best we can to get you better."

Named for Vermont philanthropists Bob and Holly Miller, who provided the lead gift for the project, the building commemorates the couple's long-standing commitment to improving the health and well-being of community members. Besides the Millers, nearly 1,400 other individuals donated to fund the building.

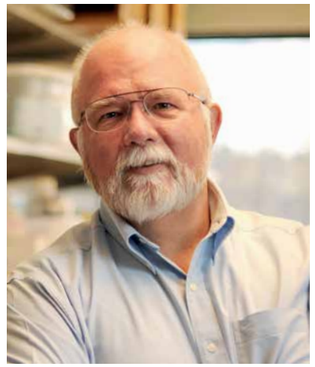


ILLUSTRATION: MARK DANE

TRACY HONORED AS UNIVERSITY DISTINGUISHED PROFESSOR

Research In over 30 years as a member of the faculty, UVM Professor of Pathology & Laboratory Medicine and Biochemistry **Russell Tracy, Ph.D.**, has built an extensive body of work rooted in the improved understanding of mechanisms of cardiovascular disease. His accomplishments were recognized when he was selected as one of three new University of Vermont Distinguished Professors, the highest academic honor UVM bestows upon a faculty member. An international leader in the field of biomarkers for blood clotting, inflammation and adaptive immune systems in cardiovascular disease, Tracy has been consistently funded by the National Institutes of Health for more than 35 years. The recipient of several international research awards, including the 2015 Distinguished Scientist Award from the American Heart Association/American Stroke Association, Tracy is a distinguished investigator of the Cardiovascular Research Institute of Vermont. Tracy and two other faculty members were formally appointed at the UVM Commencement ceremony on May 19, 2019.

Graduate Student Voice

"What we are doing in the lab will contribute not only to the basic science field but also potential stroke treatment. Understanding how blood vessels are constricted during hypertension will help to develop targeted pharmacological approaches to improve outcomes, as high blood pressure is a major risk factor for stroke."

– Neuroscience Graduate Student Zhaojin (Scarlett) Li,
recipient of an American Heart Association Pre-Doctoral Fellowship
with support from mentor Marilyn Cipolla, Ph.D., professor of neurological sciences

Study Explores How Optimism Can Bias Prognosis

Research Most people think of optimism as a good thing—a positive outlook in challenging circumstances. But in reality, it's a psychological state that can be "contagious" in a bad way. A new study, published in the journal *Psycho-Oncology*, details how a seriously ill patient's optimism can impact a clinician's survival prognosis in palliative care conversations.

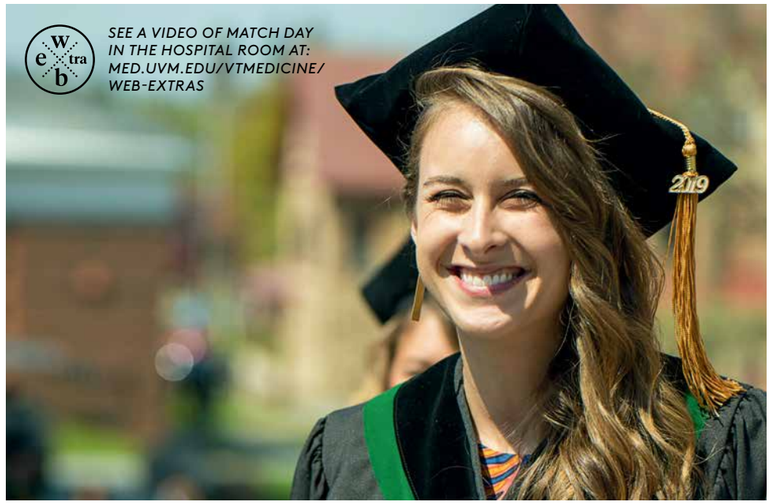
Senior author **Robert Gramling, M.D., D.Sc.**, associate professor of family medicine and the Miller Chair in Palliative Medicine, and colleagues at Purdue University, the University of Rochester and University of California San Francisco, state that clinicians have a duty to estimate prognosis as accurately as possible. If survival is overestimated, Gramling and his coauthors write, "these errors in judgment can prevent patients from making timely decisions about their end-of-life care."

The researchers enrolled 189 hospital patients with advanced cancer undergoing palliative care consultations at two geographically distant sites. Forty-one palliative care clinicians participated in the recorded consultations. The group's findings showed a generally high level of both dispositional and prognostic optimism just before palliative care consultation, as well as a correlation between higher levels of patient optimism and clinicians' greater likelihood of overestimating survival, even after adjusting for clinical markers of survival time.

"Our study suggests that patient-level optimism might exert an unforeseen influence over palliative care clinicians' prognostic judgments," write the study's authors, who add that "If so, then raising clinician awareness about these effects and including de-biasing steps in prognostication skills training may lead to more accurate estimates."

Data analyses for the study took place at the Vermont Conversation Lab, where Gramling and his colleagues both conduct research and develop training sessions through their *TalkVermont* program to help clinicians gain conversational proficiency.

Match Day



SEE A VIDEO OF MATCH DAY IN THE HOSPITAL ROOM AT: MED.UVM.EDU/VTMEDICINE/WEB-EXTRAS

Bringing Match Day to Grandma

By Tessa Barclay, M.D.'19

My grandma, Loretta Harford, is extremely tough. While working as an OR nurse, she was diagnosed with breast cancer. She continued working full time, pausing only for her chemo treatments during her lunch hour before returning to finish out the day. Decades later, she has found herself battling cancer again, this time in her lungs. At nearly eighty years of age, chemo has taken its toll, however when I saw her a month before Match Day she insisted she would be there, stubborn in spite of the fact she could no longer walk unassisted.

Arriving in Burlington the day before the Match, my grandma was in terrible pain. The mere fact that she admitted to being in pain was concerning, and we rushed her to the emergency room. After undergoing an operation the morning of Match Day, her team had a conversation with us that I had practiced in simulation but had not yet experienced as a family member. My grandma was having a difficult time coming out of anesthesia and she needed to be in the ICU. We would take things day by day. A day of celebration had become one of intense grief.

The Match ceremony was about to begin, and I knew she would be furious if I skipped it, so I left my family at her bedside to run over to the med school where I was met with surprising news. Dr. Zehle pulled me aside and told me that between the med school and the ICU nurses a second match ceremony had been arranged to take place in my grandma's ICU room. She would get to experience Match Day after all. The formal ceremony was a blur of emotional extremes, between the incredible news that I had matched at Duke, my first choice of pediatrics program, and calling other family members to communicate the difficult news about my grandmother.

The group gathered outside of the ICU included Deans Page and Zehle, Dr. First, Dr. Raszka, as well as Amy, the nurse manager who had organized everything. Complete with bagpiper, we processed to our room, where I was relieved to see my grandma was awake and talking. Dr. Zehle presented me with a pristine envelope, which I opened to tell her the news that I was going to Duke. It was an incredibly special moment, to be surrounded by the people I cared about most, and it would not have happened without the support of the med school.

Residency Match List

ANESTHESIOLOGY
James Duguay ..... New York Presbyterian-Weill Cornell Medical Center
Andrew Gallagher ... University of Vermont Medical Center
Jayne Manigrasso.... Oregon Health & Science University
SergioMunoz-Correa . Icahn School of Medicine at Mount Sinai

CHILD NEUROLOGY
Ramya Ghantasala... Zucker School of Medicine/Cohen Childrens Medical Center (New Hyde Park, N.Y.)

DERMATOLOGY
Margaret Johnston... Yale-New Haven Hospital
Allison Robbins..... Brown University/Rhode Island Hospital

DIAGNOSTIC RADIOLOGY
Khaled Al Tawil..... Zucker/Northwell Lenox Hill Hospital (N.Y.)
Taylor Brown ..... University of Arizona College of Medicine at Tucson
Alan Lee ..... Cedars-Sinai Medical Center (Los Angeles, Calif.)
Alexander Marchese . University of Vermont Medical Center
Stephen Shenouda ... Monmouth Medical Center (Long Branch, N.J.)

EMERGENCY MEDICINE
Kathryn Anderson ... University of Chicago Medical Center
Suven Cooper..... University of Rochester/Strong Memorial
Kristen Dalton..... Baystate Medical Center
Timothy Fields ..... Arnot Ogden Medical Center (Elmira, N.Y.)
Michael Hall..... University of Massachusetts Medical School (Worcester, Mass.)
Lindsay Howe ..... Denver Health Medical Center
Eliot Jia ..... Cook County Health and Hospital System (Chicago, Ill.)
Joseph Lahey..... Baystate Med Center
Sravana Paladugu.... University of Texas Southwestern Medical School–Dallas
Gregory Whitcher.... Texas Tech University Health Sciences Center (El Paso, Texas)
Nina Xue ..... University of Florida Health Shands Hospital
Mushtaba Yuridullah New York Presbyterian-Weill Cornell Medical Center

FAMILY MEDICINE
Holly Bachilas ..... Lancaster General Hospital (Lancaster, Pa.)
Sean Closs..... Eastern Virginia Medical School (Norfolk, Va.)
Wyll Everett ..... University of Vermont Medical Center
Gregory Gause..... Madigan Army Medical Center (Tacoma, Wash.)
Jenna Jorgensen..... Kaiser Permanente-Santa Rosa (Santa Rosa, Calif.)
Eric King ..... University of Massachusetts Medical School (Worcester, Mass.)
Margaret Klepack.... Maine Medical Center
Anita Li ..... St Joseph Regional Medical Center (Mishawaka, Ind.)
Caroline Linehan .... Kaiser Permanente Washington (Seattle, Wash.)
Julia McGinty ..... University of Massachusetts Med School (Worcester, Mass.)
Althea Morrison ..... UVM Health Network Champlain Valley Physicians Hospital
Paige Wood..... UVM Health Network Champlain Valley Physicians Hospital
Garyn Worrall ..... Kaiser Permanente-Santa Rosa (Santa Rosa, Calif.)

INTERNAL MEDICINE
Kristen Bartlett..... Maine Medical Center
Omkar Betageri..... University of Florida Health Shands Hospital
Aniruddha Bhattacharyya
..... University of Maryland Medical Center Midtown
Michael Burton ..... University of Kansas School of Medicine (Kansas City, Kan.)
Elizabeth Carson .... University of Vermont Medical Center
Sebastian Franco .... Duke University Medical Center
Arjun Janardhan .... University of Vermont Medical Center
Lawrence Leung ..... Kaiser Permanente-San Francisco
Samantha Magier.... Yale-New Haven Hospital
Amber Meservey..... Duke University Medical Center
John Paul Nsubuga .. Beth Israel Deaconess Medical Center (Boston, Mass.)
Jacob Reibel ..... Hospital of the University of Pennsylvania (Philadelphia, Pa.)
Rebecca Robbins..... Dartmouth-Hitchcock Medical Center
Amelia Tajik..... Brown University/Rhode Island Hospital
Marc Vecchio..... Brown University/Rhode Island Hospital

MEDICINE-EMERGENCY MEDICINE
Cody Couperus ..... Mashewske University of Maryland Medical Center

NEUROLOGICAL SURGERY
Aaron Gelinne..... University of North Carolina Hospitals (Chapel Hill, N.C.)

NEUROLOGY
Katherine Clifford ... Stanford University Programs
Midori Eckenstein ... University of Utah Affiliated Hospitals (Salt Lake City)
Cori Polonski ..... Medical University of South Carolina (Charleston, S.C.)

OBSTETRICS & GYNECOLOGY
Florence DiBiase..... Brown University/Women & Infants Hospital of Rhode Island
Katelyn Donaldson .. Medical University of South Carolina (Charleston, S.C.)
Charlotte Hastings... University of Texas Southwestern Medical School-Dallas
Ashley Hodges..... Christiana Care (Newark, Del.)
Ruby Russell..... University of Minnesota Medical School
Maia Sakradse..... Kaiser Permanente-Oakland (Oakland, Calif.)

OPHTHALMOLOGY
George Zhang..... Stroger Hospital of Cook County (Chicago, Ill.)

ORTHOPAEDIC SURGERY
Morgan Hadley ..... University of Kansas School of Medicine (Kansas City, Kan.)
Geordie Lonza..... Harbor-UCLA Medical Center (Torrance, Calif.)
Patrick Saunders..... University of Arizona College of Medicine (Phoenix, Ariz.)
Adam Schlauch..... St. Mary's Medical Center (San Francisco, Calif.)

OTOLARYNGOLOGY
Quinn Self..... University of Vermont Medical Center

PATHOLOGY
Elizabeth Doughty... University of Colorado School of Medicine-Denver (Aurora, Colo.)
Ryan Landvater..... University of Michigan Hospitals-Ann Arbor
Nicole Leonard ..... University of Utah Affiliated Hospitals (Salt Lake City)
Emily Ryan..... Stanford University Programs
Brianna Waller ..... University of Vermont Medical Center

PEDIATRICS
AshleyAdkins ..... University of Pittsburgh Medical Center
Tessa Barclay..... Duke University Medical Center
Julia Cowenhoven ... Boston Children's Hospital
Emily Kinn..... Massachusetts General Hospital
Nicholas LoSchiavo .. University of Virginia
Chantal Mendes ..... University of Utah Affiliated Hospitals (Salt Lake City)
Rebekah Misir..... NYU Winthrop Hospital (Mineola, N.Y.)
Sunit Misra..... UC Irvine Medical Center
Katherine Warther... UCLA Medical Center
Nathaniel White ..... University of Vermont Medical Center

PEDIATRICS/RESEARCH
Amy Berkman..... Duke University Medical Center

PEDIATRICS/PSYCHIATRY/CHILD PSYCHIATRY
Desiree DiBella ..... Cincinnati Children's Hospital Medical Center

PHYSICAL MEDICINE & REHABILITATION
Luke Soelch ..... SUNY Upstate Medical University (Syracuse, N.Y.)

PLASTIC SURGERY
Michael Marallo ..... University of Pittsburgh Medical Center

PRELIMINARY SURGERY
Laura Director..... Dartmouth-Hitchcock Medical Center

PSYCHIATRY
John Corbett ..... Dartmouth-Hitchcock Medical Center
Andrew Corse ..... UCLA Semel Institute for Neuroscience
Bailey Fay ..... University of Michigan Hospitals-Ann Arbor
Stephanie Kulaga .... University of Maryland Medical Center
Brian Rosen ..... Dartmouth-Hitchcock Medical Center
Zachary Wunrow .... University of Vermont Medical Center

RADIATION ONCOLOGY
Hyunsoo No..... Stanford University Programs

THORACIC SURGERY
Daniel Lambert..... Zucker School of Medicine/Cohen Children's Medical Center (New Hyde Park, N.Y.)

TRANSITIONAL YEAR
Niketu Patel ..... Walter Reed National Military Medical Center (Bethesda, Md.)

UROLOGY
Rose Leu ..... Loma Linda University Medical Center (Loma Linda, Calif.)
Curran Uppaluri..... Albert Einstein Medical Center (Philadelphia, Pa.)

Glimpses

AROUND THE LARNER COMMUNITY

May 26: The Larner College of Medicine Vermont City Marathon team

April 12: OB/GYN bootcamp residency readiness program

March 30: Students make maple syrup with Professor Emeritus Robert Low, Ph.D.

May 3: Mary Cushman, M.D., M.Sc., (seated) is named a 2019-20 University Scholar.

June 7: Professor of Surgery Frank Ittleman, M.D., receives the Catamount Surgeon Award.

April 6: The Larner College of Medicine ice hockey team wins the 12th Annual Bruce Fonda Memorial Specimen Cup.

SEE MORE PHOTOS AND VIDEO OF COMMENCEMENT 2019: MED.UVM.EDU/VTMEDICINE/WEB-EXTRAS

Class of '19

Commencement

The Gift of Transformed Energy

Commencement Speaker Rebecca Wilcox, M.D., associate professor of pathology and laboratory medicine, took the first law of thermodynamics as the foundation of her address to the UVM Larner College of Medicine Class of 2019. She told the students and their families gathered in Ira Allen Chapel on May 19, 2019: "Energy can neither be created nor destroyed. It can be transformed. That's the gift the Class of 2019 is bringing us here today: the gift of transformed energy." The following is an excerpt from her speech.

Rebecca Wilcox, M.D.

Desiree DiBella, M.D.'19 was one of 103 graduates receiving their M.D.

What are we going to do with this energy, this big gift that is filling Ira Allen Chapel? We're going to collect it. We're going to take a little bit of it, we're going to store it away. In time we might need it. I wish I could stand up here and tell you you're never going to need it. Because once you get that M.D. behind your name, smooth sailing. Easy path. But you know that's not true. You've been patient advocates. You know there are battles to fight. There are political battles. There are system battles. There are battles between what is real information and not real information. There will also be internal battles. Times where you're just going to have to discriminate, "Is this the time to have a battle at all? Maybe this is the time to sit, be quiet, and listen."

At the end of this program, we will all stand together and recite The Oath. The Oath is our commitment to our patients, and to our profession, and it also reminds us to put professionalism at the forefront of what we do. Now, I'm going to circle back to a communication we started when you were first-years, to remember that professionalism is not perfection. Nothing will degrade this energy faster than attempting to maintain that illusion of perfection. Perfection is not the goal. So, just keep using what you have already learned, the skills of transformation energy that I have seen you practice and develop here at the Larner College of Medicine. The, "I don't know. I'm going to find out, but I don't know right now." The, "I'm sorry. How could I have done that better next time?"...I don't care how many years you have on that white coat. Keep that openness. It is your greatest strength. In times when you have every right to be angry, every right to be frustrated, and maybe, at times, even despondent, it will help you transform that energy into kindness, into connectedness, into compassionate health care, and compassionate patient care.

Okay, class. Transformed energy. You've recognized it. You have stored a little bit of it away. What's the last thing we're going to do? We're going to be grateful for it. When you go through residency, and beyond, be grateful for every member of your health care team who has the strength to transform energy. Do it in big ways. Awards and double-decker chocolate cakes. Do it in small ways. Don't underestimate the transformative power of a single kind sentence on a long, long call night. And don't forget to turn that gratitude inward. Don't forget to recognize it in yourself. Self-care, inward, nurturing, it's not a checkbox. It's not a road to perfection. It is not a selfish act. And who am I kidding? You're the ones teaching us that.

The generation I come from, and before, the culture is different. I ask you to keep teaching us. Keep role-modeling that for us. We'll get better. Because energy can neither be created nor destroyed, but it can be transformed. We are grateful for the positive, joyous energy that your journey has filled this room with today. I'm going to grab a little bit of that and say that this gift empowers us to keep transforming. Thank you so much, Class of 2019.

A PIONEER IN THE LAB, AND ON THE LAND

By Cat Cutillo

In 1962, when Jackson J. W. Clemmons, Ph.D., M.D., moved to Vermont to join the UVM Department of Pathology, he was only the second African American on the College of Medicine faculty, and the first to stay for any length of time. Early on, a large farmhouse for sale in the town of Charlotte caught his eye. Public transportation stopped at Shelburne so, according to his daughter, Lydia Clemmons, the doctor walked the remaining six miles down a dirt road to reach the property. Locals called it the "white elephant house," but Dr. Clemmons' childhood experience apprenticing with his grandfather, a master carpenter, helped him see the possibilities beneath its surface.

"I didn't look at this like an old run-down house. This was a good building that could be developed," recalls Dr. Clemmons. He and his wife, also named Lydia Clemmons, who was the first African American nurse anesthetist at UVM, purchased the Charlotte property—148 acres with six historic buildings—and raised five children there.

Pioneering through rocky terrain was second nature for the Clemmonses. As a biochemist, Dr. Clemmons had been part of the lab team of the noted scientist Karl Paul Link in Wisconsin that developed the anticoagulants Dicoumarol and Warfarin. He earned a B.S., M.S., and Ph.D. from the University of Wisconsin, and was then accepted into Western Reserve University School of Medicine in Ohio and promised financial aid; but, the younger Lydia says, the school's admissions office rescinded that aid offer when he arrived and the administrators realized he was African American. The couple pinched pennies to get by, and Dr. Clemmons received his M.D. in 1959. Three years later he came to UVM, where he practiced pediatric pathology until 1991.

Six years ago, the Clemmons family began asking the perennial question posed by all farming families: Does the next generation want to continue on the land? Concerned that African Americans have, over the last 100 years, lost 93 percent of their U.S. agricultural assets, the family decided to preserve the property and launched Clemmons Family Farm, a multicultural center dedicated to celebrating African American heritage through the arts.

"It's very rare to find a farm that is owned by black people in New England," says the younger Lydia. "It's more than a family story. This is American history."

This May, Dr. Clemmons was awarded an honorary degree at UVM's commencement ceremony—recognition by the institution for his work as a pioneer and innovative leader, both at the University and in the wider community. VM

READ MORE ABOUT DR. CLEMMONS AND SEE VIDEOS OF THE WORK OF THE CLEMMONS FAMILY FARM: MED.UVM.EDU/VTMEDICINE/WEB-EXTRAS

PHOTO: CAT CUTILLO

Polio 1949: A Memoir

By John Dick, M.D.'67

A bout of polio when he was eight years old left John Dick, M.D.'67 with lifelong challenges, and valuable lessons about the art of perseverance.

The summer of '49 at Lake Dunmore promised to be a good one. I had just finished second grade and turned eight on the fourth of June. My parents, 14-year-old sister Gail, 2-½-year-old brother Bill, and I lived in Flushing, N.Y., where my father was a doctor and where Dad's parents lived within walking distance of us. My grandparents also owned a camp on what is now named Indian Trail, Lake Dunmore, which they bought from Hawley Churchill of Goshen, Vt. in August 1926. On the same property was a one room "fishing camp" where my family spent summers. The camp had one big room and a small porch where my parents slept, no running water, no toilet, no telephone, a big wood stove ("Smokey Joe") for heat and cooking, and an ice box to which men would deliver a block of ice once a week. Mom loved it.

Lake Dunmore has always been my emotional home. I have fond memories of being out on the calm, sunny lake in a rowboat with Mother to escape mosquitoes, listening to bull frogs and watching turtles sunning themselves. I also remember the subdued celebration there when Japan surrendered in August 1945, ending WWII. World War II had disrupted our lives, if in minor ways compared to the devastation millions in the world suffered. My father was a doctor in the U.S. Navy in the Pacific and totally away from sometime in 1943 until his return in the spring of 1946. By 1946-47 things were changing. Dad was home, my brother was born. Dad and I were building a tree house by our Lake Dunmore palace. I loved either cutting trees with Dad or just driving the camp roads alone with him, listening to him talk and relax. Life was good.

Usually, my father would spend only two weeks at the lake with us because of work, but the rest of us were there from just before school got out in early June until it began in early September. One reason for the extended stay was to try to avoid the polio epidemics that occurred in the summer months. Polio occurred more often where larger groups of children were. We were pretty isolated at Lake Dunmore.

In the 1940s the camps were summer residences. Many owners came from out of state. They did not have phones. Messages were often telegraphed to Brandon's telegraph office. That operator would call Norma Johnson at Cove Point, who would have her 9-year-old daughter, Jane, deliver the message. When Mom wanted to call Dad she would have to go half a mile down the lake to Marvin and Norma Johnson's house.

We arrived at camp in late June 1949, about three weeks later than usual, because Gail was graduating from eighth grade. That summer my parents were making changes to the camp. Marvin Johnson was adding a room for them, a separate room for my sister, a room for my brother and me to share, and a bathroom with indoor plumbing! We would also get a refrigerator and stove. Mom, Gail, Bill, and I stayed in the one room camp partially exposed to the elements. Sometimes the roof over the ongoing addition leaked. Once during the night two raccoons got in and caused a ruckus. Another time a curious skunk entered through the screen door that had not yet been screened. Bats were a nighttime aerial show. Mom took this with aplomb. However, she could not stand the mice. Mom and Gail's letters to Dad showed we were having a great time. Gail took me rowing, sailing, and swimming with a life jacket.

My summer at Lake Dunmore abruptly ended late one afternoon in early- to mid-July. I suddenly felt extremely weak and had to sit down by a big oak tree next to our camp. It felt like "electricity" going through my body. I could not make it inside. That was very frightening. The next thing I remember is being in a dimly lit room lying in a fetal position. I was in Mary Fletcher Hospital, in Burlington, 42 miles away, and must have been having a spinal tap. I remember nothing of the next few days. In fact, there is much about my hospital stay I do not remember. Fortunately I have letters Mother wrote to Father covering my ten-week stay in the hospital.

In an ironic twist of fate, Mom received a letter from Dad that day telling her we left New York just in time as polio cases there were mounting up. That evening she had to call and tell him I had polio.

I WAS FEBRILE AND STUPEROUS FOR A FEW DAYS.

Gradually I became aware of my surroundings. I was in an isolation room where I remained for four or five weeks, confined to bed, with a paralyzed right upper extremity, not able to use my legs, sit up, or feed myself. Even my back muscles were affected. Doctors, nurses and visitors had to wear a mask and gown to visit me. Hot packs were applied several times daily to relieve muscle spasms. Once, this scalded me. This was not the place for an eight-year-old homesick momma's boy to be. But here I was.

I never would have survived emotionally if it were not for Dorothy Montague. "Monty" was a big, caring, loving, 30-plus-year-old nurse who stayed with me 12 hours a day buoying my spirits, often reading to me.

John Bell was my orthopedist. Dr. Bell was thorough, attentive and a person of few but thoughtful words. Dad did not know Dr. Bell or if he was competent. However, he knew Dr. McCauley, a very well respected New York City orthopedist, who came to Burlington twice to examine me and advise our family. Dr. Bell was very gracious with this. Keep in mind, then as now, many New Yorkers are suspicious of Vermont doctors' qualifications. It was Dr. Bell who won the respect and admiration of Grandfather Dick, himself a general practitioner from Flushing, and Mom. He was always encouraging, thorough, and compassionate but frank. While he could report improvement with my legs and back, he could never give good news regarding my arm.

Mom made almost daily 90-mile round trips from Lake Dunmore to check on me, leaving Gail to look after Bill. My Grandfather and Grandmother Dick were in the "Big Camp" next to ours, so Gail had some support. Dad's sister, her husband, and four of their six children were also at the "Big Camp." There was a lot of chaos in Mom's life with our camp partially torn apart with the addition going on, Dad in Flushing, two children to look after, me very ill in a hospital 42 miles away and no convenient phone.

Opposite, top, Mary Fletcher Hospital as it appeared in the 1940s; bottom left, John Dick in the summer of 1949 in his boat on Lake Dunmore, just before contracting polio; bottom right, John, his mother, and brother at their Lake Dunmore camp, 1948.

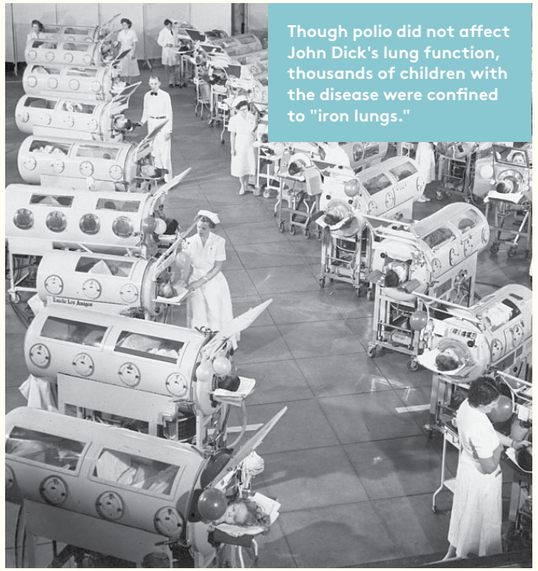
One episode early in my hospitalization is etched in my memory. I awoke and somehow thought my left arm was my right. For the next few moments I was overjoyed as I moved all the hand and arm muscles. Then I realized my mistake. I was very disappointed, but only for a short while. This resilient attitude I inherited from Mom.

After four to five weeks of lonely isolation, I was moved into a room with a roommate, Lou. Lou was a little older and more outgoing than I. His polio was much less severe. His main worry was the possibility of getting an enema that was given if one did not have a bowel movement by day three. Lou was at day two-and-a-half. I was still not allowed up and had to use a bedpan. Lou's problem was solved when he borrowed my bedpan with its contents. A downside of this move was less time with Monty, whom I considered my personal nurse and depended upon. She generally found time to check on me and communicate with Mom. Finally I was allowed to sit up for short periods. Physical therapy began including one half hour in a whirlpool bath three times a day. In time I was allowed to stand briefly and take two steps. Slowly I "learned to walk" again. Gail and Bill were now allowed to visit me. Nobody had to wear masks.

Eventually, I improved to the point where I was moved to the solarium that had several beds and a view of the city. (Mary Fletcher did not get a dedicated polio ward until 1950.) The N.Y. Giants' summer camp in 1949 was nearby. From the solarium I could see them practice. I had enough interest in that to ask my uncle to send me binoculars. Near the end of my hospitalization I saw two patients in iron lungs [a mechanical respirator used by polio patients who had lost control of their chest muscles]. I think they were isolated. Certainly fate had been crueler to them!

The 42,000 cases of polio in 1949 broke the previous epidemic records in the U.S. of 25,000 in 1916 (of which my Grandfather Dick saw about 50 while practicing in Flushing) and 25,000 in 1946. Polio disrupted and financially ruined many families. The National Foundation for Infantile Paralysis raised a phenomenal amount of money from private donations through The March of Dimes to help cover the costs and develop a vaccine. My family benefitted from this financial assistance. The Salk vaccine was not made available until the spring of 1955.

I was discharged from Mary Fletcher Hospital in mid-October, after approximately ten weeks in hospital. My future therapy was still to be decided. There remained a long road to recovery ahead of me. Dr. McCauley recommended I be placed at the New York State Rehabilitation Hospital in Haverstraw, N.Y. This would have meant several months in an inpatient setting. Many polio patients went there. One of Mom's letters to Dad revealed how "numb" she felt at the thought and that she had been upfront with me about it. She noted, "His chin quivered and he asked, 'longer than 20 weeks?'" She replied "yes" and I said it would not be "so bad." She told Dad they had to be truthful with me as "he weighs everything carefully." Fortunately, Haverstraw was not affordable. It was decided that my therapy would continue at home. I doubt I would have survived another institution.



Though polio did not affect John Dick's lung function, thousands of children with the disease were confined to "iron lungs."

MOM, DAD, GAIL AND BILL WERE

at our partially renovated camp when I was finally discharged from Mary Fletcher Hospital in mid-October. Lake Dunmore never looked so good to me.

My world had been dramatically and permanently changed. Instead of going to the third grade in the public school in the fall of 1949, I was pretty much housebound, receiving physical therapy, being in the bathtub about one hour twice a day, and taking long naps. Instead of going to my art and piano teachers' houses, therapists came to my house to teach me how to do crafts with my left hand. I had been right-handed before polio. A school tutor came two or three times a week. That person mostly read to me. I resisted being taught and did not get a third or fourth grade education. The best time was playing chess with Dad.

Once a week throughout the summer, I went to Mary Fletcher Hospital to be examined and treated by my old friends; Dr. John Bell, Monty, now a physical therapist, and Miss Corbett, another physical therapist. I made clear progress by the end of the summer of 1950, in spite of ongoing anxiety.

Fall of 1950, winter of 1950-51 and spring of 1951 in Long Island were long and boring. I think I was getting cabin fever with all that time being homebound. I began to read, mostly the Landmark series of history books. I loved those. A new one came out every couple of weeks, and I read well over 50 of them. Dad and I continued playing chess.

The summer of 1951 was spent at Lake Dunmore. I learned how to swim after falling in water over my head. It was sink or swim. I swam. I only had to go a very few feet until I could touch bottom. With that confidence, I became a very good swimmer and spent a lot of time in the water. I had a Haggerty Seashell dinghy, which I managed to row with one arm and two legs and sail down wind. Another boy my age had a rowboat with sail and rudder, so we would race. It was not easy to manage a sail mainsheet and rudder tiller with one hand and two feet. He usually beat me, probably because both he and his boat were better. I learned I hated to lose.

In November 1951, we moved to Brandon, Vt., a town of 3,500 people only 11 miles from Lake Dunmore. Flushing was not the same Flushing my Dad had grown up in. It had changed a lot during and after WWII, and Mom's asthma seemed to be better in Vermont. A new one-year-old boxer came with us—Newtwood's Conchitia—another gift from one of Dad's patients. Our house was an elegant 1840's marble house with 12 acres of woods for our back yard. This was much better than Long Island. Chita and I roamed those acres as if we were in the wilderness. She lived until I was part way through medical school.

PHOTO: GETTY IMAGES

I started the fifth grade in November after missing the third, fourth and the first three months of the fifth. I could not spell, write, or diagram a sentence well. Nor did I understand the math symbols of division, etc. I failed, but they moved me into the sixth grade the next year.

I was an OK student in the seventh through ninth grades, but preferred tapping trees and making maple syrup. That and a bout of whooping cough led to a spotty school scholastic and attendance record, leaving my mother fearful for her son's future. The upshot was that for the tenth through twelfth grades I was sent to Vermont Academy, an all-boys private school in southern Vermont.

"HE TOLD ME I'D NEVER BE ABLE TO DELIVER A BABY AND NOT TO SHOW UP. TO ADD INSULT TO INJURY, HE ASKED IF I WAS ABLE TO TAKE BLOOD PRESSURES. I GOT THE MESSAGE AND SPENT THE MONTH AT HARLEM HOSPITAL IN NEW YORK."

Although I did not like Vermont Academy, it was good for me. It taught me to be away from home. It also exposed me to Edmund "Beno" Tripp. Beno taught math and was one of my top two teachers ever. I finished third scholastically in the class, just barely making cum laude. Beno told me my cumulative average at VA was 85.0. "If it had been 84.9, I would not have given honors to you." At graduation I received a special award from our headmaster, the book *Endurance*, a true epic survival story of the Shackleton Antarctic expedition of 1914. It was not until many years later that I read the book and understood its significance.

When I was in my mid-teens, Mom had me seen at the Rusk Rehabilitation Clinic in New York City. Rusk was for people with all kinds of handicaps. Its most notable other patient was Joseph Kennedy, father of President Kennedy. One was either an inpatient or an outpatient. I was an outpatient. As I walked past the many patients in the rehab unit, one asked, "Are you a civilian or inpatient?" "You're lucky," he responded when I told him I was an outpatient. I am ashamed to confess I was somewhat appalled at the sight of all those handicapped people, as I realized, "I'm like them." Nobody I knew back home had a physical handicap. Now that was all I was seeing. We were "cripples" and had few spokespeople or role models for success. No Special Olympics then. Two and a half of my three days at Rusk were for psychological testing. When told to draw pictures of my parents, I drew stick pictures. "That is very 'primitive,'" I was told. I wonder how many portraits that right-handed psychologist drew with his left hand. Rusk gave me some special eating utensils, such as a curved knife for cutting meat. These I threw away, not wanting to emphasize being different. I still tie my shoes/boots/sneakers rather than using those with Velcro, etc. A patient recently told me she was working at Shapiro's clothing store in Brandon when at age 11 or 12, I came in to buy shoes. She offered to tie my shoes but I indignantly replied, "I can tie my own." I often wear loafers and must admit they are handy.

THE FALL OF 1959 SAW ME HEADED

to Union College in Schenectady, N.Y. I had only applied to two colleges. Williams was my first choice, but they passed on me. Union was a good fit for me. I joined a fraternity, where I learned how to catch a football, throw a baseball over hand for strikes, and party. I also received a very good education.

Since childhood I wanted to be a doctor. My father's office was in our house. I'd watch patients come and go at all hours of the day. I'd even made some house calls with him at night. He tried to discourage me. Others told me I'd never be able to be a doctor. By the first quarter of my freshman year, I decided to try. My grades were four D's and a C. I had missed three weeks with mononucleosis. Premed chairman, Leonard Clark, supposedly would not consider anyone who did not have a B average. He could not have been nicer. "We have doctors from three different medical schools coming to interview our seniors for admission and I'll have them give you their opinion." They were unanimous, "Do not bother to try. You'll never make it." When they left, Dr. Clark looked at me, "Well Dick, you might as well try. If you do not make it, at least you will have had a good education." What a wonderful man—the only person besides my mother who made me feel I could do it.

Mom took no chances. Once I was doing well in premed at Union, she made an appointment to see Dr. Wolf, the dean of the University of Vermont College of Medicine. Fortunately, Dr. James Wallace had just finished four years of medical school at UVM and was doing an internship there. He had congenital absence of his left hand and forearm. Dr. Wolf had Mom and me meet him. He was very upbeat and encouraging. Years later I had the honor of covering his oncology patients at Rutland Hospital while he was on vacations.

Shortly after I had started medical school at UVM in the fall of 1963, Dr. Bell and I bumped into each other between classes. Ever the physician, after a brief "hello" he started examining my right arm while we were standing on the sidewalk with people passing by. Dr. Bell knew a polio specialist, Dr. Goldstein, at Johns Hopkins and referred me there. I did not want to go but could not say no to a man who had done so much for my parents and me. Johns Hopkins and Dr. Goldstein had nothing new to offer.

Monty was still a physical therapist at Mary Fletcher. It was good to get reacquainted. She was very proud of the scared eight-year-old she nursed through events that changed his life in 1949. Fortunately, I had a chance to tell her how vital she had been for my future.

Medical school, 1963 to 1967, was a great experience that professionally would be hard to top. It was a dream come true. There were 50 people in our class, of which seven were women. That gender discrimination has subsequently been corrected, at least as far as current admissions apply. We got along well, studied together, and played together. Freshman anatomy lab lasted four hours a day, five days a week. Fridays, after anatomy, many of us headed for The Mill, a bar in downtown Winooski, to unwind.

I still faced at least one more skeptic. OB/GYN was a required rotation. The department chairman called me to his office a few days before my rotation was to begin. He told me I'd never be able to deliver a baby and not to show up. To add insult to injury, he asked if I was able to take blood pressures. I got the message and spent the month at

(continued on page 39)

POLIO MADE ITS FIRST LARGE APPEARANCE IN THE U.S. IN VERMONT IN 1894. READ AN EARLIER VERMONT MEDICINE STORY ABOUT THAT OUTBREAK AT: MED.UVM.EDU/VTMEDICINE/WEB-EXTRAS

The Science of Learning in Action

THE KEY TO EDUCATING THE NEXT GENERATION OF PHYSICIANS IS INNOVATION: USING ACTIVE LEARNING TECHNIQUES THAT HELP STUDENTS BUILD SKILLS, AND BECOME SELF-DRIVEN, LIFELONG LEARNERS PREPARED FOR THE EVER-EVOLVING WORLD OF MEDICINE.

BY ERIN POST

PHOTOGRAPHY BY DAVID SEAVER

"Active learning fosters a sense of teamwork and shared responsibility, which reflects the movement of the medical field away from expert autonomy and towards holistic, cohesive care." – *OLIVIA HARRISON '21*

The University of Vermont Larner College of Medicine has a long history of leadership in medical education, from its 1967 curriculum redesign, which introduced earlier and more extensive clinical instruction and enhanced emphasis on lifelong learning, to the launch of the Vermont Integrated Curriculum (VIC) in 2003, which brought education in the basic sciences together with the health sciences and clinical skills in innovative ways.

Now, the College has once again taken the lead in developing a new paradigm for medical education, one that asks students to lean in—to engage with each other and with faculty members—and asks teachers to facilitate that discussion. Called active learning, this new approach evolves the role of teacher and student in important ways.

"The role of the faculty member is changing," says UVM Assistant Dean for Medical Education Katie Huggett, Ph.D., director of the College's Teaching Academy. "They're still sharing their expertise, but in different ways. Faculty facilitate sessions, rather than lecture. They're becoming content curators, rather than creators."

This shift in how medical students are taught is driven in part by the rapid creation of new medical knowledge, which now outpaces any one person's ability to absorb it. Students need to be able to retrieve information and apply it. In class, they engage higher order thinking skills and learn how to work in teams.

The College's commitment to active learning is based on pedagogical evidence. Research shows that students internalize and retain problem solving skills better when they're interacting with faculty and with peers—the seminal work being a 2014 study published in the *Proceedings of the National Academy of Sciences* that showed improved grades and exam scores in STEM fields when active learning was employed as compared to traditional lecture.

The Larner College of Medicine has turned the evidence into a launching pad for innovation. Five core active learning modalities with standard operating procedures have been identified as the foundation for all of the sessions used throughout the VIC. Faculty have a network of professionals on the active learning team—led by Director of Active Learning and Associate Professor of Surgery Jesse Moore, M.D.—and in the Teaching Academy ready to help them develop their teaching skills, design sessions, and assess outcomes. A working group is focused on identifying research opportunities—publications and presentations at national conferences are already in the works.

We invite you to dive into one moment in each level of the VIC that showcases how the Larner College of Medicine is re-imagining medical education. >

Preceding page: First-year students in the Nutrition, Metabolism and Gastrointestinal Systems course work in small groups in the Reardon Classroom.

Racquel DeCastro '21 delivers her first "baby" in the UVM Clinical Simulation Lab flanked by classmates, sim lab staff, and associate OB/GYN clerkship director Erin Morris, M.D., at left

CURRICULUM LEVEL 1: FOUNDATIONS

Rebecca Wilcox, M.D., begins a session during the first-year Nutrition, Metabolism and Gastrointestinal Systems course with a basic question: "Bile. What is it good for?"

Students sit in small groups at tables throughout the room—electronic tablets at the ready. Conversation picks up as the groups begin to confer and list all of the functions of bile. Along with Jill Sullivan, M.D.'04, associate professor of pediatrics and pediatric gastroenterologist, Wilcox stops to answer questions as she walks between tables.

"Dr. Lidofsky's video is fantastic," Wilcox says, referring to the work of a fellow faculty member who created pre-learning material for the session. She encourages students to think back to its main points. When students reconvene, and the conversation is again directed by Wilcox and Sullivan, there are moments when pop culture meets the finer points of liver function. Actress Kirsten Dunst makes an appearance in a GIF as a visual cue for one of bile's key roles (Dunst waving good-bye=bile eliminating toxins and metabolic waste). Then, their final project for the day: With colored markers and large sheets of paper, students are drawing out the metabolism of bilirubin, a key process in a properly functioning liver.

"Having a strong handle on normal is the key to recognizing and understanding abnormal," says Wilcox, noting that this work sets the stage for a later team-based session focused on clinical cases.

As students hash out bilirubin metabolism together and come up with creative ways to communicate it, they're reinforcing what they learned ahead of class and taking it one step further.

"We meet them exactly where they are," says Sullivan. "We try to help them work through the entire metabolic process in preparation for clinical application."

Students coming to the session having already completed some work on their own is important, says Wilcox, who is course director and an associate professor of pathology and laboratory medicine. Individual and Group Readiness Assurance Tests can be done prior to class or built into sessions.

"The pre-work is the foundational knowledge and the vocabulary," she says. "Then when we apply that to a real case scenario, a real patient, we're all speaking the same language."

Once the pieces come together, student learning takes off.

"Their higher order thinking in the classroom sometimes just amazes me," she says. "It's almost like you release this potential in the room."

The Takeaway

"Students are prepared when they come into class to integrate what they've learned. Instead of listening to a lecture and then studying, they learn the material first and then they apply it. It's like the difference between reading about driving and driving a car. With active learning, you're driving a car with the instructor in the seat next to you." – *Karen Lounsbury, Ph.D., Foundations director and professor of pharmacology*

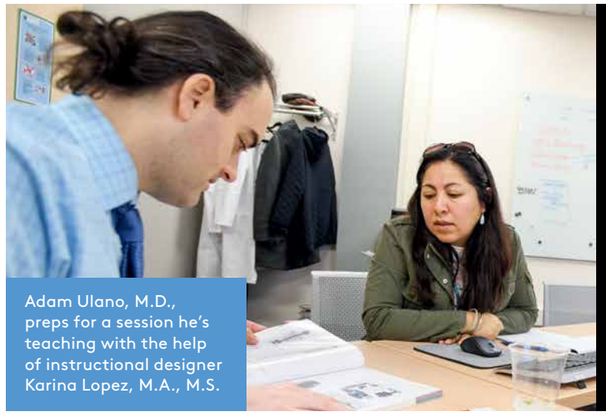
CURRICULUM LEVEL 2: CLERKSHIP

On the first day of the OB/GYN clerkship, students dive right into the practice of obstetrics: They deliver a baby in the safe confines of the UVM Clinical Simulation Laboratory. Flanked by a faculty member, a member of UVM's simulation team, and a few classmates, they try out the basic maneuvers involved in a spontaneous vaginal delivery courtesy of a high-tech mannekin "mother" and "baby." The five-hour clerkship orientation continues with other stations focused on pelvic and breast exams, knot-tying, suturing, and scrubbing into a sterile procedure.

That first day is a harbinger of what's to come, as the six-week clerkship consistently asks students to access medical knowledge and apply it in real time, while working with a group to solve problems. Elise Everett, M.D., associate professor of obstetrics, gynecology and reproductive sciences and clerkship director, says the goal is to foster leadership skills along with an understanding of the benefits of a team.

"Knowing what you don't know and being able to identify and fill those knowledge gaps is important," she says. "And being reflective, self-aware and willing to ask for feedback and for help is key to taking care of patients safely."

One innovation: Critical thinking cards that have helped shift the clerkship's didactic content from about 15 lecture hours to zero. Students meet weekly in small groups with a faculty advisor to review patient cases that relate to what they recently experienced in the clinical environment. The critical thinking cards include a chief



Adam Ulano, M.D., preps for a session he's teaching with the help of instructional designer Karina Lopez, M.A., M.S.

TEACHING THE TEACHERS

On April 25, 2019, UVM Assistant Professor of Radiology Adam Ulano, M.D., hosted his first-ever session teaching medical students. His charge: Introduce the first-year class to neural imaging techniques as part of the Neural Science course. Ulano already had an aptitude for teaching; he's the director of the UVM Medical Center Neuroradiology Fellowship Program. But many questions bubbled up as he considered the task at hand. How do you design an effective session? How should students prepare? How would he know his instruction was effective? Follow Dr. Ulano through some of the key moments as he prepares for his first session.

Read the story at VT Med Online
med.uvm.edu/vtmedicine/web-extras

"At the Larner College of Medicine, we've been innovators of a medical education program that incorporates best learning practice and takes into account ever-evolving health care systems and educational environments. Physicians today need to be self-directed, lifelong learners; active learning develops the skills our students need to thrive."

– CHRISTA ZEHLE, M.D.'99, INTERIM SENIOR ASSOCIATE DEAN FOR MEDICAL EDUCATION

complaint and questions to ask to begin to develop a differential diagnosis. Before the meetings, students review videos and book chapters to develop the knowledge base they need. In the small groups, they integrate what they've learned with what they've experienced in the clerkship and apply it to the cases they're reviewing.

"The most rewarding way to practice medicine is in an environment where we can all be teachers and learners and we can all learn together," says Everett.

The Takeaway

"In the past, the doctor was expected to know everything and make decisions independently. Now, medicine is so complex and the amount of knowledge is so vast, this is no longer possible. I think the most valuable skills that we're teaching with active learning is the ability to think critically, solve problems, and work as a team." *– Elise Everett, M.D., associate professor of obstetrics, gynecology and reproductive sciences and OB/GYN clerkship director*

CURRICULUM LEVEL 3: ADVANCED INTEGRATION

During the emergency medicine rotation, fourth-year students learn by doing: They spend two weeks in the emergency room at UVM Medical Center and another two weeks at either Central Vermont Medical Center in Berlin or Champlain Valley Physicians Hospital in Plattsburgh, N.Y. Students triage patients, present a chief complaint and history to the attending physician, and work with them on diagnosis and next steps.

They also expand their skills and knowledge through a new case-based learning series, says Sarah Schlein, M.D.'10, assistant professor of surgery and emergency medicine clerkship director. Attending physicians use these cases as the foundation for sessions on a range of emergency medicine topics. Students have pre-learning material they work through and come to the sessions at UVM ready to discuss and diagnose.

"I've taken these cases that are real, as well as thought-provoking and interesting," she says. "Students answer questions and generate what the next step would be. They are figuring out what the management approach is, and hopefully through that struggle they are learning and assimilating the information better."

At the very beginning of the clerkship, students hone their point-of-care ultrasound skills through time in the UVM Clinical Simulation Laboratory. Keith Curtis, M.D., assistant professor of surgery and integrated ultrasound curriculum director, leads them through a series of stations where they try their hand at common emergency medicine procedures. It's a continuation of work they've done since the first year, when point-of-care ultrasound instruction begins and continues throughout the curriculum.

The goal for the clerkship, says Schlein, is to give students a solid foundation in emergency medicine as well as prepare them for the demands of residency.

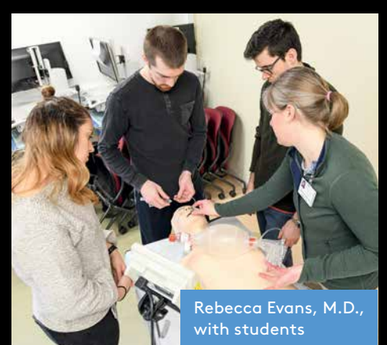
"The communication and leadership skills they develop are so profound," she says. "This creates the scaffold for them to tie in the medical knowledge and the patient care that they need to learn in the clerkship setting."

The Takeaway

"This is true across the field of medicine: It's not what you know; it's how you think. We're helping students work through a challenging problem while asking them to think outside the box. We want them to draw connections, practice retrieving little bits of medical knowledge and apply it." *– Sarah Schlein, M.D.'10, assistant professor of surgery and emergency medicine clerkship director*

BRIDGE: ANESTHESIOLOGY

In a high stress, high stakes environment like the operating room, teamwork and communication are critical. The anesthesiology bridge course—which runs during the one-week period when clerkship-level students are back on campus in between rotations—introduces students to the field and asks them to step into the shoes of an OR team. They learn procedures in the UVM Clinical Simulation Laboratory, work through cases in the Larner Classroom, and participate in a team-building workshop.



Rebecca Evans, M.D., with students

This is the second year the bridge course has used 100 percent active learning modalities.

Rebecca Evans, M.D.'10, assistant professor of anesthesiology and anesthesiology bridge course director, says one goal is to reinforce the importance of collaborating to solve problems.

"It's hard to do your own thing in the OR," she says. "And medicine as a whole has become much broader—you're working with pharmacists, dieticians, nurses. We want students to work on communication skills."

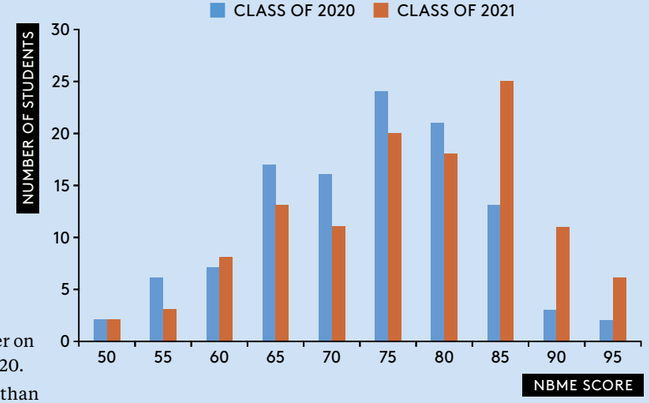
Jennifer Boccia '20 (left), and preceptor Jennifer Jachowski, D.O., in the emergency room at Central Vermont Medical Center.

DOES IT WORK? ASSESSING STUDENT OUTCOMES

The College is actively monitoring academic outcomes of active learning. Students in the Cardiovascular, Renal and Respiratory Systems (CRR) course take a customized National Board of Medical Examiners (NBME) shelf exam to measure what students learned in the course. The classes of 2020 and 2021 received the same NBME exam, which means their scores are an excellent measure for assessing changes in the curriculum. VM

Key Points

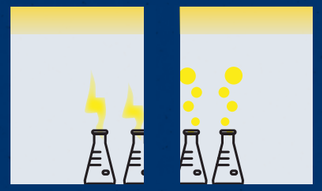
- CRR was the first Foundations course to convert to 100 percent active learning.
- The Class of 2021 scored four percentage points higher on average on the NBME shelf exam than the Class of 2020.
- Forty-two students in the Class of 2021 scored higher than 85 on the NBME shelf exam compared to 12 students in the Class of 2020.
- Analyses show that:
  - On average, students in the Class of 2021 entered Larner College of Medicine with slightly lower MCAT scores than students in the Class of 2020.
  - Learning course content with 100 percent active learning modalities was associated with higher NBME scores at all levels of academic ability upon entering medical school.



- Research has shown that active learning is particularly beneficial for women and underrepresented minorities. While there is not yet an adequate sample size to detect meaningful differences, the same trends are seen for these groups of students. Data will continue to be monitored.

DYNAMIC DUOS

WHEN CLINICIANS AND BASIC SCIENCE RESEARCHERS TEAM UP, NEW APPROACHES TO FIGHTING CANCER REACH PATIENTS FASTER. THROUGH "BENCH-TO-BEDSIDE" COLLABORATIONS, UVM CANCER CENTER RESEARCHERS ACCELERATE THE TRANSLATION OF LABORATORY DISCOVERIES INTO CLINICAL PRACTICE.



BY SARAH ZOBEL
PHOTOGRAPHY BY CAT CUTILLO
ILLUSTRATION BY ANN HOWARD

Delphine Quenet, Ph.D., and Alissa Thomas, M.D., review their work on glioblastoma in the Given Building laboratory.

DYNAMIC DUOS

"WE'VE STARTED TO HAVE A STRONGER MINI-GROUP AROUND NOT ONLY GLIOBLASTOMA, BUT BRAIN TUMORS, AND THAT'S GOOD FOR EVERYBODY."
— DELPHINE QUENET, Ph.D.

PICTURE, IF YOU WILL, A CANCER CELL. ALONE, IT IS JUST A HARMLESS ANOMALY. BUT FREE TO DIVIDE EXPONENTIALLY, THE CELLS EXPLODE TO TAKE OVER AN ORGAN. THERE'S NOTHING LIKE CANCER TO SHOW THE SHEER POWER OF MULTIPLICATION.

Now imagine that instead of cancer cells, you have two UVM Cancer Center members, a basic researcher and a clinician, each working away in their own areas. The two decide to collaborate, combining the researcher's lab work and the physician's knowledge of the patient care dimension of the disease. With this doubled-up approach, they are able to tackle with their own focused and multiplied power some of the biggest questions in cancer today. This, in essence, is the heart of what is known as "translational research."

"We developed the UVM Cancer Center to be able to support those types of relationships," says Director Gary Stein, Ph.D. "Collaboration is really the fabric of this Cancer Center, and what we have done—and it's by design, not just by happenstance—is try to accelerate the transition from discovery to clinical application." At present, more than a dozen translational teams are working at the UVM Cancer Center with new partnerships emerging each year among the Center's more than 200 members. Many of those partnerships evolved naturally, over coffee and conversations about current projects. Others were encouraged by the Cancer Center's leadership team, themselves representing multiple basic and clinical research areas, including Stein, who is as likely to match junior researcher with senior clinician as he is to introduce two peers. It's a model whose focus is on not only cancer treatment, but also prevention and screening.

"You're really thinking about both ends of the spectrum: What is the science involved, and what is the clinical outcome you want?" says the center's associate director for clinical and translational research, Chris Holmes, M.D., Ph.D. "Research is a long process that starts at the platform of the patient and patient needs, and then moves forward toward identification of a biomarker, or an actual new treatment, or a treatment approach." In some instances, it's all of the above, because in cancer research, it seems, for every answer there are two more questions. Although such partnerships are not unique to UVM, they thrive here thanks, in part, to the university's size and structure. For starters, unlike many larger cancer centers, where bench scientists are housed miles from their hospitals, here, clinicians and researchers often find their offices are but a five-minute walk apart. In addition, Holmes says the work is facilitated by UVM's large cancer control and population health group.

"The goal is to have the University of Vermont Cancer Center optimally contribute to cancer cures, cancer prevention, and survivorship issues," Holmes says. "We think this is a somewhat unique way to do that, and it certainly leverages our strength as a smaller community where a lot of the silos are broken down and we know each other, and we can move science forward in a collegial way."

Vermont Health Commissioner Mark Levine, M.D., concurs: "This is pivotal, essential work. One does not need to be one of the big-name research institutions in the country to do this kind of work effectively—it can be done on the scale that we do it here in Vermont. So much research in this decade is truly collaborative across states and sometimes across nations, so the fact that we're playing a role is highly appropriate and will continue to be very valuable."

*****

Glioblastoma is rare among cancers—Vermont's registry shows only 30 cases of it annually (if it sounds familiar, that's because it made news as the cause of death for senators Ted Kennedy and John McCain). Despite its relatively low numbers, it has piqued the interest of researchers, partly because of its aggressiveness.

"Glioblastoma is a very invasive cancer, so you can never get a clean surgery with nice margins," says Alissa Thomas, M.D. "It has tentacles that grow deep into portions of the brain, so you can't treat it surgically. It's a cancer that tends to acquire a lot of different mutations, so it develops resistances to radiation and chemotherapy relatively quickly. And it grows fast, so most of the time patients show up with a couple weeks' worth of symptoms at most; the survival average is somewhere between one and two years." Standard treatment combines surgery, radiation, and chemotherapy with temozolomide (Temodar®), but recurrence is largely anticipated. Because there is no cure and no effective salvage therapy for glioblastoma, Thomas, a neurologist and neuro-oncologist, and Delphine Quenet, Ph.D., a basic science researcher and assistant professor in the department of biochemistry, are exploring whether a specific Poly (ADP-ribose) polymerase (PARP) inhibitor could serve as an adjuvant to standard chemotherapy. They recognize the likelihood is slim that every patient would benefit from it, but hope to find those who will. To be able to offer such personalized therapy, says Quenet, is their "dream goal." The two acknowledge that theirs is not the standard approach to research, this quest for a one-size-fits-some therapy.

Marie Wood, M.D., and Jason Stumpff, Ph.D., in Dr. Stumpff's laboratory in the Health Sciences Research Facility.

DYNAMIC DUOS

"IT DOES TAKE EFFORT ON BOTH PARTS TO MAKE THOSE COLLABORATIONS WORK, BUT IT BRINGS YOU TO THE MIDDLE FROM YOUR OPPOSING WORLDS, AND THAT CAN BENEFIT THE NEXT GENERATION OF LEARNERS."
— MARIE WOOD, M.D.

"One of our frustrations in clinical trials for glioblastoma is that once you get to a big enough clinical trial, most treatments fail. They fail because we set this benchmark that X percent of patients have to respond for this to be a successful trial. But with a lot of these trials, five percent of patients respond and that's not good enough to get the drug approved or make this the standard of care. Figuring out who those five percent are so that these patients do this trial and not a different one—that would have a huge impact," says Thomas.

Quenet's lab has been focused on the effect of PARP inhibitors on the metabolism and biology of glioblastoma cell lines, specifically PTEN, which is an enzyme that acts as a tumor suppressor and is often mutated or deleted in patients.

"We would like to know if patients who are mutated for this tumor suppressor benefit more from the PARP inhibition or not, due to a concept called synthetic lethality, which has been developed these last 20 years in the PARP field," she says. In essence, synthetic lethality occurs when two genes with mutations are expressed simultaneously, leading to cell death. A familiar example is BRCA-related cancers, where PARP inhibitors have enhanced the benefits of radiotherapy and chemotherapy. Quenet and Thomas are hopeful that PTEN—which, like BRCA, is involved in double-strand break repairs—will similarly respond to a PARP inhibitor. Working with established cell lines from as far back as the 1960s, coupled with fresh samples donated by UVM Medical Center patients that must be examined in real time, before cell death begins, Quenet's lab uses biochemical, molecular, and immunohistochemical approaches to understand how proteins are expressed in the cells. When there are several, they look at the subtypes to find any that might be more sensitive to therapy.

"If we see that one of Delphine's cell lines is responding really well to treatment she's doing in the lab, we can also look and see if this was a patient who did particularly well or not well with the kinds of treatments we have available now. It gives us some real-life correlation," says Thomas. The current treatment, temozolomide, works by attaching a methyl group to the backbone of DNA, which keeps the DNA from cross-linking and replicating itself. Conversely, having a good DNA repair mechanism generally interferes with a patient's ability to respond well to the chemotherapy. PARP is a DNA repair pathway that Quenet and Thomas think may be influencing sensitivity to the chemotherapy.

"Patients often relapse, and one potential reason is because some cells are more resistant to the current treatment. Maybe they will be more sensitive to PARP inhibitor and that's what we need to address," says Quenet. The two have also been building a small tissue bank they hope will allow them to undertake different kinds of research in the future, ideally with enough fresh tissue for them to follow their own cell lines. They note the tremendous support they've had from patients in allowing use of tumor samples. The pair has been inspired by the desire of patients to play a role in advancing treatment for this disease. With initial support from the UVM Cancer Center through an American Cancer Society Institutional Research Grant, their team has further evolved and is even more fully transdisciplinary; it now includes pathologist John Dewitt, M.D., Ph.D., and neuroscientist James Stafford, Ph.D. Neuroscientist Diane Jaworski, Ph.D, has mentored Quenet and Thomas as they've applied for studies and grants—even helping Quenet by blinding her first samples.

"We've started to have a stronger mini-group around not only glioblastoma,but brain tumors, and that's good for everybody," says Quenet.

*****

Jason Stumpff, Ph.D., came to Vermont from a large medical center whose size precluded him from having routine interactions with clinicians. But here, Stumpff was assigned to an office suite with another basic science researcher and two medical oncologists.

"Putting clinicians and basic scientists together is really never easy because you don't talk the same language," says Marie Wood, M.D., , associate director for cancer control and population health science for the Cancer Center, and one of those suitemates. "Basic scientists spend so much time thinking about this little part of the world, whether it's a mitochondrion or an endoplasmic reticulum or a piece of DNA, and physicians focus on the bigger picture as they deal with patients. To bring both the clinicians diving deeper into the cellular layers, and the laboratory people up a little bit more to look outside the weeds is so helpful."

For Stumpff, an associate professor of molecular physiology and biophysics, and Wood, meeting in the middle evolved after repeated chats about cell division around the office coffeemaker. Stumpff had been studying the organization and division of chromosomes and "stumbled onto" an observation that a particular molecule involved in that process is required for cancer cells—but not normal cells—to divide. Wood was intrigued, because most chemotherapeutics operate by keeping cells from dividing, but make no distinction between cancer and normal cells.

"We talked about how to package that into a proposal so we could explore the question of which cancer cells are sensitive to the loss of this particular cell division protein and try to understand why that would be happening, with the idea of developing a potential new therapeutic strategy," says Stumpff. They decided to focus on triple negative breast cancer because it has so few targeted treatment options. Compared to other kinds of breast cancer, TNBC (so named because it lacks the three receptors most commonly associated with breast cancer—estrogen, progesterone, and the human epidermal growth factor receptor 2) tends to occur in younger women, is more likely to recur, and has a greater ability to metastasize. Stumpff received a Susan G. Komen career development grant; Wood was named one of the members of the mentoring committee, and indeed, their collaboration has evolved as a mentorship.

Wood's daughter, Lisa, worked in Stumpff's lab as an undergraduate, so Wood naturally stayed informed about how the research was progressing. As Stumpff tracked down the two patient advocates the Komen grant required (Carol Vallett and Marion Thurnauer became important members of the team), Wood and Stumpff designed a "journal club" to focus on translational science. The goal, according to Wood, was to "try and teach the basic scientists a little bit more clinical focus." She also invited Stumpff to sit in on tumor boards, where he heard cases presented by oncologists, including treatment options. Stumpff says that opportunity in particular provided a context that helps him understand which questions are worth addressing in the lab.

"We're rigorously testing the idea that one particular molecule is required for cancer cell divisions and not normal cell division," he says, further noting preliminary findings that suggest there are weaknesses in the "molecular machinery" TNBC cells need to divide—specifically, in the mitotic spindle structures. In addition, molecular composition varies among the tumors. Using cell-based models, Stumpff is testing this idea in different subtypes of TNBC; he's also compared the effects among various cancers. He and his lab members found that while, for example, colorectal cancers only sometimes responded to the molecule, all of the TNBC cells they tested consistently did so. A plus: preliminary data also showed it had minimal effects on normal cells, meaning there's less likelihood of toxic side effects. Going forward, Stumpff will examine why some cells are sensitive to the loss of this regulator, and then, with luck, determine whether there's a drug that can be developed. As important as learning which patients would respond is figuring out which would not.

The Komen grant was not Stumpff's first for this work; that came in the form of support through the UVM Cancer Center's American Cancer Society Institutional Research Grant, which provides competitive pilot project funding to UVM Cancer Center members and incentivizes translational partnerships. It was awarded to Stumpff and Christopher Anker, M.D., a radiation oncologist and associate professor of radiation oncology.

Jos van der Velden, Ph.D., and Matthew Kinsey, M.D., M.P.H., in the UVM Medical Center.

DYNAMIC DUOS

"MATT'S REALLY GOOD AT CORRELATING PATIENT CHARACTERISTICS, AND THEN I LOOK AT GENE EXPRESSION AND WE PUT THAT TOGETHER."
— JOS VAN DER VELDEN, Ph.D.

"I think that has gotten people to think about 'How could I test my question using patient samples that come from the hospital or a unique bank of patient samples?'" says Stumpff of the support. And again, what's key is the welcome opportunity to make unexpected connections, with Stumpff noting that he currently has a clinical fellow from OB/GYN, Jessica Ryniec, M.D., in his lab, a first for him. For Wood, the opportunity to teach others is an imperative: "It does take effort on both parts to make those collaborations work, but it brings you to the middle from your opposing worlds, and that can benefit the next generation of learners. As I think about what my role is now, it's as an older, more seasoned person who's going to help the next group of people get inspired, but also learn right."

*****

One of the cruel ironies of cancer is that it never grows where you want it to.

"It's one of these stunning problems that we can't get cancer to stop growing—particularly lung cancer—in the body, but as soon as you take it out and try to put it on a dish, it dies," says interventional pulmonologist Matthew Kinsey, M.D., M.P.H. There's little point in applying potential therapeutic treatments to cells that are no longer living, of course. Fortunately, Kinsey found an answer and a counterpoint in a partnership with Jos van der Velden, Ph.D., an assistant professor in the Department of Pathology and Laboratory Medicine, who had a grant to study lung cancer but little access to patient samples.

"There are no good models to study lung cancer," says van der Velden. "We have some mouse models, we have cell lines, but in the age of personalized medicine, it's going to be very interesting if you can study a biopsy in the lab to come up with a suitable therapy." The lung does not lend itself to casual study: with more than 40 different cell types, it's challenging enough, but add in the heterogeneity of cancers in that organ, and things get even trickier. Thanks to prodding from Stein and Claire Verschraegen, M.D., then the co-directors of the Cancer Center, and pilot funding through the Cancer Center, Kinsey and van der Velden undertook a collaboration to explore targeted therapies to treat lung cancer, the most lethal and intractable of all the common cancers—its five-year survival rate in the mid-teens is virtually unchanged since the 1970s.

Kinsey procured samples from his patients ("People are really amazing" in their willingness to participate in research, he says), and van der Velden began to grow cultures. When too many of the cells died off before they could be useful, he suggested growing them into three-dimensional tumor organoids instead. It's a process that has only recently gained traction in cancer research—van der Velden says a team at Stanford demonstrated earlier this year that properly grown organoids can represent not only the tumor cells but their inflammatory environment as well—and the difference between looking at a pen-and-paper sketch of a house and peeking inside a scale model of a Victorian made of wood.

"It's a way to resemble the organ—or in this case the tumor—as closely as possible to how it was in the patient," including gene expression, says van der Velden. The organoid's response will reflect the actual tumor's response. "That's huge, because if you can manipulate tumors, that's a lot easier if you can do it in these dishes with these organoids. You can manipulate tumor cells so they become responsive to these immune checkpoint inhibitors," he says. With the trial application of ezatiostat hydrochloride (Telintra, TLK199), an oral agent, supported by patient characteristics provided by Kinsey for each, it makes for truly personalized medicine.

In late March, the two enrolled their one-hundredth patient, a number that once seemed an unattainable goal. The collaboration has already proven fruitful: since they began working together, Kinsey has received an NIH K-series grant and van der Velden has received a five-year NIH R01 grant, which, he says, has about a 10 percent funding rate. They agree that the translational nature of their work made the grant applications more attractive to the NIH, and are already talking about the next one.

"Matt's really good at correlating patient characteristics, and then I look at gene expression and we put that together," says van der Velden. Using organoids has also allowed the pair to explore an interest of Kinsey's, the link between chronic obstructive pulmonary disease (COPD) and cancer, and to consider why a tumor in an area of COPD reacts differently to treatment than a tumor elsewhere. Both are perhaps most energized about plans to use organoids to determine whether it's feasible to inject chemotherapeutics directly into tumors. Today, they are working to increase the number of lung cancer patients who respond dramatically to immunotherapy from 20 percent. Someday, they say, the process may work on any kind of tumor. It will mean figuring out the composition of a tumor and then putting it through single-cell RNA sequencing; says van der Velden, "In terms of personalized medicine, that's really the future."

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Gary Stein gauges the level of success of Cancer Center-affiliated translational partnerships by the multi-year duration of many of the teams, and by their ability to glean extensive extramural funding and to repeatedly publish multi-author articles in peer-reviewed journals. But the secret ingredient may be compatibility. When Stein and his leadership team propose a collaboration, they look for people who have not only complementary interests and skillsets, but complementary personalities as well. Quenet and Thomas meet regularly just to chat, and say every time they do so, more ideas bubble up. Stumpff and Wood play off each other like a couple of vaudeville performers, but there's clearly deep respect. Kinsey says van der Velden is a "friend as well as a collaborator," while van der Velden points to the pair's work as one of the major reasons for his success in the lab.

"If you really want a partnership to work, you need to make certain the individuals make contributions that are going to be more than what either one can do by themselves," says Stein. "I think we've been fortunate to have folks who come together in that way." VM

WEB EXTRA: THE RESEARCH TEAMS DISCUSS HOW THEIR SKILLS AND PERSONALITIES COMPLEMENT EACH OTHER IN THREE VIDEO VIGNETTES: MED.UVM.EDU/VTMEDICINE/WEB-EXTRAS

Hall A

Class Notes & News

BETSY SUSSMAN, M.D.'81
President
UVM Medical Alumni Association

President's Corner

When your Alumni Executive Committee (AEC) recently got together for our spring meeting, we had a special opportunity to get to know some current medical and graduate students at the Larner College of Medicine, including Ava Bakhtyari '20, president of the Medical Student Council; Quinn Self '19, who matched into ENT at UVM Medical Center and is a recipient of the Sumner Slavin, M.D.'73 Scholarship, and Phillip Munson, a Ph.D. student in Cellular, Molecular, and Biomedical Sciences. It was great to hear about their experiences and many accomplishments; they are all truly inspiring and as alums you should feel proud.

We were also honored to have Dean Richard Page on hand for the meeting. He's truly hit the ground running as the new leader for our alma mater—hard to believe he will be celebrating his one-year anniversary in October! If you had the opportunity to meet Dean Page at one of the many regional receptions we hosted during his first few months, you will agree that he is a perfect fit for our wonderful college. Thank you to all of the alums who helped to plan and host these events.

The AEC has been hard at work preparing for Medical Reunion 2019, to be held this year October 4 - 6, 2019, coinciding with the White Coat Ceremony for the Class of 2023 and UVM's reunion festivities. It's going to be a fun-filled, action-packed event. I encourage you all to come back to the College this fall and interact with our incredible students, visit with your classmates, meet our new Dean, and get up to speed on all that is happening at the Larner College of Medicine. Visit **med.uvm.edu/alumni/reunion** for more information about hotel discounts and reunion details. Please do make your hotel reservations ASAP—discounted hotel rates are only offered through the end of August!

One of the perennial highlights of Medical Reunion is the opportunity to honor our Medical Alumni Association award winners. This year is no exception; we have 11 awardees who have distinguished themselves in a range of fields. Together, the many glowing recommendations we received for the award winners showcase just how much energy, enthusiasm and expertise our alums bring to their work. This year, the Bradley A. Soule Award—the highest honor the Larner College of Medicine bestows on an alum—will be awarded to Janice Gallant, M.D.'89. Many of you know her as the College's longtime associate dean of admissions. Not only has she spearheaded innovative work to transform the College's admissions process as well as assemble a diverse and engaged admissions committee, she approaches everything she does with a generous and compassionate spirit. We're lucky to have her as an alum and faculty member! Read more about Dr. Gallant and all of our awardees on pages 34 and 35.

Betsy Sussman

Dean Richard L. Page, M.D. (seated, third from left), with members of the Alumni Executive Committee

Share your news or updated contact information at **go.uvm.edu/infoupdate**, or contact your class agent, or the Larner Development & Alumni Relations office at **medalumni.relations@uvm.edu** or **(802) 656-4014**.

1940s

REUNION 2019: 1974 + 1979

'43 **Arnold Becker** of Avon, Conn., writes: "We're lucky, and we do miss Burlington."

1950s

REUNION 2019: 1974 + 1979

'59 **James Danigelis** writes: "We have been living on a beautiful sea island called Dataw just outside of Beaufort, S.C., for 18 years. My wife, Cec, and I celebrated our 54th anniversary this year. We enjoy good health and I play lots of golf. Cec does volunteer work and gardening. Our sons and families live in the San Francisco area and coastal Oregon, which we frequently visit. Matthew is an ER physician (M.D. '97) in Oregon."

1960s

REUNION 2019: 1974 + 1979

'69 **Susan Pitman Lowenthal** is managing director of AnGes USA, the Bethesda, Maryland-based U.S. affiliate of AnGes, a Japanese biotech company. She retired as vice president at Pfizer Oncology in 2014 after a 15-year career in pharma during which she was instrumental in the development and regulatory approval of several targeted oncology drug treatments by U.S. FDA, SFDA (China), PMDA (Japan), TGA (Australia). She is married to a fellow oncologist, Ivan Lowenthal, M.D., and is a mother to three children and four grandchildren, ages one to six, who live nearby in Cambridge and Somerville, Massachusetts. While on the faculty at Yale College of Medicine in 1981 she co-founded and was an incorporator of the Phyllis Bodel Infant Child Care Center at the Yale School of Medicine, which continues to provide on-site daycare for infants, toddlers, and young children of Yale medical students, residents, graduate students, and faculty. She is the author of over 40 peer-reviewed scientific publications. Susan looks forward to the upcoming 50th College of Medicine (class of '69) Reunion Oct 4-6 and hopes all classmates will carve out this weekend on their calendars!

1970s

REUNION 2019: 1974 + 1979

'71 With **Bill Belville**, **Howard Solomon** demonstrated his angling skills, honed on Lake Champlain, on the Rio Juruena, Brazil, in March of 2019.

'73 **Rocco Cassone** has been named to the board of trustees for Regional Medical Center, a non-profit hospital owned by Orangeburg and Calhoun counties in South Carolina. He retired in 2018 after serving the Orangeburg community as an otolaryngologist for 46 years.

'79 **Cynthia Christy** received the 2019 Research and Scholarship Award from the Council on Medical Student Education in Pediatrics (COMSEP).

1980s

REUNION 2019: 1974 + 1979

'86 **Joseph A. Bosco III** was named first vice president of the American Academy of Orthopaedic Surgeons during their 2019 annual meeting in Las Vegas, Nev. Dr. Bosco is a professor and vice chair for the Department of Orthopedic Surgery at NYU Langone Health. He specializes in sports medicine, total knee replacement, shoulder and elbow surgery.

'87 **Mylan C. Cohen** has joined the board of directors for Qualidigm, a mission-driven, national healthcare consulting company based in Wethersfield, Conn. He is the medical director for cardiology imaging and diagnostics at Maine Medical Center and for cardiovascular informatics at MaineHealth. He is a clinical professor of medicine at Tufts University School of Medicine.

'88 **Michael Rousse** has been named chief medical officer for Northeastern Vermont Regional Hospital (NVRH) in St. Johnsbury, Vt. He has been the chief of hospital medicine for 12 years, and vice president of medical affairs at NVRH for the past two and a half years. Prior to that, he worked as a primary care physician at NVRH Corner Medical from 2004 to 2006 before transitioning to his hospitalist role in 2007.

1990s

REUNION 2019: 1994 + 1999

'91 **BJ Beck** writes: "Completed the MFA at MassArt and now driving to Sonoma, Calif., our new home. Many adventures with two cats and a dog in tow!"

COLLEGE EVENTS

SEPTEMBER 11-13, 2019
50 Years of Orthopaedic Surgery Residency Program Celebration, held in conjunction with the John W. Frymoyer, M.D. Lecture Series
Burlington Country Club and UVM campus

OCTOBER 4-6, 2019
Medical Reunion
UVM Campus
go.uvm.edu/medreunion

OCTOBER 4, 2019 1:00 p.m.
White Coat Ceremony for the Class of 2023
Ira Allen Chapel, University of Vermont
Reception to follow in the UVM Dudley H. Davis Center Grand Maple Ballroom

For updates on events, visit:
med.uvm.edu/alumni

Larner College of Medicine graduates are also members of the UVM Alumni Association. See those events at:
www.alumni.uvm.edu

REUNION IS MOOOVING TO THE FALL!

Plan now to spend a long, glorious autumn weekend in Vermont catching up with old friends and faculty members.

MEDICAL REUNION

OCTOBER 4-6, 2019

For more information see the Medical Development and Alumni Relations website:
go.uvm.edu/medreunion

Class Notes & News

2000s

REUNION 2019: 2004 + 2009

'07 **Anna Benvenuto** has been named chief medical officer for UVM Health Network Porter Medical Center in Middlebury, Vt. She joined the Porter Medical Staff in 2012 as an OB/GYN specialist and continues to care for patients at the Porter Women's Health practice, while also serving as the medical director of specialty services. She is on the clinical faculty at the UVM College of Medicine.

2010s

REUNION 2019: 2014

'17 **Meredith Sooy** married Josh Mossey in Charlotte, Vt., surrounded by many fellow Catamounts. They are currently living in North Carolina while Meredith completes her pediatrics residency but can't wait to get back to Vermont soon.

Thank you to **John Healey, M.D.'78** for hosting this reception at the Roger Smith Hotel in New York City. Dean Page and his wife Jeannie had a spectacular time, as did all of us in alumni relations. We hope to see you all again soon!

UVM CONTINUING MEDICAL & INTERPROFESSIONAL EDUCATION

UPCOMING CONFERENCE SCHEDULE

STEM CELLS, CELL THERAPIES, AND BIOENGINEERING IN LUNG BIOLOGY AND DISEASES
July 15-18, 2019
Davis Center, UVM Campus
Burlington, Vt.

WOMEN IN MEDICINE 2019
August 8-11, 2019
The Bellevue Hotel
Philadelphia, Penn.

OSTEOPOROSIS UPDATE FOR PRIMARY CARE
September 27, 2019
Davis Center, UVM Campus
Burlington, Vt.

WOMEN'S HEALTH AND CANCER CONFERENCE
October 4, 2019
DoubleTree Hilton
Burlington, Vt.

PRIMARY CARE SPORTS MEDICINE
October 10-11, 2019
Hampton Inn
Colchester, Vt.

NEUROLOGY FOR THE NON-NEUROLOGIST
October 25, 2019
The Stoweflake Hotel
Stowe, Vt.

NORTHERN NEW ENGLAND NEUROLOGICAL SOCIETY ANNUAL MEETING
October 25-26, 2019
The Stoweflake Hotel
Stowe, Vt.

For information contact:

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401 Water Tower Circle
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UVMCME@med.uvm.edu
www.med.uvm.edu/cme

Ross Sayadi, M.D.'17, and Mustafa Chopan, M.D.'17

ASSESSING PUBLIC OPINION OF PLASTIC SURGERY THROUGH TWITTER'S LENS

Can Twitter provide insight into the public's opinion of plastic surgery? **Ross Sayadi, M.D.'17**, and **Mustafa Chopan, M.D.'17**, conducted a study in collaboration with UVM Assistant Professor and Division Chief of Plastic, Reconstructive and Cosmetic Surgery Kevin Maguire, M.D., and UVM data scientist and recent doctoral degree recipient Eric Clark, Ph.D., to investigate this issue. Using the UVM Computational Story Lab's hedonometer, which surveys the country's tweets daily and calculates a happiness score for each, they analyzed more than one million tweets for plastic surgery-related keywords and calculated the sentiment communicated through these tweets. While "plastic" had negative sentiment associated with it, the other keywords had more positive associations. "Our findings show that we must work to educate the public on diversity of the beautiful field we call plastic surgery," tweeted Sayadi following the publishing of the team's paper. The group's results are published in the April 2019 issue of *Plastic and Reconstructive Surgery*.

ALUM LAUNCHES THE V WORD PODCAST

When **Erica Cahill, M.D.'13**, an OB/GYN physician at Stanford University, couldn't find a women's health podcast that was medically accurate and entertaining, she decided to launch one with her colleague and fellow OB/GYN physician, Jenn Conti, M.D. The V Word is dedicated to "tackling all the crazy, sexy, embarrassing, and amazing topics of women's health with hard science, personal stories, and a good dose of humor." Recent episodes address birth control, human trafficking, postpartum depression, endometriosis and more. The hosts also interview authors, actors and activists on topics related to women's health. Read more and listen to episodes: **https://vwordpod.com/**

Erica Cahill, M.D.'13

Boston

Philadelphia

GETTING TOGETHER

Dean Richard L. Page, M.D., and **Jeanne Page** joined alumni in Boston and Philadelphia in late May for two special receptions. The Boston event, hosted by **Pramilla Yadav, M.D.'99**, and **Fred Mandell, M.D.'64**, took place at Boston's Museum of Fine Arts, where outgoing **UVM President Tom Sullivan** and **Leslie Sullivan** joined the group.

In Philadelphia, **Omar Khan, M.D.'03** and **Salwa Kahn, M.D.'05** hosted the reception at Liberty View in the Independence Hall Visitor Center. More such gatherings took place in June on the West Coast.

Masaru Furukara, M.D.'09

EXCEPTIONAL CARE ACROSS THE GENERATIONS

Mrs. Betsy D'Angelo, the widow of **Charles D'Angelo, M.D.'68**, credits Larner graduate, **Masaru Furukara, M.D.'09**, now a family medicine physician in Wisconsin, with providing clinical care that changed her life for the better.

"When [Dr. Furukara] diagnosed osteoarthritis I began lamenting aloud how that was the final straw. It confirmed my suspicion that I was old and over the hill, and explained why I was always exhausted and could not do much of anything anymore. Dr. Furukawa said, 'Let's put the knee aside and talk about that.' He discovered that I had atrial fibrillation and tachycardia, ordered an echocardiogram, and referred me to a cardiologist... The miraculous, happy ending to this story is that I now have my life back! I feel fabulous and can easily do all my usual physical activities. I will always be grateful to my wonderful physician, Dr. Masuru Furukawa, and to UVM for your emphasis on clinical care... [My husband] was always grateful for his education, especially the emphasis on clinical care. I know he would be pleased to see that philosophy continuing in the innovative programs you use to teach listening skills and to train students to look at the patient as a whole person, not just an illness."

2019 Medical Alumni Association Awards

The MAA Awards are presented every year at the Celebration of Achievements Ceremony at Reunion. The Distinguished Graduate Alumni Award will be presented October 28 at the Dean's Celebration of Research Excellence.

Full biographies of the awardees can be found at:
www.med.uvm.edu/alumni

2020 Nominations

Do you know a class member deserving of recognition? Send in your nominations for the 2020 awards to:
www.med.uvm.edu/alumni

A. BRADLEY SOULE AWARD

Presented to an alumnus/a whose loyalty and dedication to the Larner College of Medicine most emulate those qualities as found in its first recipient, A. Bradley Soule, M.D.'28.

Janice Gallant, M.D.'89
Associate Dean for Admissions and Associate Professor of Pediatrics and Radiology, UVM Larner College of Medicine

As associate dean of admissions, Janice Gallant, M.D.'89, has helped to welcome hundreds of students to the UVM Larner College of Medicine over the past 13 years. Her energy and enthusiasm for this work has helped to create a diverse and robust admissions committee as well as a holistic admissions process that has become an example for peer institutions.

Dr. Gallant joined the UVM faculty as an assistant professor of radiology in 1996, and was promoted to associate professor of radiology and pediatrics in 2003. She became associate dean of admissions in 2006, after serving on the admissions committee since 2001. She is a current member of the Alumni Executive Committee through 2021. She has earned numerous teaching awards from medical students and residents, including Clinical Teacher of the Year twice, Pediatric Teacher of the Year twice, and the 2006 American Medical Women's Association Gender Equity Award. Not only is Dr. Gallant an outstanding physician and teacher, she's also a musician. She attended the New England Conservatory of Music in Boston where she studied piano and oboe.

Her inspiration and achievements in admissions has come from her diverse and broad health care experience. After working for nine years as a physician assistant in OB/GYN at UVM Medical Center, she obtained her medical degree from the UVM Larner College of Medicine in 1989 and completed a two year fellowship at Boston Children's Hospital. She worked for over 10 years as director of pediatric radiology in the department of radiology at UVM Medical Center, working with a pediatric team caring for families and patients of all ages which was her passion and lifelong dream. It is these experiences which led to her success in transforming the Larner College of Medicine admission process. With an innovative and courageous approach, she has worked closely with a 140-member multiple mini interview team consisting of faculty, staff, community leaders and students, a 15-member admissions committee and a large number of volunteers to share a vision for and create a competency based and data driven admissions process which could best serve the UVM Larner College of Medicine and ultimately the care of patients in every community throughout the world.

Her dedication to the College has inspired countless medical students to choose UVM for their medical education and to stay connected to their alma mater.

EARLY ACHIEVEMENT AWARD

Presented to alumni who have graduated within the past 15 years in recognition of their outstanding community or College service and/or scientific or academic achievement.

Anne Dougherty, M.D.'09
Assistant Professor of Obstetrics, Gynecology and Reproductive Sciences and Gender Equity Liaison in the Office of Diversity and Inclusion (ODI) at the UVM Larner College of Medicine

Patrick Ng, M.D.'14
Major, US Air Force; Fellow, Medical Toxicology, Rocky Mountain Poison and Drug Center, Denver, Colo.

DISTINGUISHED GRADUATE ALUMNI AWARD

Presented to an alumnus/a from the UVM Larner College of Medicine's Ph.D. or M.S. programs who has demonstrated outstanding achievement in basic, clinical or applied research; education; industry; public service/humanitarianism; and/or outstanding commitment to the Larner College of Medicine community.

Richard Moss, Ph.D.'75
Professor, Department of Cell and Regenerative Biology; Rennebohm Research Professor; Senior Associate Dean of Basic Research, Biotechnology and Graduate Studies; Executive Director, Master's in Biotechnology Training Program; Director, University of Wisconsin Cardiovascular Research Center, University of Wisconsin School of Medicine and Public Health, Madison, Wisc.

DISTINGUISHED ACADEMIC ACHIEVEMENT AWARD

Presented to alumni in recognition of outstanding scientific or academic achievement.

Paige Terrien Church, M.D.'99
Neonatologist and Director, Neonatal Follow-Up Clinic at Sunnybrook Health Sciences Centre, Toronto, Ontario, Canada and Assistant Professor, Department of Paediatrics, University of Toronto

Craig Nielsen, M.D.'94
Associate Professor of Medicine and Assistant Dean of Clinical Education, Cleveland Clinic Lerner College of Medicine of Case Western Reserve University, Cleveland, Ohio

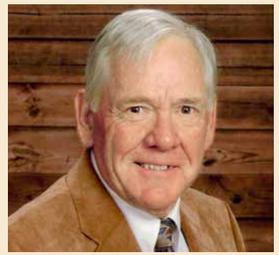
Donald Weaver, M.D.'84
Professor of Pathology, UVM Larner College of Medicine and Director of Breast Pathology Service and Surgical Pathology Fellowship Program, UVM Medical Center; Medical Director, UVM Cancer Center Bio Bank

Michael Whalen, M.D.'89
Associate Professor of Pediatrics at Harvard Medical School; Pediatric Intensivist and Investigator at the Massachusetts General Hospital, Boston, Mass.

SERVICE TO MEDICINE AND COMMUNITY AWARD

Presented to alumni who have maintained a high standard of medical service and who have achieved an outstanding record of community service or assumed other significant responsibilities not directly related to medical practice.

Mindy Goldman, M.D.'89
Clinical Professor, Department of Obstetrics, Gynecology, and Reproductive Sciences, University of California, San Francisco; Director, Women's Health Cancer Care Center, Helen Diller Comprehensive Cancer Center and USCF Women's Health



Albert Joseph (Joe) Hebert, M.D.'74
Retired Primary Care Physician, Corner Medical, Lyndonville, Vt. and Northern Vermont Regional Hospital, St. Johnsbury, Vt.

Victor Valcour, M.D.'94, Ph.D.
Professor of Geriatric Medicine in Neurology, University of California San Francisco, Executive Director, Global Brain Health Institute and Co-Director, International NeuroHIV Cure Consortium

ROBERT LARNER, M.D.'42 STUDENT AWARD

Presented to a current student(s) for his or her outstanding leadership and loyalty to the College and one who embodies Dr. Larner's dedication to not only supporting his medical alma mater, but to inspiring others to do so as well.

Chad Serels
UVM Larner College of Medicine, Class of 2020

Development News

SCHOLARSHIP CULTIVATES NURSING'S POWERFUL POTENTIAL

Changing careers or returning to school after raising a family can be daunting. Nontraditional students—usually age 25 or older—often have to balance schoolwork, home life and a part- or full-time job in addition to commuting to campus. For those interested in a career in nursing, which requires both classroom and clinical training, the challenges can be insurmountable.

But not for **Nan Frymoyer.**

After graduating from Mount Holyoke College in 1959 and raising four daughters in South Burlington, Nan was diagnosed with severe rheumatic heart disease. Amidst multiple hospitalizations, Nan experienced a gap between her care providers' explanations and her own understanding. An up-lifter to her core, Nan's response was to figure out how to bridge that gap so that future patients wouldn't experience it. She began by going back to school.

By 1989, Nan had completed a B.S. in nursing and an M.S. in education. She then developed a community-based health education system to address the communications gap. Today, it supports nearly one million Vermonters.

With charisma and spirit, Nan served our region as a community member, a nurse, an advocate and an educator. Her persistence in overcoming personal adversity and her commitment to professionalism defined her career and were greatly valued in the nursing community.

An up-lifter to her core, Nan's response was to figure out how to bridge that gap so that future patients wouldn't experience it.

After Nan's passing in 2010, her family and friends decided to establish a scholarship to support a deserving student who embodies Nan's character. This summer, the inaugural Nan Pilcher Frymoyer Memorial Nursing Scholarship will be awarded to a nontraditional UVM College of Nursing and Health Sciences student. Nan's husband, **John Frymoyer, M.D.**, former Dean of the Larner College of Medicine, hopes the award is a reminder of the importance of community and the power of nursing to improve human health at a grassroots level. Nan certainly did.

DISTINGUISHED LECTURESHIP ESTABLISHED IN DEPARTMENT OF SURGERY

UVM Professor of Surgery Emeritus **Roger S. Foster, Jr., M.D.**, has established a fund to bring to campus a distinguished keynote lecturer as part of the annual Catamount Surgeon Award program. Recruited to UVM in 1970 as a surgical oncologist, Foster served many roles while at UVM, including principal investigator for the UVM National Surgical Adjuvant Breast Project and founder and director of the kidney transplant and organ retrieval programs. When Foster received the 2018 Catamount Surgeon Award, it was both an honor and a catalyst for renewed connection to UVM and the UVM Medical Center, where his wife, Baiba Grube, M.D., a surgical oncologist and academic surgeon at Yale University, had done her surgical residency in the early 80's. His generosity in establishing the Roger S. Foster, Jr., M.D., Catamount Surgeon Visiting Professorship Fund creates an inspirational learning opportunity for students, residents and faculty.

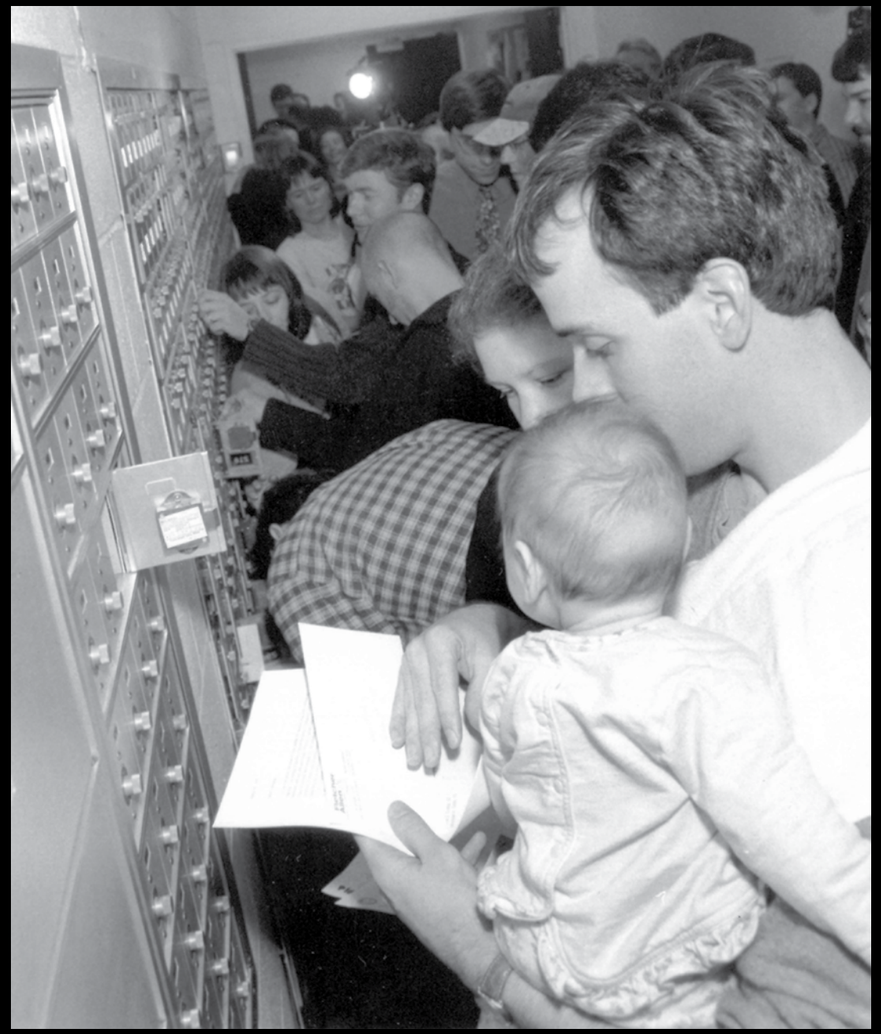
WOMEN'S HEALTH AND CANCER CONFERENCE GARNERS THREE-YEAR PHILANTHROPIC COMMITMENT

The UVM Cancer Center's Women's Health and Cancer Conference recently received an investment in its future from partners with a shared vision for the community event now in its 22nd year. **Tom and Melissa Gauntlett** of Shelburne, Vt., have made a three-year commitment as Presenting Supporters for the conference in the name of The Victoria Buffum Fund. Established by Tom Gauntlett's sister, "Vicki" Buffum, the UVM Medical Center fund supports initiatives that help families, patients and caregivers navigate cancer treatment. Although she lost her own battle with cancer at the age of 58, her philanthropy continues to empower patients and survivors. Tom Gauntlett says he's excited about the conference's alignment with his sister's vision for the fund. The Women's Health and Cancer Conference hosts nearly 1,000 individuals annually for sessions focused on empowering attendees with knowledge about the prevention, detection, treatment and survivorship of cancer. This event is offered free of charge to the public and health care professionals thanks to philanthropic support.

The University of Vermont Larner College of Medicine
Medical Development & Alumni Relations Office | (802) 656-4014
medical.giving@uvm.edu | www.med.uvm.edu/alumni

And the winner is...

Unlike most Flashback photos, we actually know some information about the subject of this picture. It was taken on Friday, March 19, 1999—Match Day—in the back hallway of the Given Building, at the bank of medical student mailboxes. Nowadays, the Match is a public event held in the Hoehl Gallery and streamed worldwide, during which students open their envelopes and read off, one-by-one, their respective residency match results. But 20 years ago, the match was a faster affair. Envelopes were brought to the mailroom. At the stroke of noon, they were placed into the mailboxes, and senior med students crowded in to retrieve them and quickly open them. It was all over in five minutes.



FROM THE PREVIOUS ISSUE

We had no responses to our last Flashback of students at an orientation ropes course, but, in the spirit of the course, we're not giving up easily! If you recognize yourself or classmates write in and we'll publish your thoughts in our next issue.

So who exactly are these '99 students in the photo? And is that baby now ready to enter med school? Send your thoughts to **erin.post@uvm.edu** and we'll include them in the next issue of *Vermont Medicine*.

Obituaries

'46 Saul Boyarsky, M.D., J.D.
Dr. Boyarsky died January 15, 2019, at Hock Family Pavilion in Durham, N.C., at the age of 95. Born in 1923, he grew up in Burlington, Vt., in a close-knit Jewish community and graduated from UVM in 1943. After an internship at the Johns Hopkins Hospital, he served in the U.S. Army Medical Corps from 1948 to 1950 in Nuremberg, Germany. He did his urology residency at Duke from 1950 to 1954. Dr. Boyarsky practiced urology at New Rochelle Hospital and taught at Albert Einstein College of Medicine in New York before moving back to Durham to take a position at Duke Hospital in 1963, where he was a professor of urology, assistant professor of physiology, director of urologic research and director of rehabilitation. In 1970, he moved to St. Louis to take the position of urologic surgeon-in-chief at Barnes Hospital and Washington University. He graduated with a J.D. from Washington University School of Law in 1981 and co-authored a code for relations between physicians and attorneys.

'50 Mary Bertucio Arnold, M.D.
Dr. Arnold died December 19, 2018. She was 94. Born September 29, 1924, in Fitchburg, Mass., she received her medical degree with *cum laude* honors from UVM in 1950 and was proud to have been at the top of her class in a close tie with the only other woman in the class. After internship and residency training in pediatrics at Hartford Hospital and the Babies and Children's Hospital at Columbia-Presbyterian Medical Center, she completed her fellowship in pediatric endocrinology at the Massachusetts General Hospital. She began her career at the University of North Carolina and in 1966 joined the faculty at the newly established Brown University Program in Medicine. Her hospital appointments included director of pediatric endocrinology at Rhode Island Hospital and chair of the Department of Pediatrics at Roger Williams General Hospital.

'56 Victor A. Silberman, M.D.
Dr. Silberman died March 24, 2018. Born June 19, 1930, he grew up in Danbury, Conn. After a five-year deferment to complete medical school and internship training, he served two years in the 7560th United States Air Force. Dr. Silberman completed his surgical residency at Beth Israel Hospital in New York and went on to work as a general surgeon at Kaiser Permanente until his retirement in 1996. He published dozens of articles in surgical journals, and served as president of the Kaiser Permanente Retiree Association and president of their regional board of directors.

'57 George Diamandopoulos, M.D.
Dr. Diamandopoulos died March 22, 2019, in Boston, Mass. He was 89 years old. Born in Iraklion, Crete, Dr. Diamandopoulos graduated from Athens College and immigrated to the United States in 1948. He attended Lawrence University on scholarship, where he earned his B.A. degree, and received his medical degree from UVM in 1957. Dr. Diamandopoulos had a long and distinguished career in medicine and teaching, beginning at the National Institutes of Health and ending with his retirement as Harvard Medical School Professor of Pathology Emeritus. In addition to researching and publishing many articles in top scientific journals, in 1969 he co-authored a paper with Nobel Prize winner Dr. John Franklin Enders, published in *Proceedings of the Royal Society of London*. In 2001, he was awarded the Faculty Prize for Excellence in Teaching—Fourth Year, from the Harvard Medical School.

'57 Francis L. Perry, M.D.
Dr. Perry, of Oklahoma City, Okla., died July 11, 2017, at the age of 87. He was born Dec. 9, 1932. Dr. Perry served the community as a flight surgeon in the United States Air Force, as well as an OB/GYN in a career spanning 55-plus years. He retired in 2015.

'58 Neil G. Diorio, M.D.
Dr. Diorio died February 24, 2019, at the age of 87. Born April 23, 1931, in Norwalk Conn., he graduated from Saint Michael's College and earned his medical degree from UVM. He spent several years practicing medicine while serving as an officer in the United States Navy before he accepted the position of chief of radiology at Henry Mayo Newhall Memorial Hospital in Santa Clarita, Calif. He retired from medicine in 1991.

'58 Robert G. Dolan, M.D.
Dr. Dolan died March 9, 2019, at the age of 87 after a long battle with Alzheimer's disease. Born in Boston, Mass., he was a graduate of The College of the Holy Cross and he received his medical degree from UVM in 1958. After his internship, Dr. Dolan was stationed in Norfolk, Va., on the U.S.S. *Randolph* as a flight surgeon. Following his military service and his residency in family practice at Bridgeport Hospital, his medical practice took him to Huntington, Conn., for ten years, where he became one of the original diplomats of the American Academy of Family Physicians. He ran a successful family practice for 25 years in Harwich. Dr. Dolan was on the medical staff of Cape Cod Hospital, becoming chair of the Family Practice Department for a time.

'58 Grace Stetson, M.D.
Dr. Stetson, 86, died on Dec. 29, 2018, in Concord, N.H. Born in Richford, Vt. in 1932, she attended UVM and received her medical degree from UVM in 1958. After her internship at Swedish Hospital in Seattle, Wash., she did her residency at Mary Hitchcock Hospital in Hanover, N.H. from 1960 to 1963. Dr. Stetson was a pioneer in mammography and did the first mammograms in New Hampshire during that residency. She enjoyed a 29-year career as a radiologist at Wentworth-Douglas Hospital in Dover and at Frisbie Memorial Hospital in Rochester, N.H. She was a member of both hospital staffs, the New Hampshire Medical Society and the New Hampshire Roentgen Ray Society.

'60 Robert K. Brown, M.D.
Dr. Brown, a longtime resident of Lenox, Mass., died unexpectedly January 9, 2019, at the age of 83. Born in 1935 in Richford, Vt., he earned his B.A. from UVM and received his medical degree in 1960. He did his internship and residency at Hartford Hospital from 1960 to 1965. Dr. Brown served in the United States Army during the Korean War and held the rank of captain from 1965 to 1967. He worked at Pittsfield General Hospital (now Berkshire Medical Center) as a pathologist and later, associate medical examiner. He was certified by the American Board of Pathology in clinical pathology and anatomic pathology. Dr. Brown retired in 2005 after 38 years at Berkshire Medical Center. He was a mentor and teacher to many of the medical residents that passed through the ranks during his time at Berkshire Medical Center.

'66 Paul J. Jabar, M.D.
Dr. Jabar died November 17, 2018, in Augusta, Maine, at the age of 88. Born in Waterville, Maine in 1930, he served in the U.S. Army during the Korean War as a medical corpsman. He graduated from Colby College and earned a master's degree from the University of Maine. He also studied at Boston College and received the prestigious Faulk Fellowship to Michigan State University. He was teacher and basketball coach at Searsport High School in Sullivan, Maine, for several years before attending medical school at UVM. Dr. Jabar practiced as an ear, nose, and throat specialist and surgeon for 25 years.

'69 William J. Driscoll, III, M.D.
Dr. Driscoll died February 24, 2019, at the age of 75. Born in 1943 in Northampton, Mass., he graduated from Bates College in 1965 and received his medical degree from UVM in 1969. For more than 35 years, he practiced obstetrics and gynecology at Anna Jaques Hospital in Newburyport, Mass.

'69 William Watson, M.D.
Dr. Watson died November 13, 2018, at his home in Myrtle Beach, S.C., at the age of 75. He was a "Double Eagle" as a graduate of Boston College High ('61) and Boston College ('65). He was a practicing physician in Los Angeles, Calif., Burlington, Vt., Albany, Ore., and Taunton, Mass., for nearly 40 years. He was a veteran and served in the U.S. Navy.

'72 Paul J. Romanelli, M.D.
Dr. Romanelli died February 9, 2019, at the age of 72. Born in Providence, R.I., he graduated from Providence College and received his medical degree from UVM in 1972. He did his internship at M.S. Hershey Medical Center in Pennsylvania and returned to UVM for his residency in internal medicine and a fellowship in hematology. He began his medical practice at the "new" Houlton Regional Hospital in 1976. Dr. Romanelli had a private internal medicine practice for 11 years which included a weekly oncology clinic, followed by 25-plus years as the director of medical affairs at Houlton Regional Hospital in Houlton, Maine.

'74 John (Jack) Moore Jr., M.D.
Dr. Moore of Gibbs, Barbados, died Feb. 4, 2019, at the age of 69. Born in Rutland, Vt., he attended UVM and received his medical degree from UVM in 1974. He completed his internship and residency in Vancouver, Canada; Minnesota, California, Arizona, and India. He worked as a physician in different hospitals in St. Thomas and St. Lucia, and then spent over 32 years caring for the people of Barbados.

'81 Thomas H. Lewis, M.D.
Dr. Lewis died unexpectedly while on vacation with friends near Anaconda, Mont., on March 9, 2019. He was a resident of Brattleboro, Vt.; formerly of Conway, Mass. Born in 1955 in the Bronx, New York, he graduated from Manhattan College in 1977 and earned his medical degree from UVM in 1981. He did his residency, living in Norwich, Vt., and working at Dartmouth Hitchcock Medical Center. After completing a fellowship in colon and rectal surgery in Santa Barbara, Calif., Dr. Lewis worked in private practice for 25 years in Northampton, Mass., and most recently practiced as a general surgeon at Brattleboro Memorial Hospital.

In Memoriam

Anne M. Johnston, M.D.
UVM Associate Professor of Pediatrics
(died June 4, 2019)

Leo R. Parnes, M.D.'55
(died April 15, 2018)

Willard Morse, M.D. '61

Karen Preis, M.D.'70
(died October 25, 2017)

Polio 1949 *continued*


Katherine and John Dick, M.D.'67

Harlem Hospital in New York. Rotating through Harlem's gynecology ward and emergency room and going to Lincoln Center in Manhattan for ballet, opera, and the New York Philharmonic was quite an experience. I should have thanked UVM's OB/GYN chairman. Ironically, my highest score in the National Board exam was in a course I never took, OB/GYN. Subsequently, I delivered a baby, and did an appendectomy, with guidance and help from the attending. I have done several arterial blood draws, spinal taps, thoracenteses, sigmoidoscopies, and a very few intra cardiac epinephrine injections. I never was able to intubate and never tried to put anyone through that learning curve. Some things do require two hands.

My recovery, in fact, has not been complete. It remains uncomfortable for me to look at pictures of myself before polio or to see current pictures showing my deformed right arm and shoulder. I was at least 16 years old before I stopped wearing long sleeve shirts in the summer in public.

My handicap sometimes frustrates me and makes me feel vulnerable, such as when climbing. People often underestimate what I can do, such as swimming, driving, shooting pool and skeet, playing Ping-Pong and tennis. Conversely, they are oblivious to the many small daily things I struggle with, for example, undoing a wrapped pad of butter, getting peanut butter or jelly from the bottom of the jar, peeling vegetables, coming to a closed door with anything in my hand, etc. Yet, this does not make me angry or bitter. My polio was a random event. There is much I can do and am very grateful for. I really enjoy my life.

Occasionally I have felt marginalized because of my disability. More often, I now realize that mainly occurs if I allow myself to think that way. If I believe I am being marginalized, I will be, just as if one believes she/he can't do something, one will not succeed. We all fail often. The real failure is in not trying.

There is satisfaction in doing something you have been told you will not be able to do. However, the real reason for attempting to do something is not "to prove the bastards wrong," but because of the challenge of doing what you want. I believe most doubters are not negative or malicious. They are only viewing circumstances through their own prism.

I am very fortunate to have the letters Mom wrote to Dad the summers of 1949 and 1950. I also have letters grandparents and others wrote to them. Our daughter, Christina, interviewed my sister in 2004 about her recollections of my polio. This recorded CD was quite helpful. I did not realize how many people my polio impacted, how long my physical and emotional recovery took, or how many people provided me with support. When people tell me what a remarkable job I've done, I know it could not have been done without the support of so many.

I always knew Mom had grit and humor. Her letters and those of others from that time period reinforce that. It was nice to read in her letters how much she loved my father, missed him when he was not there, and was an emotional support to him. More than one person wrote, "Alice is a brick."

We now have an opioid epidemic that kills 175 people daily, most of them adolescents and young adults, not counting the large numbers who become so depressed they choose suicide, often by gunshot. This is much more deadly and devastating than the polio epidemics. Kathy and I lost our 26-year-old son, Andrew, to this scourge in 2001.

I retired in January 2018 after 46 years of practicing internal medicine in Brandon and the Rutland Hospital, including the hospital practice of critical care medicine. Feeling the need to contribute, I do part-time addiction therapy at an addiction clinic in Rutland. It is rewarding.

A 21-year-old woman seeing me for the first time for Suboxone therapy asked, "What's a matter with you hand?"

"Polio," I replied.

"What is polio?" I gave her a brief answer.

"Holy f---! The whole arm?"

"Yes."

"Holy f---! Can you move it?"

"No."

"Holy f---! Does it have any feeling?"

"Yes."

"Holy shit!" That was an icebreaker. We got along fine.

While I was studying neurology in London in 1970, an Englishman asked me, "What happened to your arm?" "Polio," I said. "Oh, wretched bad luck!" was his spontaneous reply, a typically English response that was matter–of–fact and right on. I loved it. In the end, one has to play the cards one is dealt. This is done best with perseverance, humor, and grace. **VM**

June 7, 2019

11:26 a.m.

Second-year medical student Juan Conde, Ph.D., is interviewed after a press conference where he appeared with Vermont's U.S. Rep. Peter Welch, then UVM President Tom Sullivan, Dean Rick Page, and fellow students in support of the Dream and Promise Act. The legislation aims to put undocumented immigrants who, like Conde, came to the U.S. as minor children, on a path to U.S. citizenship.

PHOTO: ANDY DUBACK

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