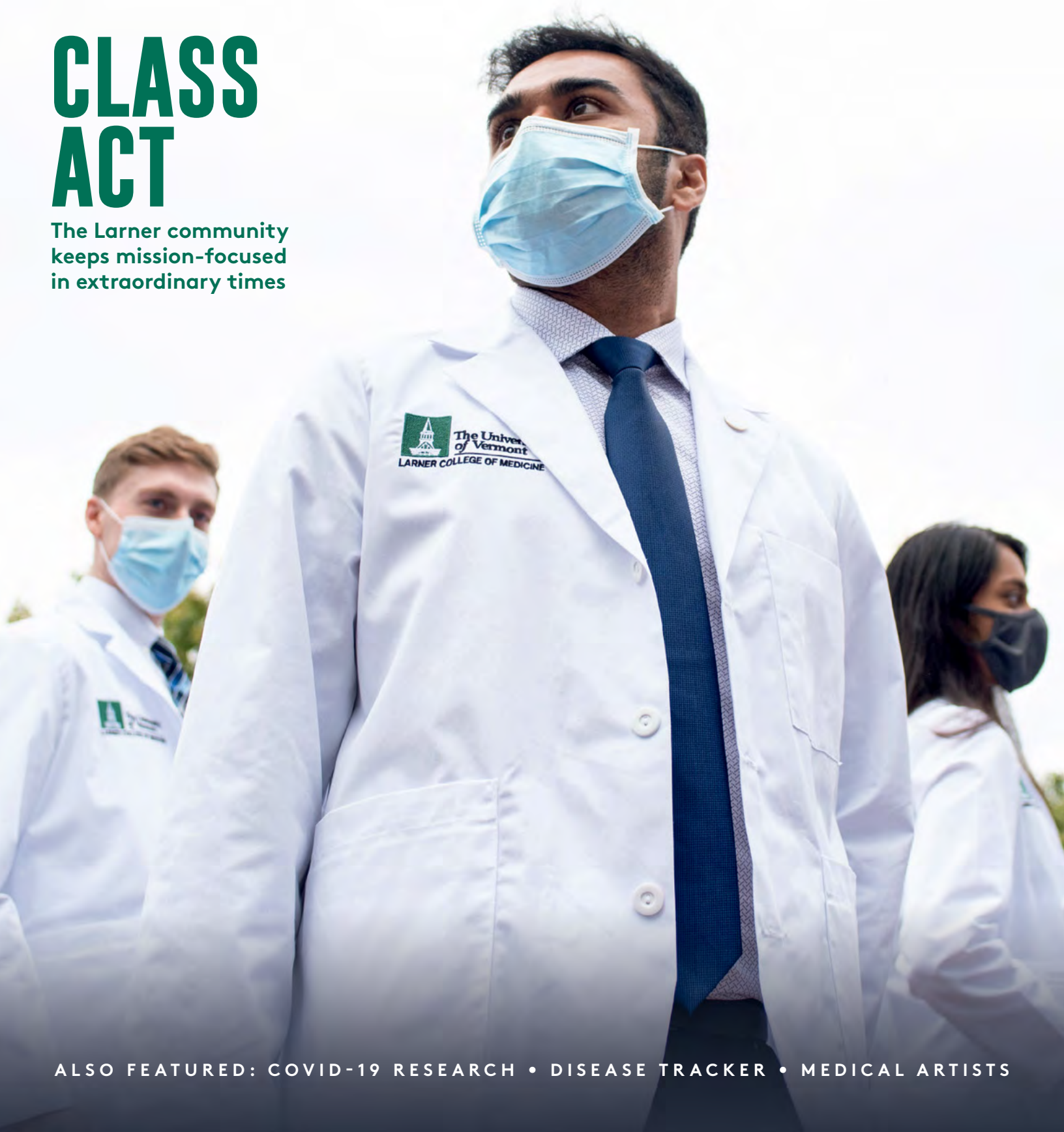
VERMONT MEDICINE

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

FALL 2020

CLASS ACT

The Larner community keeps mission-focused in extraordinary times



ALSO FEATURED: COVID-19 RESEARCH • DISEASE TRACKER • MEDICAL ARTISTS

PROFILE IN GIVING

In Memory of Collins Oguejiofor '22

When **COLLINS OGUEJIOFOR '22** died unexpectedly in Norwalk, Conn., in June of 2020, where he was about to begin his clinical clerkship at the Connecticut branch campus, the UVM Larner College of Medicine community experienced a deep loss. Collins' teachers and fellow medical students know what a great physician he would have been.

To honor Collins' memory in a meaningful way, the Oguejiofor family worked with the Larner Development and Alumni Relations Office to establish a diversity scholarship fund in his honor, with an initial goal of raising $50,000 to endow the fund. By early September family, students, faculty, staff, and friends of the College have made gifts and commitments that, combined with matching funds from the Medical Alumni Association's Challenge Program, met the initial goal.

Collins' family deeply appreciates that Collins is remembered in the Larner College of Medicine community for his kind, warm nature. They established the Collins Oguejiofor Diversity Scholarship in the hopes that students with similar backgrounds can benefit from a medical education at UVM. They are grateful to the many students, faculty, staff, and alumni who have supported it, in addition to Collins' friends and family.

Support the Collins Oguejiofor Diversity Scholarship: **go.uvm.edu/collins**

The University of Vermont
LARNER COLLEGE OF MEDICINE

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

FOR INFORMATION ABOUT HOW YOU CAN SUPPORT THE WORK OF THE UVM LARNER COLLEGE OF MEDICINE AND ITS AFFILIATES, PLEASE CONTACT THE MEDICAL DEVELOPMENT AND ALUMNI RELATIONS OFFICE.

CONTENTS

VERMONT MEDICINE • UVM LARNER COLLEGE OF MEDICINE • FALL 2020

9

11

14

36

20

On the Cover:
Class of 2024 members Carl Brasch, Varum Gupta, and Chantal Perera gather outside the Medical Education Pavilion after the October 2nd White Coat Ceremony. For more on the ceremony see page 6. PHOTO BY IAN THOMAS JANSEN-LONNQUIST

NEWS

HALL A

FEATURES

WEB EXTRAS

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

COVID•19 ONLINE

Read more Larner COVID-19 stories at:
go.uvm.edu/larnercovidstories

After a gorgeous autumn, most of the leaves have fallen here in Burlington. This comforting, seasonal shift is in contrast to the ongoing disruption caused by the COVID-19 pandemic. The world has changed, and new challenges arise, but that cannot keep us from delivering on our missions of education, research, and clinical care. I am so proud of how UVM and the Larner community have responded, highlighting the resourcefulness and versatility of our faculty, students, and staff.

I saw these qualities in action most recently during the White Coat Ceremony for our newest members of the community, the medical Class of 2024. While we couldn't hold the usual ceremony in Ira Allen Chapel, with friends and family in attendance, our first-year students were able to enjoy a hybrid event, gathering in carefully sized groups on campus, hearing from faculty and distinguished guests via Zoom, and then donning their white coats with just a few of us in attendance, and a whole world of well-wishers watching them on the livestream. It was new. It was safe. And it was still deeply moving. That's a combination I have been pleased to find in all our recent special events, be they investitures of new endowed professors, or community Town Halls, or reunion events for our alumni. These online gatherings have retained a feeling of personal closeness for the participants that surprised me. And the size of the audience who get to attend these functions has significantly increased. They may be online, but these are not "virtual" events. I encourage you to view them online on the Larner YouTube channel.

Despite the pandemic, we have medical students and graduate students in our buildings every day, and clinical education continues at our sites in Vermont and Connecticut. Our researchers, many of whom were deemed essential workers and were in their labs throughout the spring and summer, have continued their important efforts. I'm proud that this fiscal year that ended in June saw a record set both for our College's amount of externally funded research, ($105 million) and for the University's as a whole ($181.7 million). As you can read about in these pages, many scientists were able to pivot their work to address the pressing need for new knowledge related to the pandemic.

COVID-19 has thrown into high relief the vital role our institution plays in fostering research that improved the lives of those in Vermont and around the world—most recently with the news of our Vaccine Testing Center's involvement in a COVID-19 vaccine trial. That's why we are proud to proceed with construction of the Firestone Medical Research Building, thanks in large measure to the generosity of donors such as Steve Firestone, M.D.'69, and important funding such as the new $5.47 million shared resource facilities grant from the National Institutes of Health (written by our Senior Associate Dean for Research, Dr. Gordon Jensen). Our campus is changing, and the construction will be a bit disruptive for about two years, especially with regard to parking! On the other hand, I trust you will agree that this project, and the important work described in these pages, demonstrate the commitment and optimism we share for the bright future of our College.

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

VERMONT MEDICINE

Fall 2020 • Published November 2020

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

DEAN
Richard L. Page, M.D.

SENIOR ASSOCIATE DEAN FOR MEDICAL EDUCATION
Christa Zehle, M.D.

SENIOR ASSOCIATE DEAN FOR RESEARCH
Gordon Jensen, M.D., Ph.D.

SENIOR ASSOCIATE DEAN FOR CLINICAL AFFAIRS
Claude Deschamps, M.D.

SENIOR ASSOCIATE DEAN FOR FINANCE & ADMINISTRATION
Brian L. Cote, M.B.A.

EDITORIAL & CREATIVE DIRECTOR
Edward Neuert

MANAGING EDITOR
Erin Post

CONTRIBUTING WRITERS
Michelle Bookless, Jennifer Nachbur

ART DIRECTOR
Ann Howard

CONTRIBUTING PHOTOGRAPHERS
Andy Duback, Ian Thomas Jansen-Lonnquist, Mario Morgado, David Seaver

SEND US YOUR STORIES: If you have an idea for something that should be covered in *Vermont Medicine*, please email: vmstories@med.uvm.edu

VISIT *VERMONT MEDICINE* ONLINE:
For full current and past issues and exclusive webXtras at: www.med.uvm.edu/vtmedicine

Vermont Medicine is published by The UVM Larner College of Medicine. Articles may be reprinted with permission of the editor. Please send correspondence to the editor by visiting: www.med.uvm.edu/vtmedicine.

Phase 3 COVID-19 Vaccine Trial Comes to UVM and UVM Health Network

The University of Vermont Medical Center and Vaccine Testing Center at the UVM Larner College of Medicine have been selected to take part in a Phase 3 trial for a COVID-19 vaccine developed by Oxford University and manufactured by AstraZeneca. The study will track the safety and effectiveness of the investigational vaccine. Approximately 30,000 participants from the United States will take part in this study, including at least 250 people locally.

"This is an exciting opportunity for our area to help develop a safe and effective vaccine for COVID-19 and control the ongoing pandemic," said Beth Kirkpatrick, M.D., a specialist in Infectious Diseases at UVM Medical Center and director of the Larner College of Medicine's Vaccine Testing Center.

Dr. Kristen Pierce, also a specialist in Infectious Diseases at the UVM Medical Center, who leads the study and the Vaccine Testing Center with Dr. Kirkpatrick, adds, "We have significant experience testing vaccines at the University of Vermont and are proud to take part in this national effort. Volunteers will receive high-quality care throughout their participation and will be helping the global community move beyond the threat of COVID-19 by participating."

"Most people don't know that, thanks to ongoing research by Drs. Kirkpatrick and Pierce and the Vaccine Testing Center team, our college was already poised to contribute to the fight against this novel coronavirus," said Richard L. Page, M.D., Dean of UVM's Larner College of Medicine. "This vaccine trial will combine our research excellence with the outstanding clinical care provided by our partners at UVM Health Network and the UVM Medical Center, to bring us closer to eliminating this pandemic."

More information on the trial can be found at UVMHealth.org/COVIDStudy.

LCME* Accreditation Update

Key dates

VIRTUAL MOCK SITE VISIT
January 19-20 2021

VIRTUAL SITE VISIT
April 11-14 2021

*Liaison Committee on Medical Education

FLATICON

Cardiovascular and Brain Health Focus of New Center

The University of Vermont is now home to a new Center of Biomedical Research Excellence—the Vermont Center for Cardiovascular and Brain Health—thanks to funding from the National Institute of General Medical Sciences. Co-led by Professor of Medicine **Mary Cushman, M.D., M.Sc.**, and Chair and Professor of Pharmacology **Mark Nelson, Ph.D.**, the center will bring together junior and senior researchers to conduct team science across disciplines to determine causes and suggest optimal treatments for cardiovascular disease, the leading causes of death and dementia in the U.S.

The award is expected to bring nearly $12 million to UVM over five years, with $2.6 million in funding the first year.

"The Center is providing a platform to build sustainable research programs built on the exceptional potential of early career faculty, and addressing vital health problems facing society, in cardiovascular disease, stroke and cognitive impairment," said Dr. Cushman.

In addition to Cushman and Nelson, key faculty involved in the project include **Neil Zakai, M.D., M.Sc.**, associate professor of medicine, and **Peter Durda, Ph.D.**, faculty scientist in pathology and laboratory medicine, who will direct the Study Design and Molecular Epidemiology Core. **Todd Clason, M.S.**, researcher/analyst in pathology and laboratory medicine, who will direct the Customized Physiology and Imaging Core. Three junior faculty members from the Larner College of Medicine and the College of Nursing and Health Science will direct projects in the center:

- **Katharine Cheung, M.D., Ph.D.**, assistant professor of medicine: "Trajectories and Vascular Mechanisms of Cognitive Impairment in Chronic Kidney Disease;"
- **Masayo Koide, Ph.D.**, assistant professor of pharmacology: "Crippled Cerebral Blood Flow Regulation in Chronic Hypertension;" and
- **Denise Peters, P.T., D.P.T., Ph.D.**, assistant professor of rehabilitation and movement science: "Neuromechanisms Associated with Response to Gait Training in Chronic Stroke."

"The data are striking. The key takeaway is that children are not driving the pandemic. After six months, we have a wealth of accumulating data showing that children are less likely to become infected and seem less infectious; it is congregating adults who aren't following safety protocols who are responsible for driving the upward curve."

– William Raszka, M.D., speaking about a commentary he co-authored with Benjamin Lee, M.D., published in *Pediatrics*, titled "COVID-19 Transmission and Children: The Child Is Not to Blame"

Carney Receives President's Distinguished University Citizenship and Service Award

Notable

Jan Carney, M.D., M.P.H., professor of medicine, associate dean for public health and health policy, and senior advisor to the dean of the Larner College of Medicine, was named the 2019-2020 recipient of the President's Distinguished University Citizenship and Service Award in recognition of her innovative teaching, creative leadership and service to the University of Vermont community.

Carney, who served as Vermont Commissioner of Health from 1989 to 2003, has been a passionate advocate for preventive medicine and public health throughout her career—at UVM, in Vermont and nationally. Over the past 15 years, her public health projects course—run in collaboration with the United Way of Northwest Vermont—has resulted in the completion of well over 200 public health projects. Carney developed Vermont's first Master of Public Health degree and other graduate-level online public health programs and directs the Rural Health Research and Delivery Core for the Northern New England Clinical and Translational Research Network.

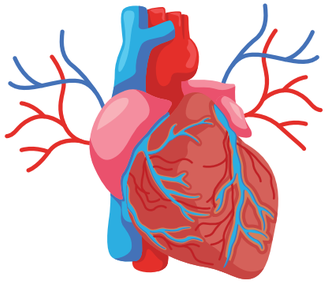
An active national and statewide leader in the American College of Physicians, Carney is a recent past vice-chair of the ACP Health and Public Policy Committee; she was awarded a Mastership in the ACP in recognition of the significance of her contributions to the field of medicine. She has championed policy efforts to reduce the health consequences of tobacco use and sugary beverage consumption in Vermont and co-chaired the UVM Tobacco-Free Steering Committee, whose work led to UVM's Tobacco-Free Campus Policy in 2015. In recent months, Carney has stepped up once again, helping educate Vermonters about COVID-19 safety protocols and information through webinars and media interviews, as well as assisting UVM leaders to develop the Return to Campus plan.

Jan Carney, M.D., M.P.H.

SIGMON AND NEW MODELS OF OPIOID TREATMENT RECOGNIZED

Associate Professor of Psychiatry **Stacey Sigmon, Ph.D.**, is featured on *Fast Company's* 11th annual list of the Most Creative People in Business. *Fast Company* recognized Sigmon in the "For Designing a Superior Solution" category for her work developing new models of opioid treatment delivery. Sigmon has built a national reputation for developing and testing innovative treatment options to bridge the gap in treatment access for patients in rural areas, including computerized dispensers for controlled medication dosing and interactive voice response systems for remote support.

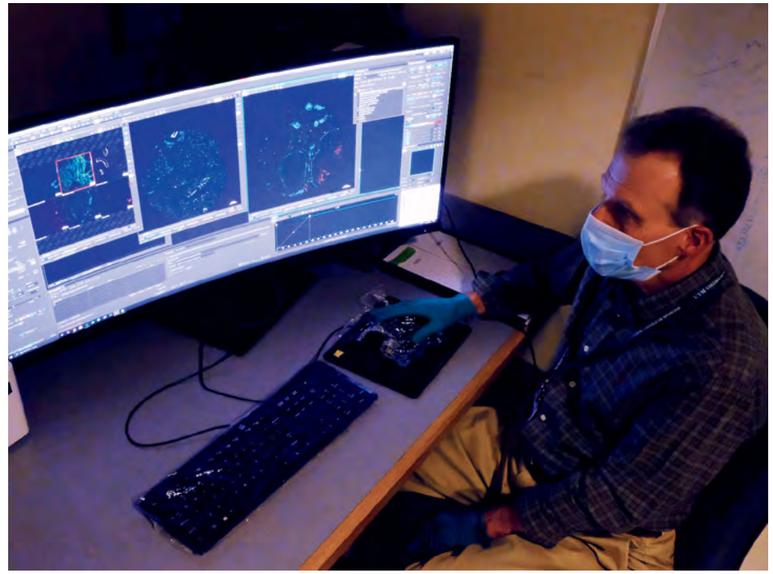
At left: illustration of Dr. Sigmon from *Fast Company* by Erick Davila.



LARNER TEAM PLAYS ROLE IN NIH COVID-19 BLOOD CLOTTING TREATMENT TRIALS

Research

UVM is participating in a major national research effort to evaluate the safety and effectiveness of varying types of blood thinners to treat adults diagnosed and hospitalized with COVID-19. Part of the Accelerating COVID-19 Therapeutic Interventions and Vaccines (ACTIV) initiative, the three trials will be coordinated by the NIH's National Heart, Lung, and Blood Institute and funded through Operation Warp Speed. Collectively known as ACTIV-4 Antithrombotics, the goal is to give doctors critical insights to improve the care of patients with COVID-19 and prevent life-threatening blood clots. UVM's Laboratory for Clinical Biochemistry Research, led by University Distinguished Professor of Pathology & Laboratory Medicine and Biochemistry **Russell Tracy, Ph.D.**, will serve as the central laboratory for the studies. Professor of Medicine and Pathology & Laboratory Medicine **Mary Cushman, M.D., M.Sc.**,is a lead investigator on the RAPID COVID COAG anticoagulation trial that will form a key part of the ACTIV-4 Antithrombotics inpatient clinical trial. Assistant Professor of Surgery **Christos Colovos, M.D., Ph.D.**, will lead the ACTIV-4 Antithrombotics Inpatient Trial at UVM Medical Center, offering Vermont patients with COVID-19 the opportunity to participate in this research.



Research

$5.4 Million NIH Grant Funds New Shared Resource Center

A new $5.47 million grant from the National Institutes of Health (NIH) to the Larner College of Medicine will fund the creation of the UVM Center for Biomedical Shared Resources. Larner Senior Associate Dean for Research **Gordon L. Jensen, M.D., Ph.D.**, is principal investigator on the grant.

The new Center will integrate five of the leading UVM laboratory-based, shared resource core facilities, including the Vermont Integrative Genomics Resource, the Vermont Genetics Network, the Flow Cytometry and Cell Sorting Facility, the Microscopy Imaging Center, and the Mass Spectrometry Facility. In fulfillment of UVM's land grant mission to be a resource for its community, the new center will provide services to institutions across northern New England, and support large, regional research programs. The grant will enhance long-term sustainability through efficiencies of scale, improved access, cross training of personnel, and sharing of resources.

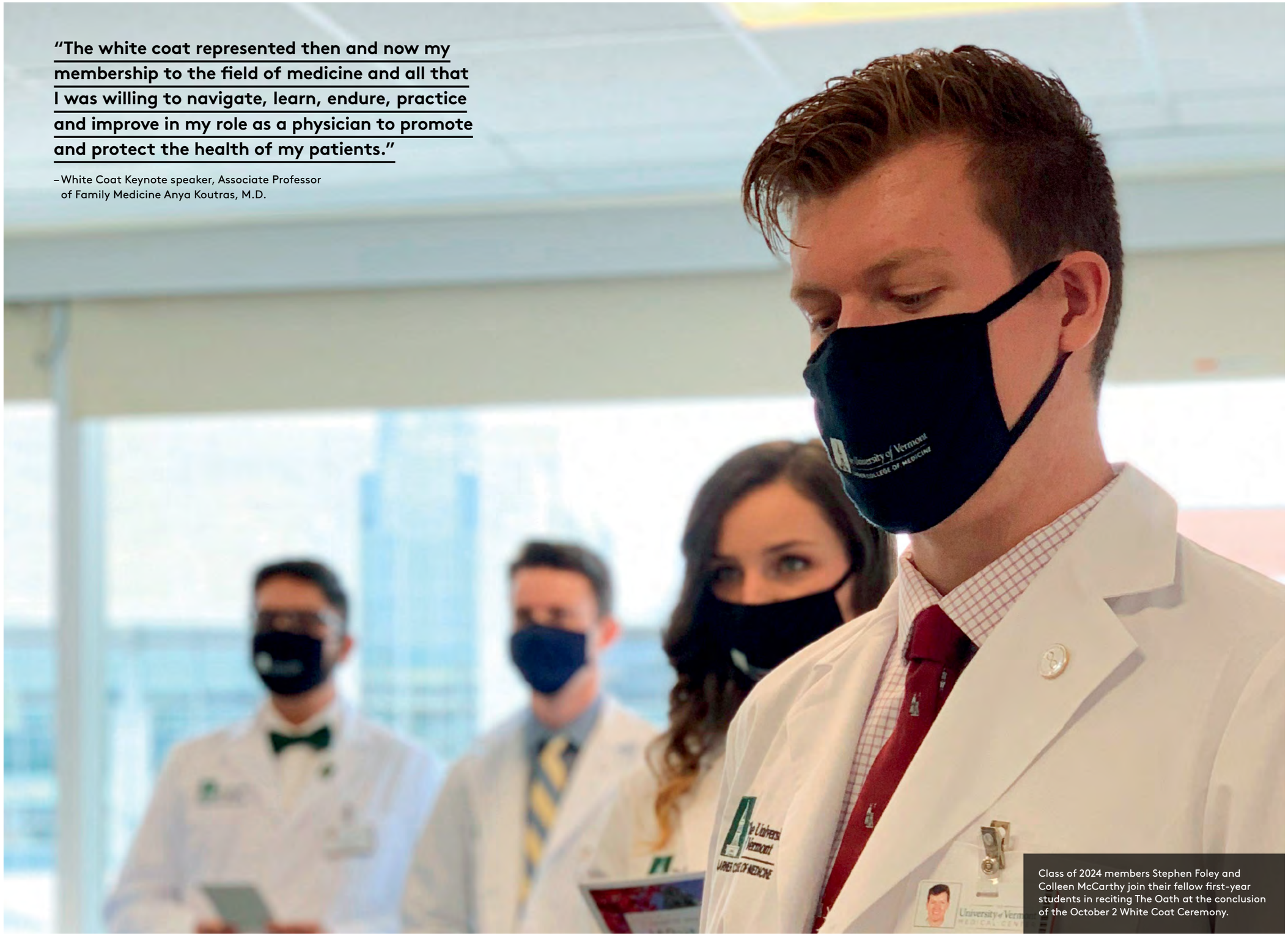
"Our shared resource cores provide state-of-the-art research equipment and methods to UVM investigators and trainees," said Jensen. "The funding of this Center will support continued growth in biomedical research spanning our institution and region for years to come."

The grant will fund completion of the Center's home on the first floor of the new Firestone Medical Research Building, which will be located on the south end of the Larner College of Medicine complex, connected to the current Health Sciences Research Facility. Initial construction work on the new building began in October.

The Center will be an important asset to UVM's continuing research success. In an increasingly competitive national research landscape, UVM recently posted a record total of more than $181.7 million in yearly research funding for fiscal year 2020, with $105 million of that coming from biomedical research associated with Larner faculty—a 32 percent increase over the prior year. Larner researchers also recently received a $12 million multi-year grant from NIH for the Center of Biomedical Research Excellence on Cardiovascular and Brain Health that will also be housed in the new Firestone Medical Research Building. In addition, Larner researchers have risen to the special challenges of 2020, with more than 50 active COVID-19 research projects in progress.

"The white coat represented then and now my membership to the field of medicine and all that I was willing to navigate, learn, endure, practice and improve in my role as a physician to promote and protect the health of my patients."

–White Coat Keynote speaker, Associate Professor of Family Medicine Anya Koutras, M.D.



Class of 2024 members Stephen Foley and Colleen McCarthy join their fellow first-year students in reciting The Oath at the conclusion of the October 2 White Coat Ceremony.

ALTERING THE WHITE COAT

CLASS OF '24 CEREMONY TAKES ON PANDEMIC TWIST

For the last quarter-century, the White Coat Ceremony has been a ritual at U.S. medical schools, one that officially welcomes students into the medical profession and emphasizes the responsibility they carry as they don the traditional physician's white coat. This year, during the most serious worldwide health crisis in a century, the University of Vermont's Larner College of Medicine revised the ceremony, traditionally held with family and friends in attendance at UVM's Ira Allen Chapel, using a format that underscores that responsibility.

On October 2, 2020, medical students in the Class of 2024, along with a limited number of faculty, administrators and staff, gathered in person in small, physically-distanced groups to receive their first white doctors' coats as family and friends joined in remotely via a livestream.

Speakers—participating through Zoom—included Larner College of Medicine Senior Associate Dean for Medical Education **Christa Zehle, M.D.**, Larner College of Medicine Dean **Richard L. Page, M.D.**, UVM Health Network President and Chief Executive Officer **John Brumsted, M.D.**, and 2020 Leonard Tow Humanism in Medicine Award recipient **Anya Koutras, M.D.**, associate professor of family medicine. Associate Professor of Medicine **Prema Menon, M.D., Ph.D.**, and Interim Associate Dean for Students **Lee Rosen, Ph.D.**, read the names of each student receiving a white coat. At the end of the ceremony, Dean Page led the students—assembled in small groups in classrooms throughout the college—in reciting "The Oath." VM

WATCH A SHORT VIDEO OF STUDENTS RECITING THE OATH AND VIEW MORE PHOTOS: MED.UVM.EDU/VTMEDICINE/WEB-EXTRAS

Three Questions with Beth Kirkpatrick, M.D.

Viewpoint An internationally recognized physician-scientist, Beth Kirkpatrick, M.D., has a decades-long history of leadership in the field of vaccine testing and development. In 2001, she launched the UVM Vaccine Testing Center (VTC), and since then, the VTC has grown to assume a prominent role in the development and evaluation of vaccines for globally important infectious diseases. The VTC has garnered support from the National Institutes of Health, the Bill & Melinda Gates Foundation, and the U.S. Department of Defense, among others. Kirkpatrick is also principal investigator and director of UVM's Translational Global Infectious Disease Research Center of Biomedical Research Excellence and Chair of the Department of Microbiology and Molecular Genetics.


Beth Kirkpatrick, M.D.

VM: **How are past successes in vaccine development informing the work going on across the globe on a COVID-19 vaccine? On the flip side, what is unprecedented about this effort?**

BK: "We have multiple twenty-first-century tools at our disposal that are transforming the vaccine field. They have grown out of concerns that vaccine development was too slow to respond to epidemics, including influenza and Ebola epidemics. For example, there's been a lot of progress with computational means of understanding the parts of the pathogen necessary to put in a vaccine. We also have new vaccine platforms or types, including those based on genetic sequences; these allow the rapid construction of new vaccines. The field has also figured out how to overlap clinical trial designs, which also speeds things up. All of these new measures save us a significant amount of time and makes vaccines that are more precisely designed. And what we understand about the human immune response is just phenomenal now. Immunophenotyping—getting a display about what exactly is going on in the immune system—has been transformational.

The other thing that's unprecedented in COVID vaccine development has nothing to do with the science, and that's the financial investment. The government is doing what they call at-risk vaccine development, manufacturing the vials of vaccine to have them ready even before we know whether the specific vaccines work. If they don't work, these vials will all be thrown away. If they do work, we've saved ourselves years of time in manufacturing vaccines. The only way any COVID vaccine could even have a prayer of coming out in 2020 or 2021 is through this type of approach. In the past, the fastest vaccine ever developed was about six years, and that was the Merck Ebola vaccine. Most of the time, they take probably twelve to twenty years, and now we are trying to do this in about a year, so that's really unprecedented too."

VM: **What are the key questions researchers are focused on as they work towards a vaccine? How can wide use of (and trust in) the vaccine be promoted once we have one that has been thoroughly tested?**

BK: "The goal isn't going to be one coronavirus vaccine. It's multiple, first-generation coronavirus vaccines. Over the next few years, though, I would not be surprised if we have better vaccines. The top issue is always safety, safety, safety. After that, we want to know about immunogenicity—the immune response your body has that suggests you're going to be protected. And then finally, the efficacy. In vaccine world, this means that when you're confronted in your real life with the infection, how well will the vaccine prevent you from getting sick.

I would say the foundation for vaccine safety review has been quite robust and has stood the test of time. Generally, until recently at least, there has been trust of the system. At the same time, and especially now, there has to be transparency with this data and this process. I would anticipate that any company that has Phase 3 data will release much of it through the publication process. For those of us who work on vaccines, I think we also have an obligation to educate the public about the process. I do think we need to help people regain trust in this system because of the politicalization."

VM: **How are UVM researchers involved in efforts to develop and test a COVID-19 vaccine?**

BK: "We are part of a National Institutes of Health group called the COVID-19 Prevention Network, or CoVPN. The NIH has taken its hundreds to thousands of investigators who are funded by the NIH as part of all clinical trial networks related to vaccines or therapeutics and combined them into one quite amazing team of scientists and investigators across the country. Together, the team works on the Phase 3 studies of coronavirus vaccines in a harmonized way. It's a very impressive network of established and trusted scientists and investigators. We're lucky UVM is part of that group." VM

For late-breaking news of VTC participation in a COVID-19 vaccine trial, see page 3: "Phase 3 COVID-19 Vaccine Trial Comes to UVM and UVM Health Network."

SURVEY PUTS HEALTH PRIORITY-SETTING IN COMMUNITY HANDS

Community Many types of circumstances—unexpected and expected—can impact an individual's and a community's health, but a pandemic can turn things completely upside-down. After several months of navigating in COVID-19's uncharted waters, the community's strengths and weaknesses have become clearer. That's why Vermont United Ways and the Larner College of Medicine are giving Vermonters with a say in prioritizing community health needs via a survey that is the largest and most comprehensive public health project ever conducted by UVM medical students.

The goal of the project is to understand community health and social needs from the community's perspective to best meet priorities for the coming year.

Larner students and faculty have collaborated with United Way of Northwest Vermont for more than 15 years as part of the Larner Public Health Projects curriculum. In this course, second-year medical students work with nonprofit agencies in the area to help meet community health needs, conducting 17 public health projects to help address those needs.

"This year, COVID-19 brought additional community challenges, so the fall project our second-year students are conducting is a survey throughout Vermont," said Jan Carney, M.D., M.P.H., associate dean for public health and health policy and Public Health Projects course director at the Larner College of Medicine.

United Way of Northwest Vermont is leading this effort, engaging all United Ways in Vermont.

"As a community-led organization, United Way's work is driven by what our neighbors tell us is most important to them," said Amy Carmola, Ph.D., director of community impact at United Way of Northwest Vermont. "We're looking for people's perspectives and priorities on their health to be able to better assess community needs and direct our investments."

A total of 17 small, medical student groups will each look at one topic in the survey, conduct a literature review, analyze the data for their topic, and present the data and recommendations in research poster form at a December virtual poster session to celebrate and highlight findings.

Larner Faculty Inducted to Vermont Academy of Science and Engineering

Three Larner faculty members were elected to the prestigious Vermont Academy of Science and Engineering (VASE), by the VASE Board of Directors at their August meeting.

On October 26, VASE formally inducted Larner Dean and Professor of Medicine **Richard L. Page, M.D.**, Professor of Pharmacology **Frances Carr, Ph.D.**, and Professor of Biochemistry **Christopher Francklyn, Ph.D.** UVM Professor of Biology **Bryan Baliff, Ph.D.**, was also elected to VASE membership this year.

Chartered by the State of Vermont in 1995, VASE has as its mission "to recognize outstanding achievement and contributions in the broadly defined areas of science and/or engineering, to foster a deeper understanding and promote discourse on scientific and technical matters among the citizens of the State of Vermont, and to provide expert and impartial technical advice to the people and the government of the State of Vermont." VASE administers a slate of grants and awards to foster science and technical fields in the Green Mountain State.




Richard L. Page, M.D. (top), Frances Carr, Ph.D. (middle), and Christopher Francklyn, Ph.D.

The VASE Annual Meeting took place via Zoom, and featured a keynote address by Vermont Commissioner of Health and Larner Professor of Medicine Mark Levine, M.D., on "The Application (and Misapplication) of Science, Epidemiologic Data, Public Health Practices, and Health Policy during the COVID-19 Pandemic."

Drs. Page, Carr and Francklyn join approximately 60 members of Vermont's community of scientists and engineers in the society.

GOYAL LAUNCHES SOCIAL MEDICINE ON AIR PODCAST

Raghav Goyal '22 is a producer for Social Medicine On Air, a podcast that "explores the field of social medicine with healthcare practitioners, activists, and researchers." In an episode titled "Medical Ethics in a Pandemic," Goyal interviews UVM Professor of Medicine **Tim Lahey, M.D., M.M.S.**

Listen to the podcast: **http://go.uvm.edu/medicalethics**

A NON-PROFIT FOUNDER, A CANCER RESEARCHER, A COMMUNITY ORGANIZER, AND A MUSICIAN:

UVM WELCOMES NEW GRADUATE STUDENTS

UVM graduate students bring a diversity of talents, skills, interests and backgrounds to their studies, helping them to grow into well-rounded scientists and researchers. Meet some of UVM's newest graduate students entering master's degree and Ph.D. programs this fall.

THE UNIVERSITY OF VERMONT • LARNER COLLEGE OF MEDICINE •
MASTERS AND PH.D. CANDIDATES

Chol Dhoor
Master's of Public Health Program

Originally from the Republic of South Sudan, Chol Dhoor moved to Vermont 13 years ago and graduated as a McNair Scholar from the University of Vermont with a bachelor's degree in Economics and Global Studies in 2011. He is now pursuing a Master's of Public Health degree at UVM. In 2016, Dhoor founded the Sudanese Foundation of Vermont Inc., an organization which provides college scholarships, mentoring programs, job searching, summer camps, and additional services to the Sudanese community in Vermont. As he begins his studies, Dhoor says that he's most excited about the diversity of his classmates. "Some of my classmates are doctors [or] Ph.D. candidates and others are taking this program as their second Master's. The program brings such a richness into one place," says he says, adding "I'm really excited about what is ahead to learn."

Shannon Prior
Cellular, Molecular, & Biomedical Sciences Ph.D. Program

A lifelong Vermonter, Shannon Prior received her bachelor's degree in biochemistry from UVM in 2014. After graduating, she worked in the lab of Kenneth Mann, Ph.D., now an emeriti faculty member, for three years before transitioning to the UVM Cancer Center, where she's been working as a clinical research coordinator since 2017. Her goal is to become a cancer researcher, with a particular interest in exploring the epigenetic regulation of cancer. She is looking forward to collaborating with her peers and UVM faculty. "It's exciting to get a chance to work with various investigators and groups who can bring their expertise to the table so we can work in a collaborative way to achieve a similar goal," says Prior. "I really believe this is what leads to well-rounded, comprehensive research."

Paola E. Peña Garcia
Cellular, Molecular, & Biomedical Sciences Ph.D. Program

Paola E. Peña Garcia is from Puerto Rico and recently graduated from the University of Puerto Rico with a bachelor's degree in cellular and molecular biology. She attended a specialized school from seventh to twelfth grade where she intensively studied music along with her other subjects. During college, Peña Garcia's self-proclaimed stage fright led her to seek out a different passion and she found her calling in science. It was a research opportunity during her undergraduate degree that led to her discovery of biomedical sciences and, she says, eventually cemented her decision to pursue a Ph.D. and career in research. Peña Garcia is particularly interested in lung immunobiology, inflammatory processes, and, overall, learning more about the cellular and molecular mechanisms of disease.

Harly Rodriguez
Master's of Medical Science Program

Originally from Bronx, New York, Harly Rodriguez received a bachelor's degree in neuroscience from Syracuse University. After graduation, he explored several different career paths including medicine, high school teaching, and community organizing. Eventually, Rodriguez decided to enroll in the Master's of Medical Science program at UVM and plans on applying to medical school to pursue a career in family medicine and psychiatry. Rodriguez co-founded the Bronx Community Health Leaders (BxCHL) at the Albert Einstein College of Medicine, a pre-health pipeline program. During the height of the COVID-19 pandemic in New York City, he worked as a medical scribe and medical assistant at an urgent care facility. Rodriguez is particularly interested in exploring "how mental health treatment is given to people of color," and says his background will aid him in doing so. "As a Latino from the Bronx, I come from an underrepresented minority background, which I know will set me up to help Spanish-speaking patients and patients of other backgrounds that experience health inequities," he says.

WORKING FOR CHANGE

Through words, photos and videos, Chris Veal '21 has been chronicling the effects of systemic racism while giving voice to peers who are underrepresented in the field of medicine. He is producing the Larner Stories Project, which features videos of classmates in conversation about challenges they have overcome in pursuing a medical career. A series of posts he wrote for the College's blog follow his experiences participating in protests in Wisconsin and his home state of Illinois. His essay, titled "At the Intersection of Fear, Grief and Love," was published online by the *Annals of Internal Medicine* in July. The following is an excerpt from his blog post, titled "We Are Ready for Change: United We Stand in Milwaukee."

Chris Veal '21

"Why did they shoot me so many times?" Jacob Blake asked his father as he began to regain consciousness in the ICU after he was shot seven times by the Kenosha Police. His father fought back tears as he struggled to answer a question so innocent yet so remarkably tragic.

"Why did they shoot him so many times?" Maria Hamilton thought to herself as she sat at a memorial service for her son, Dontre Hamilton, who was shot 14 times by the Milwaukee Police six years ago.

"Why do they shoot us so many times?" I shouted, with all the ferocity that question deserves, in unison with over 100 protesters, on a sunny day as we marched through the streets of Kenosha, Wisconsin. This question became the newest chant for a movement that has turned the final words and names of Black lives cut short by police brutality into a rallying cry for justice.

As my voice began to crack from the four hours of continuous shouting through my N-95 mask, I found myself breathless. The irony of my brothers and sisters in arms chanting "I Can't Breathe!" was certainly not lost on me.

I stepped away from the group and pulled down my mask. With my eyes closed, I enjoyed every bit of the Lake Michigan-infused air that effortlessly coursed through my lungs as I deeply inhaled.

WEB EXTRA: READ MORE BLOG POSTS AND SEE VIDEOS FROM THE LARNER STORIES PROJECT: MED.UVM.EDU/VTMEDICINE/WEB-EXTRAS

VISION 2025

A UNIFIED STRATEGIC PLAN FOR THE LARNER COLLEGE OF MEDICINE

Over the past year, through open forums and with input from faculty, students and staff from across the institution, the College's strategic plan has been refined to define who we are, what we care about, and to serve as a guide to our progress in the coming years.

Vision 2025 unifies plans within the College and aligns with the University of Vermont's strategic vision for Amplifying Our Impact and the implementation of that vision through achievement of the Academic Success Goals.

LARNER COLLEGE OF MEDICINE MISSION

To educate a diverse group of dedicated physicians and biomedical scientists to serve across all the disciplines of medicine; to bring hope to patients by advancing medical knowledge through research; to integrate education and research to advance the quality and accessibility of patient care; and to engage with our communities to benefit Vermont and the world.

VALUES

- Professionalism at the heart of patient care, research, and education
- Diversity, equity, and inclusion as essential components of all we do
- Commitment to the wellness of students, staff, and faculty
- Innovation of clinical care, research, and education
- Advocacy to promote public health and improve social conditions, including rural health disparities
- Building on our land-grant heritage to improve the health of Vermont and our region
- Excellence in all we do
- Stewardship of resources
- Service to our patients, our university, and our community

STRATEGIC FOUNDATION

- Caring for our people (students, faculty, staff)
- Commitment to a culture of continuous quality improvement in all we do
- Getting the word out to the Larner community, UVM and beyond

STRATEGIC PRIORITIES

COMMUNITY
Commit to the health of our state and region

1. Build on the land-grant tradition of UVM in commitment to accessibility across economic class and leveraging our knowledge in support of the community
2. Focus on primary care and public health
3. Further strengthen partnership and synergy with the UVMHN
4. Strengthen policy and advocacy to promote public health and health equity: improve social conditions, including rural health disparities

CLINICAL
Maximize UVMHN collaboration and partnerships

1. Incorporate missions of research and education into full implementation of network departments
2. Commitment to public health, population health, and health services research and value-based population care
3. Fully develop the role of Director of Research to increase the availability of clinical trials across the UVMHN; focus on rural healthcare delivery across our region
4. Fully develop the role of Director of Education to enhance clinical clerkship sites within the network; support graduate medical education; support innovation in continuing medical and interprofessional education

RESEARCH
Advance scope and impact of research

1. Improve infrastructure: Firestone Building, Center for Biomedical Shared Resources, Given Building renovation; sustained access to shared resource services; enhanced data processing/storage capabilities
2. Focus on current strengths and future opportunities: strengths in mechanistic, translational, and clinical research domains; support for innovation and entrepreneurship
3. Strengthen mentorship and career development for faculty, graduate students, post-doctoral fellows, medical students, and staff; maximize recruitment and retention
4. Diversify funding portfolio for research support: foundations, industry partnerships, and philanthropy

EDUCATION
Prepare the physician of the future (M.D. 2030)

1. Preserve the fundamentals of being a physician: professionalism; first, do no harm; joy of caring; wellness
2. Promote interprofessional education and care; incorporate personalized medicine (genomics, proteomics, etc.)
3. Enhance communication through telemedicine, social media, and digital health devices
4. Incorporate public health, environmental change, population health, health services research, big data, informatics, and artificial intelligence

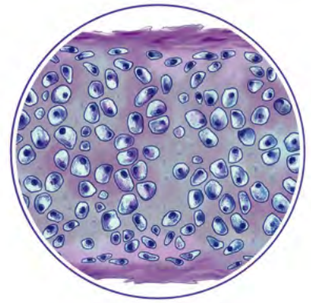
The Red Wheelbarrow

2020

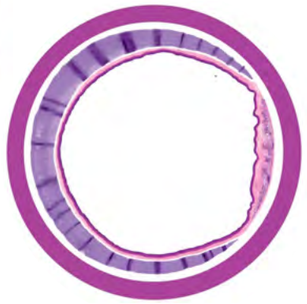
A PREVIEW

In the late 1990s, a group of UVM medical students produced a pamphlet-sized journal in which they shared their poetry, prose, photographs and other artwork. Titled *The Red Wheelbarrow*, the publication took its name from the most famous poem of William Carlos Williams, the 20th century American poet—honored with both the Pulitzer Prize and the National Book Award—who was also, for more than 40 years, a family medicine physician in his native New Jersey.

At the Larner College of Medicine, *The Red Wheelbarrow* has developed into a yearly literary and visual arts journal that showcases the talents and insights of people associated with an institution dedicated to the science and art of medicine. These pages showcase a sampling of work from *The Red Wheelbarrow* 2020. The full issue can be found online at: **med.uvm.edu/redwheelbarrow**.



ANNA QUINLAN
Class of 2022
Slide Three (top) and *Slide Four*



ANYA KOUTRAS, M.D.
Associate Professor of Family Medicine
Sunset Hill

A Trio of Breast Cancer Stories

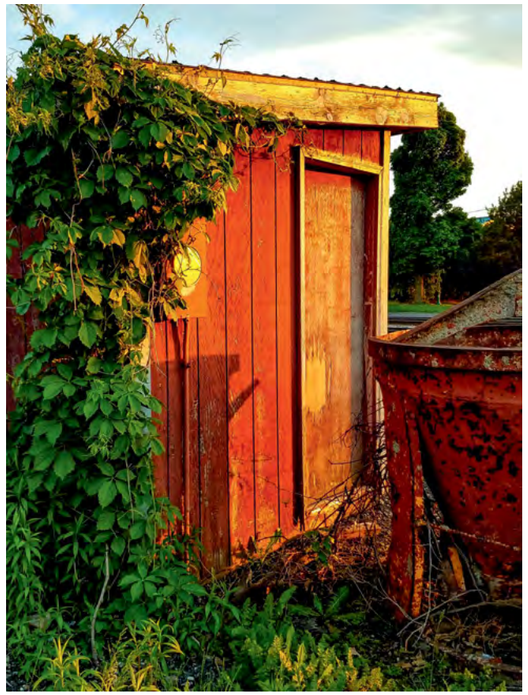
ELLEN ANDREWS, M.D.'75

I.
Angie was a racer.
Raced cars. The faster, the better.
Afraid of nothing, not even
the knot in her breast
the size of a lug nut and about as hard.
If she drove fast enough
it might just pop loose someday.
Drive fast enough, you know,
and things fly right out of a car.
You see lots of debris on the track.
Centrifugal force.
Things just go flying. Gone.

II.
After watching her grandmother go through this,
it was the one cancer she was most afraid of.
Even the label on her favorite bottle of wine
a sketch of two mountains in silhouette
sure looked like breasts to her now.
Hard to see only mountains anymore.

III.
When they said her breast cancer had spread,
Lucille wondered what would happen next.
Is that like cloning? Her breast is making more breasts?
But in the wrong places now?
Is that like when the birds carry seeds
and drop them anywhere, like into someone else's garden?

MEL WOLK, M.D.'60
Canine America



SUSAN LUCE
Office of Medical Student Education
Bathed in Summer Sun

KAYLA STURTEVANT
Class of 2022

ISI BEACH
Class of 2022
Moon Child

Heroics

BRADLEY SOULE, M.D.'69

That year of internship in medicine
we ran around all over saving lives—
or so it seemed. Resuscitations fail.
Survivors could be comatose or else
confused and could not tell me who they were,
let alone who I was. Who was I
in those starched whites, running to put out fires
which still burn, flames seen in the night?

PETER A. BLACKSBERG
Member of the family of Robert Larner, M.D.'42
Stethoscope and Sphygmomanometer

Shell

JULIA PURKS
Class of 2023

My sister Jess takes a generous amount of ibuprofen for her cramps and there are often rogue ibuprofens floating around her dresser drawers, coat pockets, the cup holders of her car, under her bed.

My two little nieces were in her bedroom one evening and they pulled a conch shell from her nightstand and began admiring it. A snail used to live in there, Jess told them while folding a pair of pants, and they looked at her in disbelief and with wide eyes before returning their attention to the shell, turning it over in their hands. When they turned it one way, something clinked inside and a crusty ibuprofen fell out and onto the bed. They both fell silent and looked at it curiously. Jess glanced up from her basket of clean laundry. That's an ibuprofen, she told them.

One niece picked up the ibuprofen slowly and held it up to the light between two fingers while the other looked closely at it, squinting her eyes. The snail became an eye-bee-profen, the one holding it said.

Opposite page
MICHELLE BOOKLESS
Office of Medical Communications
Sounds of the Farm

PRASANNA KUMAR
Class of 2022
Peruvian Serenity

SETH GORDON
UVM Clinical Simulation Laboratory
Spring (above) and *Snowy Day*

THE COVID-19 PIVOT

BY JENNIFER NACHBUR

LARNER RESEARCHERS CHANGE DIRECTION TO ADDRESS THE PANDEMIC

IT WAS MID-MARCH, WHAT VERMONTERS RUEFULLY CALL "MUD SEASON."

BUT THE PROMISE OF THE SPRING OF 2020 WAS YIELDING TO WIDESPREAD CONCERN AND HINTS OF PANIC, AS CASES OF INFECTION WITH THE NOVEL CORONAVIRUS, SARS-COV2, ROSE IN THE STATE AND ACROSS THE NATION.

WHILE EDUCATIONAL INSTRUCTION AT LARNER HAD SHIFTED TO REMOTE MODE, AND MOST IN-PERSON RESEARCH WAS SUSPENDED, A SIGNIFICANT NUMBER OF LARNER PHYSICIANS AND SCIENTISTS QUICKLY ADAPTED THEIR INVESTIGATIONS TO THE ESSENTIAL WORK OF FOCUSING ON COVID-19.

Across the globe, an international COVID-19 research movement was fast gaining traction, fueled by the immediacy afforded by the social media platform Twitter, which allowed scientists and clinicians to ask questions; share findings, treatments, and investigational approaches; and create collaborations in real time. Early research findings started popping up on preprint servers, like Cold Spring Harbor Laboratory's bioRxiv.org, a platform that allows researchers to post complete, but unpublished, manuscripts—providing critical timely information to scientists.

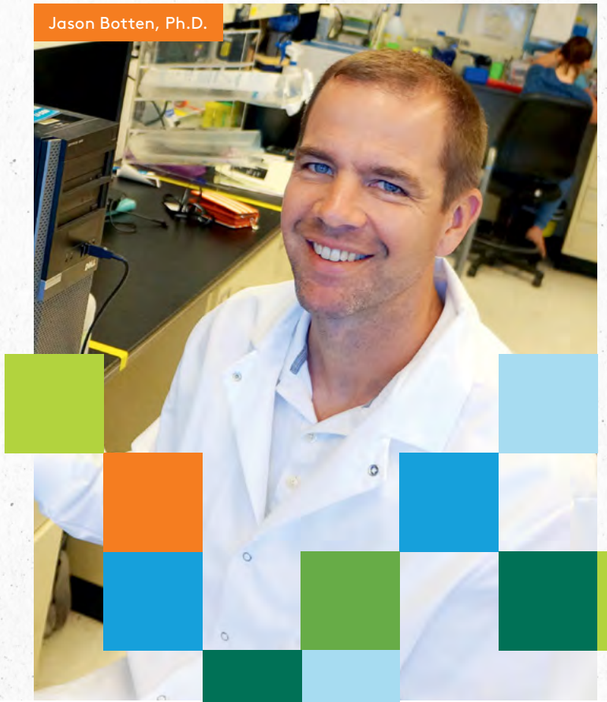
At UVM, administrative offices, departments, and centers quickly dedicated funds to the work, including those that had NIH funding applications under review. With more than a decade of experience conducting both basic science and clinical vaccine development research, many investigators in the UVM Vaccine Testing Center seized the opportunity to switch gears when COVID-19 entered the landscape, with funds available through the University's Translational Global Infectious Disease Research (TGIR) Center at the ready.

One of those faculty members is Sean Diehl, Ph.D., an associate professor of microbiology and molecular genetics, who leveraged his lab's extensive experience to explore the immune response in SARS-CoV2.


Sean Diehl, Ph.D.

SARS-CoV2 and the Immune Response

"We turned on a dime to work exclusively on COVID-19, adapting our expertise in measuring antibodies to such viruses as dengue and Zika to see if we could find out how this novel coronavirus activates the antibody response," explains Diehl.


Jason Botten, Ph.D.

"YOU CAN GO FOR THE PERFECT TEST, OR YOU CAN USE THE ONE THAT'S GOING TO PICK UP THE GREAT MAJORITY OF PEOPLE AND STOP TRANSMISSION."

– JASON BOTTEN, Ph.D.

He's quick to point out that it literally took a village to bring the research to life.

His colleague Florian Krammer, Ph.D., of Mount Sinai's Icahn School of Medicine in New York City, had published a preprint of a serological assay that Diehl deemed appropriate for his team's work. Krammer mailed Diehl the tools needed to build the assay—some DNA spotted onto a piece of filter paper. Diehl's lab got to work quickly: he notes that Nancy Graham, a technician in the lab, with support from technician Ben McElvany and graduate student Kip Strother, "had this assay up and running in less than a month, with our first results on April 14!"

Pathologist Jessica Crothers, M.D., a TGIR research project leader, played a strategic role in several Larner COVID-19 projects, including Diehl's. Crothers secured Institutional Review Board approval to obtain as many blood samples as she could from March through May from the UVM Medical Center's COVID-19 patients. Medical student Dore Grier and clinical research coordinator Ashley Miles compiled patient info so that Diehl and his technicians could design the serology study, which was recently published in *Clinical and Translational Immunology*.

What they learned provides important information about antibody levels in sicker patients and the elderly that could Inform vaccine goals.

"We think that our new insights using this well-characterized cohort of COVID-19 patients gives a good picture of the natural history of how antibodies that likely contain some protective activity are induced by this virus," says Diehl.

Currently, he and his team are recruiting for a study of people who had COVID-19 but did not require hospitalization, in partnership with Professors of Medicine Jason Botten, Ph.D., and Renee Stapleton, M.D., Ph.D. The objective is to follow these participants for a year and obtain blood samples from them to determine if the SARS-CoV-2 immune response lasts at least a year.

A Less-Than-Perfect COVID-19 Test Shows Promise

Like Diehl, Botten has had his hands in multiple COVID-19 projects since early in the pandemic. An expert on pathogenic RNA viruses, Botten's first—and most immediately impactful—project was his work with Emily Bruce, Ph.D., faculty scientist in medicine, Crothers and others in developing and studying an alternative COVID-19 diagnostic test. The method for the test, published first in a BioRxiv preprint and more recently in the journal *PLOS Biology*, omits the step in the widely used reverse transcription polymerase chain reaction (RT-PCR) test, considered the gold standard of COVID-19 diagnostics, where the scarce reagents are needed. Shared widely on Twitter, the preprint was downloaded 18,000 times and the abstract was viewed 40,000 times.

A critical connection between Crothers and Keith Jerome, M.D., Ph.D., director of the University of Washington's Molecular Virology Lab, provided the perfect partnership for examining the test's accuracy on a broader scale. The site of the first confirmed U.S. COVID-19 case, Washington had far more cases than Vermont—more than 1500 people had already tested positive by March 20—and Jerome's lab had plenty of samples with a wide range of viral load to study.

The UVM test correctly identified 92 percent of the positive samples


Renee Stapleton, M.D., Ph.D.

funded clinical trial examining the use of cycle ergometry and amino acid supplementation in ventilator-dependent patients with acute respiratory failure. She and her collaborators at Johns Hopkins and Queens University realized an opportunity to target their focus on COVID-19 patients who had been on ventilators. She applied for a supplement to the R01 grant for a cohort study investigating these patients' inflammation and immune response outcomes over the course of a year and, using existing resources, she and her colleagues began enrolling participants.

Ultimately, the supplement did not secure funding, but with the blood samples her team had already obtained, she teamed up with Professor of Medicine and Chief of Cardiology David Schneider, M.D., to develop a study on biomarkers for thrombosis in COVID-19 patients. "Recent reports have noted that thrombosis complicates 16 percent of hospitalizations and thrombosis is a key contributor to respiratory failure," says Stapleton.

While the grant won't be reviewed until April 2021, Stapleton continues to be involved in SARS-CoV2 research. In collaboration with Botten, she's enrolling COVID-19 positive patients for his lab's work developing human monoclonal antibodies as a therapeutic for COVID-19.

and 100 percent of the negatives, only failing to catch the positive samples with exceptionally low levels of the virus. Public health experts increasingly believe that ultra-sensitive tests that identify individuals with even the smallest viral loads are not needed to slow spread of the disease.

"You can go for the perfect test, or you can use the one that's going to pick up the great majority of people and stop transmission," says Botten. "If the game now is focused on trying to find people who are infectious, there's no reason why this test shouldn't be front and center, especially in developing countries where there are often limited testing programs because of reagent and other supply shortages."

Botten, Bruce and colleagues' test is now being run in labs worldwide through a program called PROPAGATE, run by the Health and Environmental Sciences Institute (HESI), a non-profit that marshals scientific expertise and methods to address a range of global health challenges. HESI Director Syril Pettit, Dr.PH., saw the preprint and reached out to Botten in April and the relationship has yielded great momentum for the research.

Pivot Once, Pivot Twice

In some cases, great concepts for adapting existing research were halted, due to lack of funding. Stapleton, a pulmonary and critical care specialist, was already three years into a National Institutes of Health-

A Virus that Robs Cells' Ability to Sound Alarm and Defend

In addition to their many other projects, Botten and Bruce also collaborated with Dev Majumdar, Ph.D., assistant professor of surgery, and Mitchell Guttman, Ph.D., a professor of biology at the California Institute of Technology. Working in the shared UVM - Vermont Department of Health BSL-3 facility, they examine each of the roughly 30 viral proteins in SARS-CoV-2 and helped map out how they interact with host human cells within a cell-culture dish. The results, published in October in the journal *Cell*, found that SARS-CoV-2 proteins attack three critical cellular processes that serve as the cell's alarm system to call for help or warn nearby cells of infection. This new information provides insights into how to fight the virus.

"We understand so little about this virus compared to HIV or Influenza," says Majumdar. "I'm looking forward to more basic science work so we can get a first draft of how this virus replicates and takes over the cell. Armed with that kind of information, we can think meaningfully about targeted therapeutics, monoclonals, and vaccines."

A Vermont Model for Rural COVID-19 Communications

Launched in 2017, the Northern New England-Clinical and Translational Research (CTR) Network supports a wide range of clinical and translational studies that emphasize health problems endemic in the rural populations of Vermont, New Hampshire and Maine, where many of the residents are over 65 years of age and barriers can compromise rural health care delivery.

Associate Dean for Public Health and Health Policy Jan K. Carney, M.D., M.P.H., who co-leads the Rural Health Research and Community Engagement Core for the network, saw an opportunity to supplement this work in the face of the COVID-19 pandemic. She proposed and has been leading development of a unique, virtual two-way Rural Health

"WE UNDERSTAND SO LITTLE ABOUT THIS VIRUS COMPARED TO HIV OR INFLUENZA. I'M LOOKING FORWARD TO MORE BASIC SCIENCE WORK SO WE CAN GET A FIRST DRAFT OF HOW THIS VIRUS REPLICATES AND TAKES OVER THE CELL."

– DEV MAJUMDAR, Ph.D.

Dev Majumdar, Ph.D.

Communications Network (RHCN), engaging all 11 U.S. CTR programs and working in collaboration with state departments of health to provide rapid, evidence-based health communication to vulnerable rural populations for COVID-19 and all future epidemics. Vermont's RHCN project features an inventory of communications channels in Vermont towns; a tracking system for evidence-based health information delivery and receipt; tele-health and online technologies for education; outreach to vulnerable rural populations; and will host a Virtual Rural Health Communication Forum.

"CTR programs are serving as a regional and national resource to promote rural health communication," says Carney. "Our goal is to develop a sustainable communications infrastructure with innovative technology and a 'how to' model for our predominantly rural populations that can be used today and long into the future."

As Mud Season had, eventually given way to spring and summer, and spectacular early-Autumn foliage season faded into "Stick Season." Vermonters, like people across the globe, looked warily toward the year ahead. On UVM's campus, more than 50 COVID-19-related projects continued, in the hope that, with diligent research and successful vaccine trials, future Mud Seasons would once again be a time when the greatest worry for most people would be a rutted driveway. VM

On Track

Davidson Hamer, M.D.'87, keeps tabs on the world's most dangerous diseases.

By Erin Post

Davidson Hamer, M.D.'87, professor of global health and medicine at Boston University School of Public Health and School of Medicine and co-principal investigator of the GeoSentinel Surveillance Network

When the SARS-CoV-2 pathogen began to spread across the globe in early 2020—country after country responding with shelter-in-place orders, mask mandates, and calls for solidarity with overstretched physicians and nurses—Davidson Hamer, M.D.'87, watched the virus' emergence with a grim determination.

As co-principal investigator of the GeoSentinel Surveillance Network, a project of the Centers for Disease Control and Prevention (CDC) and the International Society of Travel Medicine (ISTM), Hamer has seen the beginnings of infectious disease outbreaks take shape many times, sometimes while monitoring from his office at Boston University, other times while he is out in the field. With 68 locations in 28 countries, the network compiles data from travelers, immigrants and refugees presenting at clinics with various illnesses, using the network's reach across the globe to track the emergence of infectious disease and prevent its spread.

In the early days of the COVID-19 pandemic, reports from network locations began to show that this outbreak was different—and not the seasonal flu. GeoSentinel uses a special code for new diseases or particularly dangerous established diseases—called an "alarming final diagnosis"—and the core team receives an email when this type of report is recorded. Hamer, who had just returned to the U.S. from Japan, remembers the first emails coming in for COVID-19.

On February 1, a person in New York City from Wuhan, China, was reported with a COVID-19 diagnosis. A few days later, another traveler from China was diagnosed. Then two diagnoses in Tokyo, and one half a world away, in Liverpool.

"It was late February that it started to go haywire," Hamer says. "The volume of cases reported by our sites grew really rapidly. We knew from what was happening globally that there was a problem."

PHOTO BY CYDNEY SCOTT FOR BOSTON UNIVERSITY PHOTOGRAPHY

In March, Hamer and colleagues watched the epicenter shift from Asia to "cases of people who had been exposed in Italy and Spain and other parts of Europe, traveling within Europe."

As we now know, the rampage didn't end there. COVID-19 traversed the globe in a matter of months, leaving hundreds of thousands of people dead and many more critically ill. And the fight continues. Kristina Angelo, D.O., M.P.H., an infectious disease physician at Emory University School of Medicine and a medical epidemiologist with the CDC and GeoSentinel Surveillance Network, says the network is beginning to shift under Hamer's direction to projects related to COVID-19, while keeping existing research going as best they can. The relationships he's developed over his decades of work in the field—bridging cultures and countries—have helped to move the organization forward even in this unsettled time.

"One of the things that makes him exceptional in this role is his collegiality and his ability to make friends wherever he goes," Angelo says. "He has a natural gift for camaraderie."

It would be an understatement to say that this year has been busy for Hamer, a professor of global health and medicine at Boston University School of Public Health and School of Medicine. He's taken on dozens of media requests for interviews, has become a consultant to organizations including Major League Soccer, and has played a key role in crafting Boston University's plan to bring students back to campus safely in the fall.

"[The plan] includes testing every student on arrival and testing them twice a week, mask use, de-densification of classrooms and enhanced air filtration systems and all sorts of things to try and make the campus safer and healthier," he says.

Hamer has provided this same expertise to Major League Soccer, an organization that includes 26 teams from the U.S. and Canada. Phyllis Kozarsky, M.D., special advisor to the GeoSentinel Surveillance Network and professor of infectious disease at Emory, worked with Hamer on a plan that has allowed the teams to resume their season through extensive testing and isolation protocols.

"We spent a lot of time helping Major League Soccer figure out how to be successful," she says. "And being able to play in a place like Orlando, which was one of the hottest spots in the United States."

Hamer and Kozarsky are now starting to create plans to safely allow other groups, like orchestras and bands, to resume tours. Kozarsky—a leader in the field of travel medicine who co-founded the ISTM and has served in numerous roles since GeoSentinel's founding in 1995—says Hamer brings to his leadership position an ability to see a challenge from multiple angles and bring the right resources to bear.

"Not only is he brilliant, but he can synthesize a lot of information, very, very quickly," Kozarsky says. "And he is able to multitask, probably better than anyone I've ever known."

For the past two-plus decades, Hamer has been putting that multitasking ability to good use, with roughly 275 publications and four books to his name. In addition to his work with the GeoSentinel Surveillance Network over the past seven years, he has spearheaded more than 50 projects in 20-plus countries, with a particular focus on improving neonatal and child health in addition to research on infectious disease.

Susan Coffin, M.D.'87, came to know Hamer as a research collaborator years after graduating medical school with him. Back on campus in Burlington for a medical reunion, they struck up a conversation and found intersecting interests in child health. As a pediatrician with expertise in infectious disease at Children's Hospital of Philadelphia and a professor of pediatrics at Perelman School of Medicine, Coffin has a long track record of influential research on

"[COVID-19] has raised awareness of how vulnerable the global population can be in the context of a new disease arising."

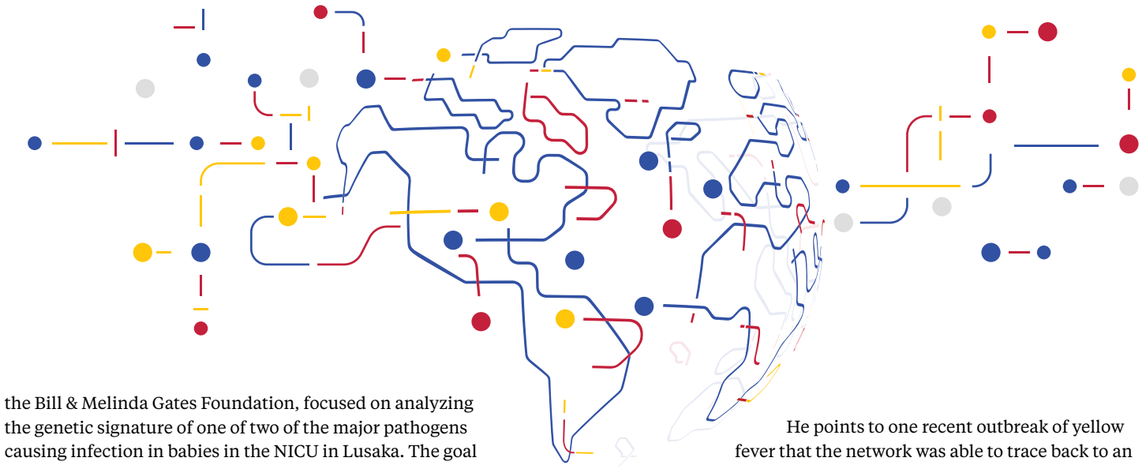
– DAVIDSON HAMER, M.D.'87

healthcare-associated infections as well as pediatric influenza; she has led infectious diseases prevention projects in Botswana, Ghana, Vietnam, Egypt, Greece and China. Soon, Hamer and Coffin were headed to Zambia together, where Hamer had lived from 2011 to 2014 to lead a partnership between Boston University and a Zambian research group.

The project focused on preventing bloodstream infection in neonatal intensive care units. As the proportion of women giving birth in healthcare facilities has increased in Zambia, so too has the need for protocols to prevent sepsis in vulnerable infants. Their research, published in *Clinical Infectious Diseases* in 2019, showed that a bundle of interventions—including infection prevention and control training, text message reminders, use of an alcohol hand rub, environmental cleaning, and weekly bathing of babies with a specific cleansing formula—effectively lowered hospital-associated mortality rates in neonates at the University Teaching Hospital in Lusaka, Zambia. Key to their work, says Coffin, was Hamer's longstanding relationships with Zambian healthcare professionals. The time he had spent in the country allowed the team to home in on interventions that made sense.

"[The research] has demonstrated that it is possible to make a measurable and sustained difference in both infection and mortality outcomes," she says. "And the interventions needed aren't necessarily fancy."

Hamer and Coffin are now working on a project, with funding from



the Bill & Melinda Gates Foundation, focused on analyzing the genetic signature of one of two of the major pathogens causing infection in babies in the NICU in Lusaka. The goal is to determine whether there has been a chronic, sustained outbreak or whether new strains of the same bacteria continue to be reintroduced, and to characterize the strains as an early step for vaccine development.

"Figuring this out speaks to the next level of interventions," says Coffin. "We might act differently for a chronic outbreak as compared to multiple reintroductions."

Hamer's interest in answering this type of question—at the intersection of infectious disease and child health—dates back to the beginning of medical school, when he arranged to spend the summer between his first and second years in Dhaka, Bangladesh. He worked three days per week at a nutrition science lab and spent another several days every week working on research projects at the International Centre for Diarrhoeal Disease Research, known as icddr,b.

"That piqued an interest in new infectious diseases, but also, the health of children and nutrition, because I saw a lot of vitamin A and iodine deficiency," he says.

He cites the late UVM Professor of Pathology and Laboratory Medicine, Washington Winn Jr., M.D., as a mentor who inspired his interest in disease processes. Another experience towards the end of medical school, in La Paz, Bolivia, solidified his interest in international work. But when it came time to choose a specialty, he found himself wavering.

"I went into an internal medicine program and I was thinking about neurology and cardiology and gastroenterology, again all specialties," he says. "But eventually I realized that infectious disease interested me the most."

In the early 1990s, when global health research fellowships were few and far between, Hamer sought out Tufts Medical Center for their well-established international program, which had a particular focus on diarrheal disease in children. His work has over time expanded to include research on other infectious diseases, such as HIV/AIDS and malaria, as well as the implementation of community-based interventions like the formation of mothers' groups in Zambia and using community health workers to improve early childhood development in rural South Africa.

When the CDC approached him about helping to lead the GeoSentinel Surveillance Network, he saw the opportunity to combine public health intervention with big picture analysis. As reports of individual infectious disease cases come in from network locations, the team can aggregate the data and respond in real time.

"We use this to look at both trends in infectious disease acquisition during travel, but also to try and identify hotspots of new outbreaks," he says.

He points to one recent outbreak of yellow fever that the network was able to trace back to an island off the coast of Brazil that had not historically been associated with this disease. After reports of ten travelers returning to their home countries with yellow fever came in—four of whom died—the network was able to quickly issue a report.

"That led the CDC, the Pan American Health Organization and the Brazilian government to change the areas of the country that were considered at risk for yellow fever, so that people would be appropriately vaccinated before travel there," he says. "It's a nice example of using these data to drive a change in public health practice."

Longer-term research, including a recent analysis of typhoid fever antibiotic resistance patterns in South Asia, also regularly comes out of the network.

"We can show how antibiotic resistance varies in different parts of the world and also show how intense of a problem it is," he says.

Now, in the era of COVID-19, the network has received supplementary funding for several projects, including one focused on identifying biomarkers for the disease. Another monitors for sentinel cases to help identify areas at risk, leveraging the network's extensive reach to respond quickly. Hamer has been "instrumental in helping to coordinate and execute" these large, complex COVID-19 projects, says Angelo, his GeoSentinel colleague.

As the world waits and hopes for a vaccine, Hamer points to widespread testing as critical to control COVID-19. Unfortunately, in many parts of the world, the resources and infrastructure are just not available, leading the disease to spread undetected.

"The end result is that they're seeing a lot of people get sick and die from COVID-19, but never making that diagnosis," he says.

And in a metropolis like Dhaka, Bangladesh, where Hamer has colleagues and friends, the need to practice social distancing meets a reality that may not support it.

"You've got a city of 17 million people that live on top of each other," he says. "How do you tell them to keep apart or not go to work if they're in the service industry? There are a lot of challenges in terms of delivering testing, but also trying to deliver public health messages that people can follow."

If there is a bright side, says Hamer, it's that the world is now paying attention. His hope is that investment in disease surveillance and public health will follow.

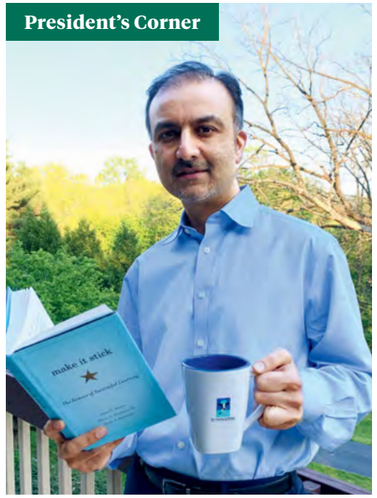
"[COVID-19] has raised awareness of how vulnerable the global population can be in the context of a new disease arising," he says.

Through it all, Hamer and his colleagues will be closely monitoring the landscape, trying to stay at least one step ahead of the infectious diseases threatening humanity. VM

HALL A

NOTES AND NEWS FOR LARNER COLLEGE OF MEDICINE ALUMNI

President's Corner



OMAR KHAN, M.D.'03
President
UVM Medical Alumni Association

I want to express my gratitude to all of you, my fellow alumni and physicians, for the resilience and leadership you continue to show as we grapple with the COVID-19 pandemic in different ways. I have been impressed with how our alma mater has made the best of a difficult and uniquely challenging situation by rapidly developing remote learning options for our students, ensuring that they can continue their medical education in the safest way possible. We are truly leading the nation in this regard! We are also hearing much positive feedback about Reunion 2020, our first virtual event. Although I certainly missed seeing you all in beautiful Vermont in the fall, it was a great chance to connect.

Much like our alumni near and far, the Class of 2024—our newest medical students—are rising to the challenges this pandemic presents. They've had to quickly adapt to a medical education that is different from what they expected, yet they remain enthusiastic, gracious, and ready for the challenges ahead. They also need your support. The College of Medicine Fund remains a critical source of unrestricted funds; in the last year, Dean Page was able to quickly allocate dollars for important student needs like enhanced wellness activities and psychological services. If there was ever a time for our community to pay it forward and support the College, it is now. Every gift matters—we want to show our students that their Larner alumni stand by them as they navigate these difficult times.

Another way to make a difference: consider supporting the College's ongoing commitment to diversity, equity and inclusion by contributing to the Collins Oguejiofor Scholarship Fund. Founded in memory of Collins Oguejiofor '22, you can read more about Collins's life and this important effort on the inside front cover of this magazine. We wish to honor Collins's memory in a meaningful way by helping generations of future medical students achieve their dreams. Read more and give here: go.uvm.edu/collins

As always, I am humbled by the College's long tradition of alumni supporting future generations of students. Your commitment to the physician leaders of tomorrow is strong, and for that, I thank you all!

Omar Khan

University of Vermont Medical Alumni Association

Alumni Executive Committee

OFFICERS (TWO-YEAR TERMS)

PRESIDENT
Omar A. Khan, M.D.'03 (2020-2022)

VICE PRESIDENT
Mary Cushman, M.D.'89 (2020-2022)

SECRETARY
Michael D. Upton, M.D.'94 (2020-2022)

EXECUTIVE SECRETARY
John Tampas, M.D.'54 (Ongoing)

MEMBERS-AT-LARGE (SIX-YEAR TERMS)
Annie Coates, M.D.'07 (2018-2024)
Brian Cuniff, Ph.D.'07 (2020-2026)
Sean Diehl, Ph.D.'03 (2016-2022)
Seth Dorsky, M.D.'10 (2020-2026)
Janice M. Gallant, M.D.'89 (2015-2021)
Albert J. Hebert, Jr., M.D.'74 (2015-2021)
Christopher J. Hebert, M.D.'02 (2015-2021)
Danie Leahy, M.D.'17 (2018-2024)
Gus Papadakis, M.D.'92 (2018-2024)
Suzanne R. Parker, M.D.'73 (2016-2022)
Heidi K. Schumacher, M.D.'10 (2015-2021)
Pramila R. Yadav, M.D.'99 (2015-2021)

EX OFFICIO MEMBERS
Richard L. Page, M.D., Dean
Kevin McAteer, UVM Foundation

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@med.uvm.edu** or **(802) 656-4014**.

1970s

REUNION 2020: 1975 + 1980

'73 Jim Betts "As I pen this, we are all engulfed in this pandemic. California is surging now, with another shutdown looming for the state. Just devastating. I'm hoping by the time you read this, there will be some form of vaccine to at least begin developing a degree of herd immunity. We are slammed at Children's Hospital, as this is also the middle of trauma season, if dealing with COVID-19 is not enough. I'm looking forward to our 50th, if I can continue to dodge the viral hit! We will have to choose another venue, as Suzy has transitioned out of her beautiful home and moved onward.

"Still in practice, now with a UCSF faculty appointment, as Children's Hospital Oakland was merged with UCSF two years ago, as we have 80 percent government-insured children, and our finances were unsustainable with a $30 million (!) loss in 2017 alone! I was married last year to Liz Cochran, a pediatric anesthesiologist with whom I trained at CHOP 40 years ago. We almost wed then, but she was returning to Omaha, her home, and I came west. We figured we'd work it out…at some point. Well, 38 years later we did. She's also still in full time practice. We were commuting, but the pandemic has been the brakes on travel. Lots of calls and zooming…for now.

"I'm still serving with the Big Sur Fire Department, as I have a home in Big Sur. Weekends not on call are spent there. Also a privilege to continue as the tactical physician with the SF FBI Division SWAT team. Lots of really bad people out there causing mayhem. I hope everyone will continue to contribute to the endowment of our alma mater. They need our assistance more than ever in these financially challenging times. Everyone STAY SAFE and we'll gather again in '23. The oysters will be on me."

'79 Ralph Manchester vice provost and director of the University Health Service (UHS) at the University of Rochester, has received the American College Health Association's Lifetime Achievement Award. He joined UHS as a staff physician in July 1983. He was appointed medical chief of UHS and an assistant professor in the School of Medicine and Dentistry in 1985, and in 1994 became UHS director. Under his direction, in 1999, the university became one of the first in the country to assign to each student a primary care physician or nurse practitioner to coordinate and oversee their care while attending school. This model has been adopted at a number of colleges and universities nationwide. He also developed the policy for the University of Rochester to become tobacco-free in 2017 and led implementation efforts.

1980s

REUNION 2020: 1985 + 1990

'86 Dora Anne Mills has been appointed to the board of directors for the Good Shepherd Food Bank, Maine's largest hunger relief organization. Since 2018, she has served as the chief health improvement officer for MaineHealth, Maine's largest health system. She previously served as the Maine CDC director for 15 years.

1990s

REUNION 2020: 1995 + 2000

'92 Anders Holm was recently elected a Top Doctor in Otolaryngology for 2020 by *New Hampshire Magazine*.

'92 Jennifer Woodson writes: "Peter is doing his twilight tour with the U.S. Navy in Naples, Italy. We moved here amidst COVID-19, which caused some hiccups. I am trying to navigate being medical director remotely for a nonprofit that serves men and women who find themselves with potential unplanned pregnancies and STD risks. The youngest of four kids is still at home, so the nest is getting smaller! We live in the heart of downtown Naples and have a guest bedroom! Once it is safe for Americans to travel, feel free to email and visit!"

'94 David L. Robbins, Jr., recently joined Cardiovascular Specialists of Lawrence, Kansas, part of LMH Health. He completed his residency in internal medicine and fellowships in cardiovascular disease and interventional cardiology at UVM. He is board-certified in cardiovascular disease, interventional cardiology and nuclear cardiology.

2000s

REUNION 2020: 2005 + 2010

'00 Jill Samale recently returned to the staff of Community Health Programs Barrington OB/GYN in Barrington, Mass. She is affiliated with Berkshire Medical Center and Fairview Hospital's Family Birthplace. She practiced previously with the CHP team and then joined Berkshire OB-GYN, a Berkshire Medical Center practice. From 2006 to 2014, Samale practiced at South County Hospital Center for Women's Health in Wakefield, R.I. Earlier, she practiced at Alice Peck Day Memorial Hospital in Lebanon, N.H. From 2000-2005, she worked in private practice at Baystate OB/GYN Group.

'01 Emily Harrison has joined Thundermist Health Center in Warwick, R.I., as a family medicine physician. Her clinical expertise includes women's health and family medicine. She is fluent in Spanish and has spent most of her career working in the Latino community. She previously served as the medical director of the family medicine practice at Care New England Medical Group Women's Care. She served as medical staff president at Memorial Hospital of Rhode Island and on Care New England's Board of Directors.

'09 Erica Bove (Mahany) has joined Boston IVF, one of the nation's top fertility networks. Board-certified in both obstetrics/gynecology and reproductive endocrinology/infertility, she is the chief reproductive endocrinologist at Boston IVF's full-service fertility center and IVF laboratory in Syracuse, N.Y.

'15 Jonathan Pan recently joined New Hanover Regional Medical Center Physician Specialists—Internal Medicine Specialists in Wilmington, N.C. The office offers adults preventative services, chronic condition management and care for illnesses and injuries. He completed his internal medicine residency at Wake Forest Baptist Medical Center and a fellowship in infectious diseases at Virginia Commonwealth University Health System.

'15 Dijana Poljak has joined Gifford Health Care's Obstetrics and Gynecology team. She completed a fellowship in pediatric and adolescent gynecology at Washington University School of Medicine in St. Louis, Mo., and her residency at Stony Brook University Hospital in Stony Brook, N.Y. Gifford is a community hospital in Randolph, Vt., with family health centers in Berlin, Bethel, Chelsea, Randolph, Rochester, and White River Junction.

SUBMIT CLASS NOTES ONLINE

The UVM Alumni Association now offers an easy-to-use online form to submit class notes. You can also browse class notes by year, school or college, or note type.

Submit your class note and read more from classmates: **go.uvm.edu/medclassnotes**

Jhaimy Fernandez '21 with her grandmother at her White Coat Ceremony in 2017

To support students like Jhaimy, visit **go.uvm.edu/givemed**

A Note of Thanks

In this ongoing series, Vermont Medicine *shares a note of thanks from a student for the support they've received from alumni.* ***Jhaimy Fernandez '21*** *sends her gratitude for the William C. Street, M.D.'59 and Lorraine Hassan-Street Endowed Scholarship:*

Dear Alumni,

Thank you for supporting my medical school education. My name is Jhaimy Fernandez and I'm a third-year medical student currently on my OB/GYN clerkship. I was born in Los Angeles to Mexican immigrant parents and I am the first in my family to attend medical school. I chose to attend Larner College of Medicine because of their commitment to teaching us to provide holistic care. Whether that be recommending yoga, breathing exercises or acupuncture in addition to pharmacologic interventions, I enjoy having a holistic education. Plus, I enjoy practicing yoga as well. I hope to become a primary care physician for underserved communities and incorporate holistic care in my practice.

It's hard to believe I'm halfway through my third year in medical school. Medical school has continually broken me down and built me back up. This molding process has taught me patience, courage and determination. I like the person I'm becoming. Thank you once again for your generous contribution and opportunity to become the person I'm meant to be.

Sincerely,
Jhaimy Fernandez

Justin Genziano, M.D.'17

Alumni Voice

A City United

Justin Genziano, M.D.'17*, found himself at the front line of the COVID-19 pandemic in the spring of 2020 as an anesthesiology resident at New York-Presbyterian/Columbia University Medical Center. The following is his reflection on that intense time, which was first published on the Larner College of Medicine blog.*

Read more alumni and student stories at **uvmmedicineblog.wordpress.com**

IT HAS BEEN TWO MONTHS SINCE the pandemic crept into our lives here in New York City. Back in March, I steeled myself for a waking nightmare after hearing about the dire situation faced in Wuhan, then Italy, then Seattle; a wisp of contagion slowly drifting across the globe.

There was no crash of a tidal wave, like we expected. Instead, the influx of patients slowly and steadily increased. As we intubated more and more patients, the need for more ICU space also increased. We outfitted our operating rooms into ICUs to meet this need. Providers and staff from all over our institution mobilized to treat patient after patient, many hungry for air. As anesthesiologists, our expertise in critical care and airway management became essential assets. We supported our patients and did the same for each other. Day by day, somehow this incredible task became...manageable.

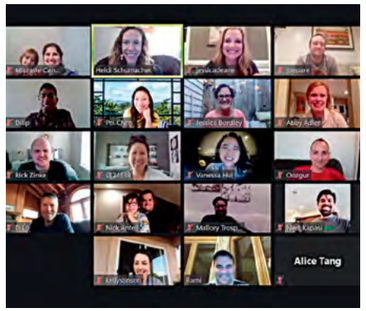
New York City really is something else. This city is a living thing, mostly moody, and never predictable. But during this difficult time, I watched its generosity blossom. Most of us rely on public transportation to get around, especially to and from work. But soon that became a risk factor in and of itself. We were supported by ride-hailing and car rental companies that helped provide our transportation for work. Local restaurants all around the city, hurting themselves, kept us fed day and night, body and soul. That 7 p.m. roll call heard around the city applauding the work and sacrifice of those of us on the front line is a bittersweet balm after a rough day. We did not go into medicine seeking thanks. We did it because we love to help. Sometimes this recognition is overwhelming, even embarrassing. But as I look outside my window, I see couples on roof tops halleloo-ing, horn players heralding anthems, and little kids banging pots and pans with their families—all watching and listening to a city united, not just for the front line, but for each other. It is not just for me. They need it, too.

As the numbers recede, our work continues. Normal will never be what it was several months ago, and it will still be a while yet before we know what "normal" will even look like. In the meantime, we have this opportunity to take a deep breath and reflect. One of our attendings, at a recent meeting, stated that we will come out of this as the world's experts in managing COVID-19. It is a somber accolade. However, it means we are well-positioned to help. That same mission that guided our decision to become physicians holds firm—even in a pandemic.

✓ Reconnect.
✓ Remember.
✓ Celebrate!

MEDICAL REUNION 2020– WE DID IT

Even a worldwide pandemic could not keep UVM medical alumni from joining together virtually to see old friends and teachers, and share fond memories of the place where their medical careers began. Over the course of the first ten days of October, alumni from across six decades took part in Zoom webinars, meetings, recorded tours, and award recognitions, using technology to overcome distance and share each other's company again. And overcome it they did: this "virtual" reunion attracted over 50 percent more alumni participants than most past in-person events.



It's not over yet!

Many of the reunion sessions are viewable online. See what all the excitement was about at **go.uvm.edu/medreunion**

"I know this is not how you imagined your 50th celebration and would prefer to be on campus today—I know I certainly would prefer that we were coming together in person. But, like good physicians, we are doing what is best for our patients and our communities and staying physically distanced."

– Dean Richard L. Page, M.D., speaking at the Class of 1970 50th Medallion Ceremony

PETERSON NAMED INAUGURAL GOLDMAN PROFESSOR

Thomas Peterson, M.D., chair of the Department of Family Medicine, has been invested as the inaugural **Morris Goldman '29 M.D.'32 Professor of Family Medicine.** The ceremony was the first of its kind to be held remotely, via Zoom, on August 13, 2020.

Harriet Goldman and Michael Kaplan established the professorship in honor of Dr. Goldman's late father, Dr. Morris Goldman, a member of the UVM class of 1929 who went on to receive his medical degree in 1932. As a Jewish man, Morris Goldman was always deeply grateful to UVM for helping him achieve his dream of becoming a physician at a time when very few medical schools accepted students without regard to race, creed, or religion. He went on to a career as the quintessential family physician.

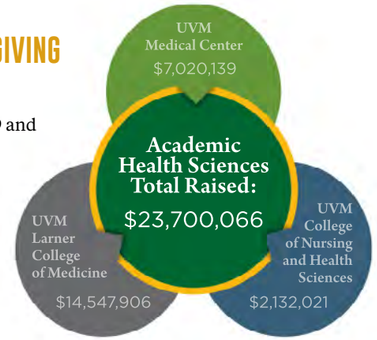
"I'm very proud to represent Dr. Morris Goldman and his contributions to healthcare. His example is an inspiration and in alignment with modern family medicine. Dr. Goldman provides a vision and a North Star for us all." –Thomas Peterson, M.D.

Like Morris Goldman, Peterson has dedicated his medical career to caring for multiple generations of families. He has twice been voted Family Practice Teacher of the Year and was honored as Family Physician of the Year in 2003 by the Vermont Academy of Family Physicians.

COLLEGE CELEBRATES LIFE OF JEFFREY SCHUMACHER, M.D.'74

The Larner College of Medicine community has come together to honor the memory of alumnus **Jeffrey Schumacher, M.D.'74**, through contributions to a fund created by his family to benefit the Department of Pediatrics. Over 80 households—including many classmates —have given to the Schumacher Family Endowed Fund in Pediatrics since Dr. Schumacher's death on May 26, 2020, with gifts totaling over $40,000. The fund, founded by the Schumacher family, supports students, residents, fellows and faculty "in their personal wellness, in the continued search for best practices in care and teaching, and in the commitment to the health of the children and families in our beloved Vermont." The Schumacher family has a long-standing connection to UVM and the field of pediatrics: Jeffrey and his wife, Cajsa, both graduated in the Class of 1974 and went on to become pediatricians. Two of their children, Erika and Heidi, graduated from the College in 2008 and 2010 respectively and practice pediatrics. Their son, Ryan Schumacher, D.O., is an emergency medicine resident physician in Utah. Known as "Dr. Jeff" by patients and families in Albany, N.Y., Dr. Jeffrey Schumacher leaves a legacy of three decades of compassionate patient care.

END-OF-YEAR GIVING AT A GLANCE



Between July 1, 2019 and June 30, 2020, more than 9,000 donors made gifts to support clinical care, research and education at the UVM Medical Center, the UVM Larner College of Medicine and the UVM College of Nursing and Health Sciences, for a total of over $23 million.

TANDOH APPOINTED GAMELLI GREEN AND GOLD PROFESSOR OF SURGERY

Margaret A. Tandoh, M.D., associate professor of surgery and associate dean for diversity, equity and inclusion, was invested as the inaugural **Richard L. Gamelli, M.D.'74 Green and Gold Professor in Surgery** during a virtual ceremony on September 22, 2020. Established by Richard Gamelli, M.D.'74, and his wife Mary, this professorship honors his accomplished 40-year medical career and aims to support the work of Dr. Tandoh and her colleagues in the Department of Surgery.

Dr. Gamelli earned a medical degree from UVM, completed a five-year surgical residency at what is now the UVM Medical Center and was as an attending surgeon caring for burn patients at the medical center for 11 years, serving as vice chair of surgery, mentoring countless medical students and residents, and conducting research. His burn care expertise led him to a distinguished career at Loyola University Chicago, where he served as senior vice president and provost of Health Services, the Robert J. Freeark Professor of Surgery, and director of the Burn Center at Loyola University Medical Center before retiring as professor emeritus in 2014.

Known for her extraordinary commitment to the local, regional and global community, Dr. Tandoh has dedicated her medical career to acute care surgery and the treatment of trauma and burn patients. She serves as the medical director of the Burn Program at the UVM Medical Center. A member of both the Advisory Council and the Learning Environment and Professionalism Committee, Dr. Tandoh also serves on the New England Surgical Society Task Force on Diversity in Surgical Leadership and was appointed to the Vermont Medical Board in 2019.

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

Flashback

Attention, Please

We're guessing the lecture was over, or not yet begun, in this photo that seems to have been taken in the "new" Hall A that existed on the second floor of Given from 1968 till the early 2000s. Is that person in front meditating on all the knowledge he's just ingested? And who are his classmates?

Send your thoughts to **erin.post@med.uvm.edu** and we'll include them in the next issue of *Vermont Medicine*.

FROM THE PREVIOUS ISSUE

The Summer 2020 Flashback drew a great number of responses from alumni in classes from the late 1970s. There was a wide range of suggestions for the students in the photo. The consensus seems to be that Class of '79 members Tom Boduch, Sally Shulman, and Tom Harrington, along with Jim Sensecqua from the Class of '80, are the students in the foreground. There were thoughts that the instructor could be Dr. Roy Korson, but most respondents voted for his being Dr. Jackson Clemmons (Dr. Clemmons was featured in the Summer 2019 *Vermont Medicine* when he received an honorary degree from UVM).

Thanks to alumni Tom Boduch, Cynthia Christy, Michael Hermans, Jim Jarvis, Jon Keller, David Little, Gerard Nuovo, Dennis Plante, and Marga Sproul for their contributions.

OBITUARIES

'42 Robert D. Wakefield
Dr. Wakefield, 99, died May 31, 2020, in Auburn, Maine. Born July 7, 1920, in Camp Dix, N.J., he graduated from UVM and received his medical degree from UVM in 1942. He began military service in 1945. Ordered to the European theatre in 1946, he served as a battalion surgeon for the 14th Infantry before reassignment to the 26th Infantry Regiment's Medical Detachment in Nuremberg, Germany. He attended sessions of the Nuremberg trials, as his regiment was responsible for security during the trials. Following discharge in 1947 as a captain, he continued his service in the U.S. Army Reserves as a medical officer, retiring in 1968 as a lieutenant colonel. Dr. Wakefield did his internship at St. Francis Hospital, Hartford, Conn., followed by residencies at Boston City Hospital, Worcester City Hospital and Hahnemann Hospital in Worcester, Mass., and Montana Deaconess Hospital in Great Falls, Mont. He practiced medicine in Boston, Mass., and Great Falls, Mont., eventually settling with his family in Auburn, Maine. He was a pathologist at Central Maine General Hospital (now CMMC) and later chief pathologist at St. Mary's Hospital, where he was instrumental in establishing the hospital lab and a training program for lab technicians. He also served as medical examiner for the state of Maine.

'47 Edward Byington Crane
Dr. Crane died May 15, 2020, at the age of 96. Born October 25, 1923, in Burlington, Vt., he was drafted at the end of World War II, but had already been accepted into medical school. He completed his medical training and his medical internship at UVM in 1947 on inactive reserve status. Dr. Crane established a private practice in Charlotte, Vt., at the age of 25. He was a true country doctor, with his medical practice in the home and his station wagon often serving as an ambulance. During the Korean War, he received permission to continue his practice instead of joining the war effort because he was the only doctor in Charlotte. In 1955, he was called up to fulfill his military commitment, joining the U.S. Army as a captain. Following a brief stint at the U.S. Army's psychiatry school, Dr. Crane jumped at the opportunity to be stationed in Baumholder, Germany. Upon leaving the U.S. Army in late 1956, he returned to his private practice in Charlotte. In 1975, Dr. Crane "retired" from private practice after working too many seven-day work weeks as a country doctor, choosing instead to join the Air Force. His first assignment was in Colorado Springs, Colo., at Peterson Air Force Base, where he was put in charge of the outpatient clinic. In 1982, Dr. Crane was transferred to Carswell Air Force Base in Fort Worth, Tex., becoming the flight surgeon for a B-1 bomber wing with the responsibility of conducting crash investigations. In 1986, he was transferred to Montgomery, Ala., to support the Air War College as chief of the base outpatient clinic. In 1987, he finally retired for good as a colonel and returned to Frisco, Colo.

'54 Jacqueline A. Noonan
Dr. Noonan, 91, died July 23, 2020. Born in Burlington, Vt., she was a pediatric cardiologist in the Bluegrass, Ky., area for over half a century. She earned her bachelor's degree from Albertus Magnus in New Haven, Conn., and her medical degree from UVM. She was professor emeritus and former chair of the Department of Pediatrics at the University of Kentucky. She discovered a congenital heart condition, Noonan Syndrome, and devoted her life to caring for children.

'55 Stanley L. Burns
Dr. Burns died on October 21, 2020, in Shelburne, Vt. He was 94 years old. Born in Rutland, Vt., in 1925, he was graduated from Rutland High School in 1943 and served as a Surgical Technician with the 116th Evacuation Hospital with the 7th Army's Rhineland, Alsace-Lorrain and Germany Campaigns in World War II. After discharge he completed his undergraduate and graduate studies under the G.I. Bill. In 1950 he married Mary (Marcy) Picard, R.N. He received his medical degree from the University of Vermont College of Medicine in 1955. There followed five years of post-graduate training in internal medicine, cardiology and hematology at the University of Pennsylvania in Philadelphia. In 1960 Dr. Burns and his family returned to Burlington where he became a member of the faculty of the College of Medicine. Throughout his professional career, he devoted his career to teaching clinical skills, providing direct patient care and was a key figure in the development of hematology oncology in Vermont. He achieved the rank of professor of medicine in 1972 and became emeritus in 1991. Dr. Burns also served as assistant dean at the College of Medicine and associate chair of the Department of Medicine. In addition, he was a longtime leader of the UVM Medical Alumni Association. He served as president of the Vermont Medical Society in 1975 and received their Distinguished Service Award in 1991.

'58 Eugene M. Beaupre
Dr. Beaupre died April 27, 2020, in Bedford, N.H. at the age of 89. Born in Barre, Vt., on Feb 19, 1932, he earned his medical degree at UVM and completed internships at the University of Pennsylvania. In 1970, he moved to Waterville, Maine, to begin a hybrid occupation of medical practice and hospital administration at Mid Maine Medical Center, eventually serving as its president. He launched with colleagues an ambitious project called Cancer 2000, which became The Alfond Cancer Center in Augusta. He retired from MMMC to go into private practice. Lastly, Dr. Beaupre served as the chief of medicine at the VA Togus Hospital in Augusta, Maine. He facilitated an overhaul to the management structure and facility improvements to help our veterans and families to receive better health care.

'61 James Edward O'Brien
Dr. O'Brien died in Wethersfield, Conn., on May 9, 2020. Born June 30, 1930, in New Haven, Conn., he earned a B.S. in pharmacy and a M.S. and Ph.D. in pharmacology at the University of Connecticut School of Pharmacy, received his medical degree from UVM, and completed his residency in internal medicine at St. Francis Hospital in Hartford, Conn. He became clinical pharmacologist and acting visiting physician in the Department of Medicine, medical director of the Intensive Care Unit, and director of the Methadone Detoxification Program at St. Francis. Following that, he was appointed medical director of the Combined Hospital Alcoholism Program (CHAP) in Hartford and then assistant professor of psychiatry and medicine at the University of Connecticut School of Medicine, serving as medical director of the Alcohol Treatment Center at University of Connecticut John Dempsey Hospital. He was the medical director of the Connecticut Poison Control Center. He was also a commissioner of pharmacy for the state of Connecticut. He served as medical director of the government managed care programs at BlueCross BlueShield of Connecticut and as outside consultant at The Hartford. Dr. O'Brien was recognized for his leadership and commitment to drug education, receiving awards from the U.S. Department of Justice, New England Narcotics Enforcement Association, and the Governor's Prevention Partnership for Safe and Successful Drug-Free Kids. He was also named a Distinguished Alumni of the University of Connecticut School of Pharmacy.

'62 Neil F. Mara
Dr. Mara, of Bloomfield, Conn., died August 20, 2020, at the age of 90. Born in Chicopee Falls, Mass., he served in the U.S. Army in Korea and devoted himself to caring for the chronically ill at a leprosy colony near his base. His medical career was largely spent at St. Francis Hospital in Hartford, Conn. He was a founding member of Woodland Anesthesia Associates, P.C. For many years, Dr. Mara was chief of St. Francis' anesthesiology department and president of its medical and dental staff. He was instrumental in founding St. Francis's renowned chronic pain management clinic and St. Francis' outpatient surgery program. Dr. Mara was also a teacher. Hundreds of resident anesthesiologists and student nurse anesthetists learned their craft from him and his Woodland colleagues. In recognition of his career of service and teaching, St. Francis Hospital and Medical Center named Dr. Mara as a Distinguished Physician.

'65 Myer S. Bornstein
Dr. Bornstein of Taunton, Mass., died June 6, 2020, at the age of 81, due to complications from COVID-19. Born September 7, 1938, in Boston Mass., he served in the United States Air Force during the Vietnam War and obtained the rank of lieutenant colonel. Dr. Bornstein went on to a distinguished career in obstetrics and gynecology, working at Charlton and Truesdale Memorial Hospitals in Fall River, Mass., New London Hospital in New London, N.H., and serving as chief of obstetrics and gynecology and medical director at Morton Hospital in Taunton, Mass. He also served as medical director for Seminole Point Rehabilitation Center in Sunapee, N.H., and was a former president of the Massachusetts Medical Society.

'74 Stephan M. Hochstin
Dr. Hochstin, of Plymouth, Mass., died May 2, 2020. Born in Phoenix, Ariz., on December 18, 1948, he was raised in Windsor, Vt. At the time of his death, Dr. Hochstin was in his 46th year practicing medicine as an award-winning hematologist and oncologist. In 1979, he began his practice at the Beth Israel Deaconess Hospital in Plymouth, Mass. His honesty, openness, and commitment to respecting and communicating with his patients were hallmarks of his career. He believed fervently that the key to his patients becoming well again was a team approach as well as a compassionate, empathetic, and collaborative relationship with his patients.

'77 Cornelius O. "Skip" Granai, III
Dr. Granai, 71, died June 28, 2020, at his home in Ashaway, R.I. He graduated from UVM in the class of 1970 and served in the Army ROTC. Dr. Granai earned a master's degree in cell biology from UVM in 1973 and his medical degree from UVM in 1977. He completed a residency in obstetrics and gynecology at Tufts University School of Medicine and a fellowship in gynecological oncology at New England Medical Center. Over the course of his professional life, he was on the faculty of Tufts University, Harvard University and Brown University and on the staff of the New England Medical Center and Massachusetts General Hospital. He became director of Women's Oncology at Women & Infants Hospital in Providence, R.I., and executive chief of oncology for Care New England. He taught the many oncology fellows and residents he trained to keep "fighting the good fight" by advocating strongly for what they learn is right from being at a patient's bedside and by remembering the values and privilege that brought them to medicine in the first place. He became a sought-after speaker and spread his message throughout the world. Dr. Granai loved his work and would have done it unsung, but he was awarded many honors, among them the Arnold P. Gold Foundation Humanism in Medicine Award, a Lifetime Achievement Award from the American Cancer Society, and the Kaali Award, which he received in Hungary for his "invaluable and lasting contribution in gynecologic oncology and integrative care, for his motivational speeches worldwide, and for his passionate humanism."

'77 Andrew A. Jeon
Dr. Jeon died at his home in Hanover, N.H., at the age of 68. Dr. Jeon was born in Boston, Mass., on November 17, 1951. He most recently served as the CEO and president of Harvard Medical International and accomplished much in more than two decades of senior academic, clinical, research, administrative and leadership experience in academic medical centers of the highest caliber. Prior to joining Harvard Medical International in 1996, Dr. Jeon held various positions at Harvard Medical School and its affiliated institutions, including serving as chief medical officer of Harvard Medical International, chief of hospital services and operations at Brigham and Women's Hospital, and director of ambulatory surgical services at Massachusetts General Hospital, and director of ambulatory services at Boston Children's Hospital. As a certified anesthesiologist and published author, Dr. Jeon also taught at Harvard Medical School in the Department of Anesthesiology. His postgraduate training in pediatrics and anesthesia was conducted at the Massachusetts General Hospital and the Hospital for Sick Children in Toronto, Canada.

In Memoriam

Robert Larner, M.D.'42 and Helen Larner in 2005.

Helen Moray Larner (1925 - 2020)
Our College of Medicine lost one of its most steadfast supporters with the passing of Helen Moray Larner on November 2, 2020, at her home in Woodland Hills, California. She was 94.

Born in the Bensonhurst neighborhood of Brooklyn, N.Y., in 1925, Helen and her family moved to California in the 1940s. Her family recounts that, far from her familiar Brooklyn, Helen left her suitcases packed for two weeks upon arrival. Then, she settled in for life. The daughter of immigrants, Helen became a skilled bookkeeper. She married pharmacist Saul Hann in 1945. After the war, they worked in a drug store together, with Helen keeping the books and running the cosmetics counter. They later purchased a drugstore in the San Fernando Valley, and then two more drugstores, in Oxnard and Santa Barbara, Calif., respectively.

Saul Hann passed away in 1971 and Helen sold the drugstores. Not long after she met a new love of her life, Robert Larner, M.D. After a brief courtship, they married.

Together the Larners ran a successful property management firm for over 40 years. That success, and years of prudent real estate investment, built a financial base that allowed them to pursue their passion—the support of medical students and the fostering of medical education at Dr. Larner's alma mater, the place that he credited with changing his life. Over the years, the Larners helped thousands of students through the Larner Loan Fund. They also underwrote the building of the UVM Clinical simulation Laboratory, the renovation of teaching spaces at the College to accommodate active learning methods, and the creation of nation's first endowed professorship in medical education. In 2016, a landmark gift that brought their total philanthropy to the College to the $100 million level prompted the naming of the institution in honor of Dr. Larner.

Helen Larner was an enthusiastic partner in all these endeavors, and cared deeply about the College's mission to educate the next generation of physicians. Today, a portrait of Robert and Helen Larner hangs in the College's Hoehl Gallery. Her generosity and that of her husband will continue to benefit this institution and its students, faculty, and staff for decades to come.

August 10, 2020

7:59 A.M.

Students in the Class of 2024 wait in a physically-distanced line outside of the Larner College of Medicine to begin their first day as medical students. While Orientation had a different look and feel this year, the poignancy of the moment was no less significant.

The University of Vermont
LARNER COLLEGE OF MEDICINE

VERMONT MEDICINE
89 Beaumont Ave.
Burlington, VT 05405

Non-Profit Org.
U.S. POSTAGE
PAID
Burlington VT
Permit No. 143