Reflecting Achievements

A look back at the accomplishments of students, faculty, and staff in 2009, and a look ahead at the promise of 2010

Also featured:
- Interview with Dean Morin
- Departmental yearly highlights
- Philanthropy Report for Fiscal ’09
Recall the good times. Renew old friendships. Reconnect with faculty. Revisit the place where your medical career began.

MEDICAL REUNION
June 11–13 • 2010


The UVM Medical Alumni Association invites you and your family to plan now to join your classmates for Reunion 2010 — June 11–13, 2010. Come back to Burlington and the UVM campus, your home during medical school. You may have lost contact with your classmates and former teachers, but reunion will give you the chance to reconnect, rekindle old friendships, check out favorite places, talk with faculty, meet the medical students of today, and experience first-hand the growth and evolution of your medical alma mater.

EVENTS INCLUDE: Medical Education Today Session • Tours of the College, including the Medical Education Center and new Courtyard Building • Alumni Awards and Reception • Medical Alumni Picnic • Nostalgia Hour • Class Receptions

Register today for your reunion! www.med.uvm.edu/alumni

For more information, call the UVM Medical Development & Alumni Relations Office at (802) 656-4014 or email medalumni.relations@uvm.edu
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Frederick C. “Rick” Morin II, M.D., became the College of Medicine’s 17th dean two years ago. In an interview with the editor of Vermont Medicine, Dean Morin reflects on the school’s challenges and accomplishments.

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Economic stimulus projects used to be limited mostly to fixing bridges and roads. Today, the National Institutes of Health spurs on the economy with special grants targeted for quick implementation, and the College of Medicine’s scientists and physicians have risen to the challenge.

By Jennifer Nachbur

20 Seeds of Change
Amid the busy whirl of classes and clinical rotations during medical school, future physicians at the College of Medicine stay engaged with the world around them.

By Jennifer Nachbur

ON THE COVER: Photograph of the windows of the Health Science Research Facility reflecting the Given Building by Mario Morgado.
FROM THE DEAN

The beginning of a new year is a time for many to look back and reflect on the past. As I do so, I am struck by how much it seems like only yesterday that I stepped up to the microphone in the Hoehl Gallery to introduce myself to the University community as the College’s dean. At the same time, when I look back over all that has been achieved at the College in the past two years, I am impressed by the efforts of everyone connected to the College, day after day, that has helped us continuously improve in all our missions.

In this issue of Vermont Medicine you can read more of my thoughts on last year, and what’s next for the College that I care about so deeply. So perhaps it’s best to use this column as an opportunity to extend a sincere “thank you” to the many people who have helped the College in its important work: to the faculty, who’ve worked so hard to deliver a leading-edge curriculum and who have grown our research enterprise in a tough economic climate; to the staff, who have kept the College functioning efficiently day in and day out; to the medical and graduate students, whose intelligence and commitment remind us always of our main reason for being here; and to our community, including especially our clinical partners at Fletcher Allen Health Care, for the support of so many of our efforts.

This issue of our magazine melds the style of our regular publication with some of the reflective content and reviews of our previous annual reports. We hope you will find it an informative view of the important activities of the College all through the year. A special note of thanks must go to the medical and graduate students, whose intelligence and commitment remind us always of our main reason for being here; and to our community, including especially our clinical partners at Fletcher Allen Health Care, for the support of so many of our efforts.

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Graduate Student Receives NCCAM Grant to Study Connective Tissue

Like the connecting pathways of the peripheral nervous system she studies, neuroscience graduate student Sarah Corey’s scientific career has followed interrelated foci, from work on neurological aspects of AIDS, to immunology, to neuroimmunology and Alzheimer’s disease. Her latest venture as a National Center for Complementary and Alternative Medicine (NCCAM) predoctoral fellow is the development of an animal model of connective tissue inflammation.

Connective tissue, located between muscle, fat, and skin throughout the body, has the ability to become stiff in response to injury or remodel if stretched. Working with mentors Helene Langevin, M.D., research associate professor of neurology, and Margaret Vizzard, Ph.D., professor of neurology, Corey aims to determine whether connective tissue is innervated — if it possesses nerve fiber terminals that transmit a sensory response such as pain — and how the connective tissues of the lower back are altered with injury and inflammation. To date, no investigator has demonstrated that the connective tissue of the lower back contains sensory nerve fiber terminals.

Working in the Langevin lab allows Corey exposure to clinical work and both Langevin and Vizzard also conduct basic science laboratory work. The co-mentors share aspiring Corey with specific aspects of her research; Langevin advises on issues relating to connective tissue remodeling and Vizzard guides her with the development of an animal model from the perspective of nerves and inflammation. “It’s nice to sort of be on the edge of both worlds,” says Corey.

Corey hopes her research will provide answers to two questions: Are there sensory nerve fibers in connective tissue? And could this connective tissue and its innervation contribute to chronic low back pain? She also plans to apply a form of simulated manual tissue stretch in her animal model and measure its effect on the inflammatory response of these connective tissues. The hope is that her findings can be applied to clinical research examining low back pain and the effect of body-based treatments, such as yoga and massage, on that inflammation.

Vermont’s Largest City on Top for Women’s Health

After looking at the 100 largest metropolitan areas in America, the Burlington–South Burlington region came out on top as Self magazine’s “fittest, healthiest, and happiest” city to live in for women, in a listing published in their November issue. The magazine studied almost 8,000 different pieces of data in 50 categories and consulted a panel of experts to come up with its rankings.

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Self noted the larger percentage-than-average rate of residents who exercise and walk to work in the Queen City, the high quality of health care available, and the comparatively low number of smokers. Burlington also has some of the lowest rates of death from cervical and ovarian cancer in the nation; and local residents seem to eat a healthier diet, spurned on by the presence of six times as many food co-ops as the national average.

Research Milestones

Medical Grad Publishes Conflict-of-Interest Research in JAMA

During his fourth year at the College of Medicine, 2009 graduate Jared Blum, M.D., completed and presented a scholarly research project on conflict-of-interest policies of medical journals. That study, with Blum as first author, appeared in the November 25 Journal of the American Medical Association. Blum’s mentor, Research Assistant Professor of Surgery Kaleb Freeman, M.D., Ph.D., was corresponding author on the study. “We were encouraged to find that most top medical journals today have conflict-of-interest policies available for public review; this was not the case even ten years ago,” said Freeman. “However, there is substantial variation in editorial practices which may explain some of the inconsistencies of conflict of interest disclosures in the medical literature.”

Casson Fertility Study Aims to Reduce Multiple Births

A study taking place at UVM and six other centers in the National Institute of Child Health and Development’s Reproductive Medicine Network is examining a new treatment hoped to help achieve the best outcome for mother and baby where infertility treatment is in use — a “singleton” birth. Study investigator Peter Casson, M.D., professor of obstetrics, gynecology and reproductive sciences and director of reproductive endocrinology and infertility at UVM/Fletcher Allen, says the study focuses on one of the most common causes of infertility — Poly cystic Ovary Syndrome. Study participants will receive either the new drug — called luteinize — or the currently used treatment clomiphene citrate. Secondary aims of the study are to determine whether luteinize offers patients an improved quality of life and is more cost-effective than clomiphene.

Zakai Plays Lead role in Nature Genetics Publication

Assistant Professor of Medicine Neil Zakai, M.D., M.Sc., was co-first author of a study published in October in Nature Genetics that examined genetic variants of several traits of red blood cells — including size, shape and hemoglobin concentration — in order to better understand how problems with these traits can lead to such conditions as hypertension. According to the study’s authors, red blood cell disorders are associated with such commonly limited conditions as high blood pressure and other cardiovascular diseases. Apart from known disease states, such as sickle cell anemia and some hereditary red blood cell disorders, the genetic regulation of the size and shape of red cells and the amount of hemoglobin in red cells had not been previously studied. Mary Cushman, M.D., professor of medicine, was a co-author on the paper.

Colletti Participates in Collaborative Clinical Care Network

A group of researchers that includes pediatric gastroenterologist Richard Colletti, M.D., has received an $8 million grant from the National Heart, Lung and Blood Institute (NHLBI) for a 5-year project to improve the care of patients with inflammatory bowel disease through widespread collaboration.

Irvin Studies Placebo Effect in Asthma

The largest and most comprehensive study ever to evaluate placebo effects in patients with asthma has found that, though not effective in improving lung function, placebo treatment accompanied by enhanced messages designed to increase patients’ expectations of the drug therapy’s health benefit can improve asthma symptoms. Conducted by members of the American Lung Association’s Asthma Clinical Research Centers (ACRC), including Charles Irvin, Ph.D., professor of medicine, the study in the September journal of Allergy and Clinical Immunology sought to determine whether response to placebo or a standard asthma therapy can be boosted by messages that increase expectation of benefit. The study was funded by the American Lung Association and the National Institutes of Health’s National Heart, Lung and Blood Institute.

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In the mid-1960s, about eight percent of enrolled students at the country’s medical schools were women, but over the past 45 years, that number has increased to 50 percent and higher, particularly at the College of Medicine, where female students have been the majority for nearly ten years. As one of 59 women in UVM’s current first-year class of 114 medical students, Olivia Carpinello is in the majority. As one of 59 women in UVM’s current first-year class of 114 medical students, Olivia Carpinello is in the majority. As one of 59 women in UVM’s current first-year class of 114 medical students, Olivia Carpinello is in the majority.

Olive Carpinello, M.D. ’50 and her granddaughter Olivia Carpinello ’13.

Artifacts of an earlier pandemic in the Dana showcase.

The 1918–19 Flu Pandemic was called the “greatest medical holocaust in history” Best estimates put the worldwide death toll anywhere from 50 to 100 million people. The H1N1 virus, an unusually virulent strain of influenza A, was identified as the deadly culprit behind that pandemic. Ninety years later, the H1N1 virus has prominently re-emerged around the world.

This winter’s exhibit at the Dana Medical Library, H1N1 Flu 1918–19 and 2009, traces the epidemiological and historical aspects of this virus in two different centuries. The images and texts in the exhibit hope to shed some light on the virus’ impact on a world at war, on student life at UVM, and even on literary works on the shelves at the Bailey/Howe Library. Current 2009 influenza statistics from the Vermont Department of Health are monitored and posted weekly for this dynamic display.

One Family’s Legacy of Learning and Caring

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Dana Library Looks at Nine Decades of H1N1

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GROWTH OF MEMBERS OF UNDERREPRESENTED GROUPS IN UVM MEDICAL STUDENT CLASS

<table>
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<tr>
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<td>3.50</td>
<td>3.60</td>
<td>3.66</td>
<td>3.67</td>
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STUDENTS
The college received 6,022 applications for the 114 positions in the Class of 2013, who began their first year in August 2009.

- Total Medical Students: 458
- In-State: 32%
- Women: 52%
- Men: 48%
- Graduating Students: 110
- Post-Doc Fellows & Associates: 53
- MD-PhD Students: 27

Class of 2013

- Median undergraduate GPA: 3.67
- Median MCAT — Verbal: 10.0
- Median MCAT — Physical Science: 10.0
- Median MCAT — Biological Science: 11.0
- Science Majors: 59%
- Median Student Age: 24.78 years

Students come from five different countries, 23 states, and speak 13 native languages.

GRADUATES/ALUMNI

Class of 2009
Residents entered in primary care specialties (Family Medicine, Internal Medicine, Pediatrics): 41%

2009 graduates went on to residencies at nearly 40 institutions across the nation, including Stanford Hospital, Johns Hopkins University Hospital, and the Scripps Clinic.

Percentage of Vermont physicians educated or trained at the academic health center: 38%

Alumni

- Number of living alumni of the College: 4,055
- Alumni who live in New England: 47%
- Percentage of Alumni who contribute philanthropically: 37%

FACULTY

- Basic Science: 74
- Clinical: 408
- Volunteer (vt, maine, N.Y.): 1,629
- Staff: 4,54

Two College of Medicine faculty members, Professor of Medicine Burton Sobel, M.D., and Professor and Chair of Pharmacology Mark Nelson, Ph.D., were named University Distinguished Professors at Commencement 2009. A new honorific title conferred upon a select number of professors who have attained an international reputation in the areas of teaching, research, scholarship, and service.

RESEARCH SUPPORT

Total dollars: $77,808,688

The National Institutes of Health (NIH) support three Centers of Biomedical Research Excellence at UVM, which focus on neuroscience, lung biology, and immunobiology, respectively. College of Medicine researchers have also garnered three NIH Challenge Grants supported by the American Recovery and Reinvestment Act of 2009 (see page 16 for more information).

FACILITIES / PHYSICAL PLANT

Total Area: 566,500 sq. ft.

Two newest additions to the College are the Colchester Research Facility (2008) and the Courtyard at Given (2009).

Given Building: 196,000 sq. ft.
- HSF: 110,000 sq. ft.
- Courtyard at Given: 31,000 sq. ft.
- Medical Education Center: 44,000 sq. ft.
- Colchester Research Facility: 72,000 sq. ft.
- DeCoebriand: 20,000 sq. ft.
- Others: 23,500 sq. ft.

ENDOWMENTS (Market Value as of June 2009)
Department Support: $49,413,152
Scholarship: $21,946,653
Total Endowment Value: $71,359,804

PRIVATE GIFT REVENUES
Private Philanthropy to the College of Medicine from alumni, friends, and foundations totaled $6.85 million for fiscal year 2009. For more detailed information about philanthropy, see page 42.
In the fall of 2007, Frederick C. Morin III, M.D., became the College of Medicine’s 17th dean. Since then, the College has built an impressive new structure in the heart of its campus, and faced some of the toughest economic challenges in decades. Vermont Medicine sat down with Dean Morin in November to talk about the state of the College, and what lies ahead.
RICK MORIN: One of our greatest strengths is the quality of our student body. Our entering students’ grade point average has gone from about a 3.3 to nearly 3.7 in the last few years. It’s not the only thing, but it’s one important quantitative measure. Nationally, the competition for students has gotten fiercer. But we’ve continued to get progressively higher-quality students, and also a more diverse class. We’ve gone from two students from underrepresented groups per class about four years ago to 18 in our latest class. That’s a huge increase. So we’ve upped both the diversity and the quality of the class simultaneously, and every year we send graduates to the top residency programs in the nation. That’s a real credit to the quality of the education here, the reputation of the place, and the work of the admissions committee and staff.

VM: As the relationship with Maine Medical Center extends in 2011, how is the progress on building new clinical partnerships? Are any surprises or challenges you’ve seen in the first place, and most get rejected. So that’s another testament to our quality.

RM: Yes, we’re broadly represented in six of the eight working groups. There are three areas, the Biological Sciences, Neuroscience, and Public Health and Health Policy, where we are the biggest component in terms of current ongoing research, and we have a lot to offer the University in developing the other “spires.”

The point of the “spires” is to concentrate the University’s resources on areas where we can be in the top tier nationally. There are some areas where I believe we are there now. The biological sciences spire is clearly the best-developed research grouping at UVM, with outstanding investigators from the College. We have really strong neuroscience work here, for instance, in neurobiology and in neurology. We have very good behavioral work in the College’s Department of Psychiatry, in the Department of Psychology, over in Arts and Sciences, and in the College of Nursing and Health Sciences. Put that together and it makes a serious research strength.

One of the reasons I focus on success in research funding is that, in a very tangible way, it is the external world’s view of excellence. To distribute that funding, the NIH and NSF get the world’s experts in your field together in a study section that reviews all the grant applications that come through in that round, and they fund about one out of every ten. So when you get funded you’ve been reviewed by the best people in your field in the world, and they’ve determined that you are in the top 10 percent of all candidates. That’s something to celebrate. We also have faculty who regularly publish in the best journals in the world — the New England Journal of Medicine, Nature, Science. Those journals get the best submissions in the first place, and most get rejected. So that’s another testament to our quality.

RM: Along with two of our senior associate deans, Dr. Paul Takeda and Dr. Bill Jeff ries, I’ve put a lot of effort into arranging places to train UVM medical students when they’re off the Fletcher Allen campus. Fletcher Allen is still our primary partner. There is no question about that. But the number of students we’re training is increasing. We increased our class size three years ago, so the numbers of medical students in the third and fourth years are growing rather dramatically. The affiliation with Maine Medical Center is ending in a year and a half, so we have to have places to train students. In the coming years, we’ll be training more students in the State of Vermont than we ever have. We have affiliation agreements with three places: Eastern Maine Medical Center in Bangor; Danbury Hospital in Connecticut; and St. Mary’s Medical Center in West Palm Beach, Florida. The biggest of those right now is Danbury Hospital. They are ready to take two dozen students in the next year. Danbury is a big, modern, well-equipped hospital, with the busiest cardiac service in the state of Connecticut, and really wonderful facilities. Danbury provides a more diverse population for our students, with multiple languages and cultures in its population. That’s something that our students are eager to experience.

West Palm Beach, obviously, is a place that the students would be happy to go to, especially at certain times of the year! St. Mary’s has a very underserved population in its area, which would be a good experience for our students. They also have a large amount of inpatient pediatrics, and a large number of infant deliveries, something that we have less of here, so we think that would be a real asset for our students. Down the road, there could be the opportunity to recruit students from there as well.

We also have a signed agreement with Eastern Maine Medical Center in Bangor. Again, I think we’ll have maybe four-dozen students at any given time at all three of these sites, which is slightly less than what we have at Maine today. So we’ll be both giving our students more diverse choices, and we’ll be training more students in Vermont than ever before. I think it’s a positive situation for everyone involved.

VM: Research is another important mission of the College. Are surprises or challenges you’ve seen in this area?

RM: The key positive in research at the College is the strength of our faculty. We have incredibly strong investigators here. The standards they reach, their grant funding, and their rate of publication are exceedingly high. From 2007 to 2009 they have increased our federal grant funding by $14 million. And that’s before the federal stimulus package [the American Recovery and Reinvestment Act] kicked in, so that really is “swimming upstream.” Although the amount of federal funding was shrinking, we were getting more of it. And just since July, in stimulus package money we’ve received about $14.5 million to add to the total. The faculty here put in well over a hundred ARRA grants in just a few months. They took advantage of the opportunity, and have done exceedingly well.

The biggest challenge will be: what will happen after the ARRA money goes through the NIH and the federal finance agencies? Will we sustain this “bump” or will our funding drop back down to where it was before? That’s the biggest risk we have to face right now, and that’s not something we can control. We’ll have to see where that heads, but I think that our folks have done a fantastic job of getting the funding that’s been available.

One of the reasons I focus on success in research funding is that, in a very tangible way, it is the external world’s view of excellence. To distribute that funding, the NIH and NSF get the world’s experts in your field together in a study section that reviews all the grant applications that come through in that round, and they fund about one out of every ten. So when you get funded you’ve been reviewed by the best people in your field in the world, and you’ve determined that you are in the top 10 percent of all candidates. That’s something to celebrate.

VM: Research is another important mission of the College. Are surprises or challenges you’ve seen in this area? Ira Bernstein, will help us develop research. He’s won many awards, and our science is, not just on salary.

We have a signed agreement with Eastern Maine Medical Center in Bangor. Again, I think we’ll have four-dozen students at any given time at all three of these sites, which is slightly less than what we have at Maine today. So we’ll be both giving our students more diverse choices, and we’ll be training more students in Vermont than ever before. I think it’s a positive situation for everyone involved.

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VM: What about graduate students? Ira Bernstein, will help us develop research. He’s won many awards, and our science is, not just on salary. RM: Over the last six years we’ve implemented a whole new curriculum for the medical students. Now we want to look at improving the program for graduate students too. Usually, in their last three or four years, grad students are in laboratories with their faculty mentors, but for the first couple of years they’re more on their own, taking classes. We’ve now built a well-appointed common space for grad students to gather and study, which we hope will encourage a stronger sense of community and collaboration. We should be announcing our first director of graduate student education soon, and we’ve raised grad student stipends so we can compete for the best students based on how good our science is, not just on salary.

VM: Research is another important mission of the College. Are surprises or challenges you’ve seen in this area? RM: The key positive in research at the College is the strength of our faculty. We have incredibly strong investigators here. The standards they reach, their grant funding, and their rate of publication are exceedingly high. From 2007 to 2009 they have increased our federal grant funding by $14 million. And that’s before the federal stimulus package [the American Recovery and Reinvestment Act] kicked in, so that really is “swimming upstream.” Although the amount of federal funding was shrinking, we were getting more of it. And just since July, in stimulus package money we’ve received about $14.5 million to add to the total. The faculty here put in well over a hundred ARRA grants in just a few months. They took advantage of the opportunity, and have done exceedingly well.

The biggest challenge will be: what will happen after the ARRA money goes through the NIH and the federal finance agencies? Will we sustain this “bump” or will our funding drop back down to where it was before? That’s the biggest risk we have to face right now, and that’s not something we can control. We’ll have to see where that heads, but I think that our folks have done a fantastic job of getting the funding that’s been available.

One of the reasons I focus on success in research funding is that, in a very tangible way, it is the external world’s view of excellence. To distribute that funding, the NIH and NSF get the world’s experts in your field together in a study section that reviews all the grant applications that come through in that round, and they fund about one out of every ten. So when you get funded you’ve been reviewed by the best people in your field in the world, and they’ve determined that you are in the top 10 percent of all candidates. That’s something to celebrate.

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RM: We absorbed a 25 percent cut in our state funding — it looks like we’ll do better this year, so that’s a good thing. But we have taken a substantial amount, a couple million dollars, out of our budget. We got it done. Working with the department chairs, we carefully planned in December and January, and by February we had done it — we’d chosen what was most important to preserve. What we needed most is more funded investigators, and COBRE grants provide support to develop these faculty. We think this is a very realistic goal over the next three years.

VM: What else has surprised you about the College?

RM: I realized on my very first visit the cohesiveness of the University, Fletcher Allen, College of Medicine, and the state government. I didn’t appreciate as fully the cohesiveness of the faculty and the student body. We are a relatively small medical school and the students really do bond together. They really like being here and they like each other, and that feeling continues for decades after they graduate. In fact, we have some of the most attached alumni in the world. We have twice the national average of the portion of our alumni who give philanthropically to the College every year. We’re in the very top two or three positions. The community feeling of folks who have been educated and trained here is incredibly tight. This last year, Tom Sullivan, one of our alumni, has been extremely generous in his philanthropy to the College of Medicine. And it’s a natural outgrowth of his strong attachment to his medical alma mater.

VM: How do you like living in Vermont?

RM: That’s a completely different question. I really like it. That was part of the attraction for me. I love the outdoors. Hiking, biking, skating, sailing, fishing — these are the kinds of things that I have always loved to do. And Vermont is a Mecca for those activities. I’ve hiked pretty much every trail up Mansfield and up Camel’s Hump. And skied down many of them. And I’ve skied everywhere at Stowe dozens of times.

VM: And you’re a serious biker?

RM: Yes, I bike to work, and I’ve biked from here to Canada, with friends. I’ve been out trout fishing in the streams with my wife, Tracy. The place we’ve loved most is up near Waterville, it’s the north branch of the Lamoille, and it’s just gorgeous. In about a ten-mile stretch there are several covered bridges, beautiful villages, and crystal-clear water; a classic New England stream with big boulders, falls and pools, and beautiful trout.

RM: You’re UVM parents, also?

VM: Yes, we are. Our youngest, Mark, is a sophomore, and acheive success in fulfilling our missions. The current economic downturn, we’ve gotten many new grants. And recruited a whole new class since then, with our standards held high. I think the faculty and staff have really performed admirably, and I look forward to the future. The future is turbulent in medicine today, but I feel like we’ve been through the worst we’re likely to see, and we’ve still managed to nurture our best people and achieve success in fulfilling our missions. The current may be running pretty heavy, but we’re still very adept at swimming upstream.
n September 30, President Obama announced $5 billion in new medical research grants through the National Institutes of Health (NIH) as part of the American Recovery and Reinvestment Act (ARRA), an act which had already provided $8.2 billion in extramural funding to the NIH to help stimulate the U.S. economy. By mid-December, the University of Vermont had been awarded more than $20 million in ARRA funds for scientific research; of that total, College of Medicine investigators have received more than $14.5 million in new funding, for at least 38 projects led by 27 principal investigators across 14 academic divisions.

As part of ARRA, the NIH designated at least $200 million in fiscal years 2009–2010 for a new initiative called the “NIH Challenge Grants in Health and Science Research.” Through this program, roughly 200 grants are being allocated for “Challenge Topics,” defined by the NIH as studies that “focus on specific knowledge gaps, scientific opportunities, new technologies, data generation, or research methods that would benefit from an influx of funds to quickly advance the area in significant ways . . . and should have a high impact in biomedical or behavioral science and/or public health.” Approximately 20,000 applications were received for this funding, so it is an indicator of research quality that the College of Medicine received three of these highly-competitive grants, as well as a large grant from the National Institute of Mental Health.

The first Challenge Grant to be awarded delivered $1 million to fund a multidisciplinary neuroscience research project led by Rae Nishi, Ph.D., professor of anatomy and neurobiology and director of the Neuroscience Graduate Program. Nishi’s Challenge Grant, titled “Adolescent Brains, Nicotine and Endogenous Prototoxins,” aims to gain an understanding of how adolescent brains differ from adults’ brains in terms of their greater susceptibility to the addictive effects of nicotine.

“This is a collaborative effort among myself and five other scientists,” says Nishi. “It will support equipment purchases from two local Vermont companies, as well as create three to four full-time research positions and undergraduate and graduate research.

For many people, the words “economic stimulus” call to mind images of construction projects like bridge repairs and roads being repaved. But in Vermont and across the nation, the current infusion of funds into the economy also has a strong biomedical research component.
opportunities.” Collaborators on the grant include Paul Newhouse, M.D., professor of psychiatry and director of the Clinical Neuroscience Research Unit; Alexandra Potter, Ph.D., assistant professor of psychiatry; Felix Eckstein, Ph.D., professor of neurology; Donna Toufexis, Ph.D., associate professor of psychology; and Haydeh Payami, Ph.D., a genetic epidemiologist at the Wadsworth Center in Albany, N.Y.

Despite the belief that biofuels — liquid replacements for petroleum made from vegetable sources — may be better for the environment and for human health, there is limited information about the biological effects of biofuel emissions. The second NIH Challenge Grant awarded to the College, this one specifically from the National Institute of Environmental Health Sciences, will fund a collaborative project led by Naomi Fukagawa, M.D., Ph.D., professor of medicine and director of the Gerontology Unit, to compare and contrast the biological effects of emission particles from the combustion of petro- and biodiesel and the influence of age and gender on these responses.

“Our goal is to lay the groundwork for future studies,” says Fukagawa. “We’ll be looking at the mechanisms responsible for the significant relationship between airborne particles and lung and heart disease and we’ll be developing approaches to reduce the adverse health consequences of air pollution.”

According to the Surgeon General’s 2008 Call to Action to Prevent Deep Venous Thrombosis and Pulmonary Embolism, over 300,000 Americans each year suffer from venous thromboembolism (VTE), with potentially more than 100,000 fatalities per year caused by the condition. For reasons that are not yet understood, African Americans have an approximately 50 percent to 60 percent increased incidence of VTE.

The main limitation to studying this disparity is the paucity of African Americans in most large-scale epidemiological studies. The new Challenge Grant awarded to Assistant Professor of Medicine and hematologist Neil Zakai, M.D., by the National Heart, Lung and Blood Institute will support his secondary analyses on VTE event data from two large studies. Zakai will develop a prospective cohort study with sufficient numbers of African Americans and European Americans to evaluate racial disparities in VTE in the United States. An understanding of the reasons for this disparity will guide next steps to formulate public health policies to address this disparity.

James Hudziak, M.D., professor of psychiatry, medicine and pediatrics and director of the Vermont Center for Children, Youth and Families, is the project’s principal investigator. He and the research team will rely on a unique application of genetic tools — single nucleotide polymorphism (SNP) and copy number variation (CNV) with genome wide association study — to help search for clues to the genetic sources of psychiatric conditions that develop during childhood.

“\textit{We will use genome-wide association approaches to look at the possible association of almost one million SNPs with specific behaviors and disorders to identify one small thing that changes in the genome},” says Hudziak. “CNV identifies larger genetic changes that you would never pick up by looking at chromosomes using microscopy. This approach will allow us to look at a wide variety of genes involved in a behavioral disorder such as Autism Spectrum Disorder.”

The research team hopes the study’s results will lead to improved diagnostic and treatment approaches for childhood psychiatric disorders. UVM psychiatry faculty members Robert Althoff, M.D., Ph.D., and David Retzler, M.D., serve as co-investigators on the study.

Dr. Nishi has already spent tens of thousands of dollars on equipment from local firms, and new research technichians and nurse positions will be created or protected by the funding for other Challenge Grant programs. The NIH Challenge Grant, which brings in $2.8 million in funding the first year and $1 million the second year, will create seven new jobs at the three U.S. sites.

As with all NIH funding, the primary focus is on developing new understanding and opportunities for treatment. But the economic effect of the grants will be palpable. “Investment in biomedical research actually stimulates new job growth very effectively,” Senior Associate Dean for Research Ira Bernstein, M.D., ’83 noted to the Burlington Free Press in December. “The scientific community is an entrepreneurial community. They vote to the occasion to compete for these awards.”

Reinvesting in Research

In addition to the Challenge Grant researchers featured here, College of Medicine investigators who have officially received ARRA funding as of December include: Gary Mawe, Ph.D., professor of anatomy and neurology; Rodney Parsons, Ph.D., professor and chair of anatomy and neurobiology; Christopher Franklyn, Ph.D., professor of biochemistry; Ralph Budd, M.D., professor of medicine and director of immunology; Charles Ivan, Ph.D., professor of medicine and director of the Vermont Lung Center; Benjamin Suratt, M.D., associate professor of medicine; Teresa Ruiz, Ph.D., associate professor of molecular physiology and biophysics; Marilyn Cipolla, Ph.D., associate professor of neurology and obstetrics, gynecology and reproductive science; Berta Celler, Ph.D., research professor of family medicine in the Office of Health Promotion Research; Mark Nelson, Ph.D., professor and chair of pharmacology; George Wellman, Ph.D., associate professor of pharmacology; and David Krag, M.D., professor of surgery and Vermont Cancer Center surgical oncologist.

Biomed Research Spawns Businesses

It was 1973, and UVAl, which was then known as the "Father of the problem-oriented medical record," was founded by Dr. John Nishi. It was a small business in his graduate student years, but it has grown and now employs over 100 people worldwide. In 2010, UVAl was acquired by Vermed, a company that specializes in developing devices for in-vitro research.

Vermed specializes in the development of microfluidic technologies. The company has developed several products, including a device for measuring microfluidic flows, which has been used in a number of medical applications. Vermed’s technology is protected by more than 100 patents.

Today, UVAl’s Office of Technology Commercialization Transfer and the UVAl—Vermont Associated Center for Emerging Technologies helps faculty members bring new ideas to market. One recent venture is Vermed, founded by Benjamin Littenberg, M.D., Charles Maclean, M.D., and Michael Cognon. Vermed’s computerized information system should vastly improve the treatment of chronic conditions such as diabetes, and as a result provide good jobs for the local economy.
A commitment to serving others is at the heart of 1952 Nobel Peace Prize recipient Albert Schweitzer’s “Reverence for Life” philosophy, which led the former theologian, musical scholar, and renowned organist to change careers, earn a medical degree at age 30, and devote the rest of his life to caring for people in need, including those at his hospital in Lambarene, Gabon, in Africa.

UVM medical students tread this same path today in many similar ways, through projects directly connected with Schweitzer’s legacy, and by following their own self-directed need to engage and help their community.

Seven second-year medical students are fostering Schweitzer’s legacy through five service projects they are conducting as 2009–10 Schweitzer Fellows. One of only eleven such programs in the U.S., the New Hampshire/Vermont Schweitzer Fellows Program annually selects a group of health professional students, students in health-related disciplines and law students who seek to help those currently underserved by the healthcare system. Each project must provide at least 200 hours of service.

In one such project, second-year medical student Piyush Gupta began a daily hospital-based tutoring program called “Bedside Brainiacs” at Vermont Children’s Hospital at Fletcher Allen Health Care. Gupta’s program, focused on helping kids keep up with schoolwork while spending an extended time in the hospital, focused on creating a team of tutors to ensure that pediatric patients requiring long-term hospital stays can keep up with class assignments.

“Upon returning to school, these children are behind in their work and try to catch up to their peers, which may be difficult, since they may still not be functioning at their optimal level,” says Gupta, who partnered with Fletcher Allen’s Volunteer Services office on the program. Since this program’s launch in 2009, Gupta has involved his College of Medicine classmates as well as UVM undergrad students as volunteer tutors.

Like Piyush Gupta ’12 (above, right) who founded the Bedside Brainiac educational program for young patients, medical students constantly weave community service and improvement into their curriculum.
Second-year students Jessie Kerr and Patrick Butsch combined service and learning far from the medical campus this past summer when they traveled for three weeks through Peru. Thanks to one of seven travel awards funded by the College’s Medical Alumni Association in 2009, Kerr and Butsch first journeyed to the Caritas Felices Girls’ Home in southwest Peru, about an hour outside of Lima. The facility is the only federally-funded home for sexually abused girls in Peru. Run by two Catholic nuns and many volunteers, it is a refuge for about 45 girls aged 2 through 18. It was, of course, deeply affecting to work with the girls, Kerr explains, and though they found the experience to be emotional and sad, they were inspired by the strength and support the girls receive at the home.

Kerr and Butsch introduced the Caritas Felices girls to a morning exercise routine (though volleyball is regularly played, there was previously no structured exercise) and they brought with them more than 100 tooth fluoridation kits to use to treat the girls — an important contribution in an area where toothpaste is in short supply. The remaining kits were used when Kerr and Butsch traveled north to the Napo River area in the Amazon Basin. They worked with a Peruvian doctor in the town of Iquitos, and then ventured by boat up the Napo to study the vaccination program for tropical diseases in that area. Kerr and Butsch found the project richly rewarding, and they hope that the connections they have established, particularly with DB Peru, the charitable health care organization that facilitated their journey, can be utilized by other medical students for service/learning projects in the future.

Closer to home, with the H1N1 influenza pandemic in the news every day this fall, the nation’s airwaves and newspapers were filled with advice on how to avoid transmitting or catching the virus, and how to secure one of the doses of vaccine that were in short supply. But even in a country where there is previously no structured exercise) and not being able to afford to stay home (10.8 percent). In addition, the study found that families with three or fewer paid sick days indicated much greater difficulty in taking children to physician visits than those who had more than three paid sick days (34.4 percent compared to 13.1 percent). “We conclude that the availability of paid sick days benefits Vermont children’s health,” the students stated in the study.

The Sick Days Coalition used the press conference and the students’ research as part of their continuing work for passage of H.382, a Vermont bill that seeks to allow working Vermonters to earn up to seven paid sick days annually.

Conant and fellow students in the group presented their research findings at the American Public Health Association national meeting in Philadelphia, Pa., in November. In addition to Conant, members of the public health project group included Dino Barhoum, David Diller, Annya Fischer, Marisa Hori, Hunter Moore, and Kathryn Richard.

According to a 2009 U.S. Department of Agriculture report, more than 12 percent of Vermont households are “food insecure” — meaning they do not have consistent access to enough food on a daily basis. Helping families in need achieve food security is the aim of a community food shelf, which relies on citizens and businesses for donations to meet this objective. However, the nutritional quality of the donations is not always addressed.

In collaboration with the Burlington, VT–based Chittenden Emergency Food Shelf, a project led by second-year medical students is seeking to ensure that the local food shelf not only takes in enough donations, but receives food that is truly nutritious.

Nutrition as a public health issue has been the focus of student projects over the past six years. This latest group developed a poster promoting a list of “Food Shelf Friendly”-designed foods and associated stickers to be placed on shelves at several area grocery stores. “The list emphasized vegetables, fruits, and whole grains, and included a variety of foods paying attention to calories, protein, saturated fat, and sodium,” says Dr. Carney. “We collected data from seven stores about how much food is being donated normally,” explains second-year student Isaac Noyes. “Then, in early November, the poster and stickers went up at the three stores, and the poster with a tear-off list of foods to donate went up at two stores.” Two stores, which serve as the study’s comparison of methods, had neither of these interventions.

The team’s final results will be presented at the College’s Public Health Project Poster Session and Celebration in late January 2010, “an event that allows this group and 14 others to publicly share their insights into public health,” says Dr. Carney. “And medical students who understand public health and the community will be better physicians.”

In Schweitzer’s Footsteps

Beside Puysh Gupta’s bedside brainiac tutoring program, the Schweitzer Fellows 2009–10 projects at the College of Medicine include:

Helping Seniors Live Independently by Reducing Preventable Falls

Students Jane Roberts and Heather Viani are working with Burlington’s Cathedral Square Corporation and the Senior’s Aging Safety at Home initiative to help reduce preventable falls and allow seniors to continue to live independently.

Project HOPE (Health Outreach & Prevention Education)

Medical student Derek Huang aims to empower refugees community members through Project HOPE, a training and then community-based project — by providing tools to ensure they play a lead role in their health care and live healthier lives. His work with the Community Health Center of Burlington could provide a model for use with other ethnic groups and also includes the development of health education modules.

MISSION-VT

Working with the division of public psychiatry at UVM and the Vermont Department of Mental Health, Michael McQuiggan has been conducting a project designed to facilitate the implementation of a new information system that links data about veterans’ statuses, public court records, and arrest records with agencies that provide services for this population, such as support groups and jail diversion programs. The toolkit was piloted by students at the College of Medicine and Vermont Law School in South Royalton.

Environmental Health Education and Outreach

Megan Malgeni and Alex Folkl’s project was inspired in part by Albert Schweitzer’s role in Medicine. Their goals are to integrate environmental health education into the College of Medicine curriculum, and improve environmental health outreach activities. This past summer, they created four environmental health modules on radon, clean drinking water, mold, and pandemic flu for the Vermont Department of Health to present to Town Health Officers.

In the 2009 Vermont Med Yearbook, scenes from three student community projects: Patrick Butsch ‘12 (top) gives a fluoride treatment to Peruvian girl Joanna Conant ‘11 and Jan Carney, M.D. (above) at the Sick Days Coalition’s press conference in front of Burlington’s Barnes Elementary School; (at right) Daniel Carbello ‘12 affixes a “Food Shelf Friendly” sticker at City Market.
During 2009, the Department of Anatomy and Neurobiology (ANNB) was active in research, graduate training, and medical and undergraduate student teaching. The Center of Biomedical Research Excellence (COBRE) in Neuroscience completed its eighth year of funding and supported four junior faculty research programs, two multi-user research cores and a Translational Core. The Translational Core strengthens interactions between clinical and basic neuroscientists, funds research opportunities for medical students, and provides stipends for a summer undergraduate research program. ANNB faculty had extramurally supported research programs in molecular and developmental neuroscience, neural control of G.I. function, and environmental toxicology.

The University-wide Neuroscience graduate training program continued to grow with 22 students currently enrolled. Rae Nishi, Ph.D., is the Director for this four-year-old graduate program. Cynthia Forehand, Ph.D., serves on the Steering Committee and many other ANNB faculty serve as student mentors.

ANNB faculty teach in multiple venues, including undergraduate and graduate medical education, health professional programs, and graduate and undergraduate student courses. Ellen Cornbrooks, Ph.D., and Jean Szilva, M.D., received awards from the medical Class of 2011 in recognition of their dedication and commitment to the students’ learning.

ANNB faculty made significant professional contributions at the national and international levels. Dr. Nishi was president of the Association of Neuroscience Departments and Programs and oversaw its merger with the Society for Neuroscience. Dr. Nishi is also president of the Vermont Chapter of the Society for Neuroscience where she organized the very successful 4th Annual Neuroscience Research Forum. Victor May, Ph.D., continues as a member of the Scientific Advisory Committee for International Symposia on VIP, PACAP and Glucagon-Related Peptides and is serving as co-editor for the 9th International Symposium publication. Dr. Forehand was a member of the USMLE Neurology/Neuroscience Task Force and National Board of Medical Examiners Step 1 Interdisciplinary Review Committee. Gary Mawe, Ph.D., served as a member of the Advisory Board of the International Foundation for Functional Gastrointestinal Disorders and a councilor for the American Neurogastroenterology and Motility Society. Rodney Parsons, Ph.D., served as the chair of the External Advisory Board for the Howard University Special Neuroscience Research Program. ANNB faculty were invited speakers at many international scientific meetings, continued to serve on NIH Study Sections and NSF Program Review Panels, were members of scientific journal editorial boards, acted as manuscript reviewers and participated in College, University, state and national committees.

Selected Highlights

- Grants from the National Institutes of Health for: Center for Neuroscience Excellence (COBRE), Neural Control of the Gallbladder; Molecular Regulation of TIMP-3 in Neuron Cell Cycle Arrest, Cystatin-induced Plasticity of Micturition Reflexes.
- U.S. Patent applications filed by Victor May, Ph.D., and by Matthew Rand, Ph.D.
Currently, anesthesiology faculty includes 40 attending physicians who deliver over 24,000 anesthetics at Fletcher Allen and more than 12,000 pain treatment procedures at our Pain Clinic. There are currently 20 residents in our core training program, including two PGY-1 residents in our newly added four-year curriculum, as well as three pain medicine fellows.

During the past academic year, our faculty presented their data at national meetings in San Antonio and New Orleans, and our trainees presented posters at the New England Resident Conference in Boston and the American Society for Regional Anesthesia and Pain Management in California.

We have continued successful implementation of an anesthesiology information system that integrates our preoperative evaluation, surgery scheduling, and intraoperative pharmacologic and physiologic data. William Magrabi, M.D., Ph.D., has been invited to work with other anesthesiologists in a national effort to pool preoperative, intraoperative, and postoperative demographic and physiologic data in order to track perioperative outcomes and generate quality initiatives.

Christopher Chase, M.D., completed the Harvard acupuncture training program and is running an acupuncture research clinic to study the feasibility of treating chronic pain patients with acupuncture. In collaboration with the Department of Pediatrics and Perioperative Nursing, Monika Modlinski, M.D., has significantly contributed to the ongoing success of the “Comfort Zone,” a multidisciplinary effort to provide comprehensive care of pediatric patients undergoing sedation for procedures performed at Fletcher Allen.

Kevin Ahlert, M.D., David Adams, M.D., Carlos Pino, M.D., and Christopher Visconti, M.D., continue their participation in the Vermont Integrated Curriculum in the Neural Sciences course. Likewise, Dr. Pino, Stephen O’Donnell, M.D., and Mitchell Tsai, M.D., continued our commitment to the Bridge Curriculum for medical students entering their third year. Several faculty members provide ongoing mentoring for medical students and continue an active role on the UVM Admissions Committee. Dr. Williams, M.D., and Matthew Fish, M.D., organized another successful Vermont Perspectives in Anesthesia in Stowe last March, and Mark Hamlin, M.D., is course co-director for the Northern New England Critical Care Conference. A number of our faculty members provided anesthesia during the year for surgical initiatives in Guatemala, Haiti, and Africa.

Selected Highlights

- During the past academic year, anesthesia faculty members had nine manuscripts accepted for publication in such venues as the Journal of Clinical Anesthesia and Regional Anesthesia and Pain Medicine.
- The Vermont Snow Sports Research Team, led by Robert Williams, M.D., received continued grant support for their research on helmet use among skiers and snowboarders.
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The Biochemistry Department faculty continued a high level of productivity in their research endeavors. NIH funds continued in the form of a Career Development Award, as well as an individual pre-doctoral fellowship. In addition, two faculty garnered ARRA administrative supplements for their programs. Eight publications resulted from collaborative efforts of faculty within the department and eleven others from national or international collaborations. Further evidence of the recognition of our research accomplishments by our peers is provided by the many invitations our faculty received to present their work at prestigious national and international meetings and symposia.

A true highlight of our department was the 15 graduate students training with departmental faculty. In 2009, three students earned their doctorate and one earned a master’s degree. Collectively, these students produced ten first author and 12 co-author publications. During their tenure as graduate students, they attended seven national meetings and one international meeting, and were fortunate enough to present portions of their work in those venues. Eleven of the 27 studies published represent first authorship by seven continuing graduate students. In addition, nine students attended six national and/or three international meetings in order to present their work. The incredible success of our students is a testament to our faculty’s commitment to graduate education.

Christopher Francklyn, Ph.D., was invited to detail his work in a plenary talk at the 2008 International Conference on Aminoacyl-tRNA Synthetases in Meylan, France, for which he also served on the organizing committee and where Ethan Guth, a graduate of our department, presented his work in a plenary talk. Anand Minajigi, a graduate student in Dr. Francklyn’s laboratory, published a notable paper in Proceedings of the National Academy of Sciences. Due to their substantial international reputations, several of our faculty continue their work on editorial boards. Kenneth Mann, Ph.D., received the distinction of a “Pioneer in Hemostasis” at the 50th Anniversary meeting of the Annual Meeting of The American Society of Hematology, an honor that was afforded to only three scientists in that field. National and international service is evident in the continuing work of Paula Tracy, Ph.D., as one of the two program chairpersons for the XXII Congress of the International Society of Thrombosis and Haemostasis.

As a result of research activity in the department, 27 outstanding, peer-reviewed manuscripts, and eight invited book chapters or reviews were published by the faculty. Faculty continued their work on 12 federally funded projects, four of which were within a Program Project Grant from the National Heart, Lung and Blood Institute.
The Department of Family Medicine enjoys remarkable success in 2008–09. Sahir Patel, M.D., and Whitney Calkins, M.D., have joined our clinical faculty. New faculty Ursula McVeigh, M.D., Timothy Burdick, M.D., and Michael Sirois, M.D., bring expertise in palliative care, medical informatics, and underserved population care. Among accomplishments: Kathleen Boland, M.D., was named Faculty Teacher of the Year; and Roger Kessler, Ph.D., was recognized as Senior Scientist, by the AAFP National Research Network.

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The department is proud to contribute to UVM's renowned excellence in primary care education. Our faculty teaches in the Family Medicine Clerkship and Acting Internship. Doctoring in Vermont, Doctoring Skills, Medical Student Leadership Groups, and Palliative Care, and Health and Human Ecology electives. Countertop national trends, overall interest in family medicine is substantially increased, and our 2009 graduating class included record numbers going into family medicine.

Our Residency Program has an outstanding reputation. The majority of our recent graduates accepted practice positions in Vermont. Our entering residency class is topnotch; curriculum improvements include office procedural training, chronic care modules, and gynecologic training sites. The residency education and informed decision making (pre-diabetes), global and ecological health, chronic care, pediatric care, adolescent risk-taking, innovations in patient care, and telemedicine care on the Vermont AHEC Program, and the Office of Health Promotion Research.

Selected Highlights

- Grants from Health Resources and Services Administration for primary care residency training, from the American Cancer Society and National Cancer Institute, from State of Vermont Health Department, from the U.S. Department of Agriculture, and from the Agency for Health Research and Quality.

The Department of Medicine comprises 131 full-time faculty and over 350 part-time faculty. In 2009, new faculty members joined the department in Immunobiology, Cardiology, Dermatology, Pulmonology, Hematology/Oncology, Endocrinology, Infectious Disease, General Internal Medicine, Rheumatology, and Nephrology. The department is a national leader in research. This year we held the second department-wide Research Day on May 1, which highlighted the strength and breadth of the research enterprise. Department faculty published 330 manuscripts, reviews, chapters, and books. A large number of these publications were in exceptionally high impact journals, including the Neu-England Journal of Medicine and Science. Faculty members serve on NIH study sections, are editors of journals, and are members of editorial boards.

The faculty participate extensively in the VC curriculum and more than 100 trainees including house officers, chief medical residents, undergraduate students, graduate students and post-doctoral fellows (M.D. and Ph.D.) are actively engaged in research, education and clinical care in the department. The faculty received a number of honors and awards this year for their contributions to education. Renee Stapleton, M.D., and Erik Rafa, M.D. were named the Teachers of the Year by the Medicine Housestaff. William Hopkins, M.D., received the Foundations Teaching Award and the Foundations Course Director Award from the Class of 2011. The course that he directs, Cardiovascular, Respiratory & Renal Systems, won the award for Outstanding Foundations Course for the third year in a row. Benjamin Flank, M.D., and Sadie Mills, M.D., were chosen by the Class of 2010 for the Humanism and Excellence in Teaching Award. Florian Foerg, M.D., was selected for the Leonard Tow Humanism in Medicine Award from the College of Medicine. Ralph Budd, M.D., was named one of the 2009–2010 University Scholars. Richard Pinkney, M.D., was selected as a Frymoyer Scholar for the 2010 and 2011 academic years.

One University honor of particular note was bestowed upon Burton Sobel, M.D., who was one of the first faculty members to be named a University Distinguished Professor, a new honorific title conferred upon a select number of professors who have attained an international reputation in the areas of teaching, research, scholarship, and service. The department provides extensive clinical care at Fletcher Allen Health Care and numerous Vermont and New York State sites, and is very engaged in the Vermont Blueprint for Health Project, and the Medical Home Project, which is an important part of the Blueprint. Through these efforts, department members are working to improve primary care office efficiency and service quality for patients in Vermont.
The Department of Microbiology and Molecular Genetics continues to play a major role in the research and educational missions of the College and the University. In the research arena the department has two major foci: cellular microbiology and pathogenesis and fundamental molecular genetics with an emphasis on nucleic acids and protein/nucleic acid interactions. The cellular microbiology laboratories of Gary Ward, Ph.D., and Mariana Matrajt, Ph.D., study toplasma invasion and differentiation, respectively. Dr. Ward is co-investigator on the NIH COBRE Award supporting immunobiology and microbiology and also plays a national role as the elected Treasurer for the American Society for Cell Biology. Oral pathogens are the focus of the laboratory of Keith Mintz, Ph.D., while Douglas Johnson, Ph.D., is working in molecular genetics with an emphasis on nucleic acids and protein complexes associated with energy metabolism and bacterial cell adhesion. The faculty published over 20 articles in prestigious journals as well as serving on editorial boards for several journals. Faculty were honored as symposium organizers and invited speakers at several prestigious international meetings. David Warshaw, Ph.D., was the Program Chair for the 53rd Annual Biophysical Society Meeting attended by 1500 international scientists. At this meeting, Michael Rademacher, Ph.D, organized a symposium on “Genes in Energy Metabolism”, Kathleen Trybus, Ph.D., spoke at a symposium on “Intracellular Cargo Transport by Single Molecular Motors”, and Christopher Berger, Ph.D., spoke at the Motility Subgroup. Theresa Ruiz, Ph.D, organized a symposium on “Advances in Structure/Function Determination by Cryo-Electron Microscopy” at the International Microscopy and Microanalysis Meeting. Faculty play key service roles in many editorial boards. Dr. Ward was an invited speaker at four international meetings this year and gave a keynote address at the International Conference on DNA Repair and Mutagenesis, which is held every five years. Drs. Doublie, Pederson, and Wallace serve on NIH or NSF review panels and a number of editorial boards. Cutting-edge RNA biochemistry and function are studied in the labs of John Burke, Ph.D., and Gregory Gilmarin, Ph.D. Umadevi Wesley, Ph.D., is a cancer biologist who works on the role of proteases in cancer progression and is supported by the COBRE in neurosciences. In February, Neil Sarkar, Ph.D., a bioinformatician, joined the department. Dr. Sarkar, who also has an appointment in the Center for Clinical and Translational Science (CCTS) was an invited speaker at numerous prestigious meetings and serves on several editorial boards.

Pederson, Ph.D, Susan Wallace, Ph.D., and Scott Moczulski, Ph.D., from Biochemistry and Mark Roule, Ph.D., from Molecular Physiology and Biophysics, is supported by multiple RO1s and an NCI-Funded Program Project that focuses on bioinformatics, crystallographic, molecular, and biochemical approaches to study DNA damage and repair. Dr. Double is a member of the Faculty of 1000 and was the elected co-organizer of the 2008 FASEB summer conference on Nucleic Acid Enzymes. Dr. Pederson was an invited speaker at the 2008 Salk Institute meeting on DNA Replication and Gxenome Stability. Dr. Wallace was an invited speaker at four international meetings this year and gave a keynote address at the International Conference on DNA Repair and Mutagenesis, which is held every five years. Drs. Doublie, Pederson and Wallace serve on NIH or NSF review panels and a number of editorial boards. Cutting-edge RNA biochemistry and function are studied in the labs of John Burke, Ph.D., and Gregory Gilmarin, Ph.D. Umadevi Wesley, Ph.D., is a cancer biologist who works on the role of proteases in cancer progression and is supported by the COBRE in neurosciences. In February, Neil Sarkar, Ph.D., a bioinformatician, joined the department. Dr. Sarkar, who also has an appointment in the Center for Clinical and Translational Science (CCTS) was an invited speaker at numerous prestigious meetings and serves on several editorial boards.

In her lab, Dr. Susan Wallace and colleagues study DNA damage and repair.
Neurology
Robert Hamill, M.D., Chair

The Department of Neurology programs in teaching, clinical, and laboratory-based research, and clinical care remain productive and strong. In education, Neurology faculty have leadership roles in the translational core of the COBRE grant in Neuroscience, the University-wide extramurally funded program designed to enhance neuroscience research and mentorship of graduate students and junior faculty, as well as postgraduate residents in neurology, psychiatry and neurosurgery. Neurology faculty are sought after to participate in continuing medical education programs locally and regionally, and a number of faculty have participated in national and international symposia.

The hospital-based and ambulatory clinical programs in Neurology continue to expand. We have recruited two new faculty who are superbly trained in general neurology as well as fellowship-trained in neuropsychology, neuromuscular disease and multiple sclerosis. The Fletcher Allen Vermont Regional Sleep Center now has a total capacity of eight sleep laboratories. On the hospital level, the Stroke Program has provided excellent patient care and was recognized by both the American Heart Association (AHA) and the Joint Commission (JCAHO).

Our clinical and laboratory investigations in cerebrovascular disease (stroke and eclampsia) have made noteworthy progress. Mark Gorman, M.D., associate professor of Neurology and Director of the Stroke Program at Fletcher Allen, is the ‘Co-Neurologist’ for the Insulin Resistance Intervention after Stroke (IRIS) trial.

Laboratory studies by Marylin Cipolla, Ph.D., Professor of Neurology, Obstetrics and Gynecology, and Pharmacology, have drawn national and international attention as well. A second area of translational neuroscience that has drawn national and international recognition is the work of professor Margaret Vizard, Ph.D., who has made substantial contributions in system neuroscience.

Selected Highlights
Neurology faculty contributed 72 publications to biomedical literature, were awarded 24 grants from the National Institutes of Health (NIH) and other funding agencies such as American Heart and Muscular Dystrophy Associations, and received grant funding for 31 clinical trials from the NIH and the biopharmaceutical industry. Six faculty are members of NIH study sections or research review panels for major foundations or research review panels.

Obstetrics, Gynecology and Reproductive Sciences
Mark Phillippe, M.D., Chair

This department has demonstrated continued success in 2009 with academic, research and education programs in reproductive medicine and science. Our full-time departmental faculty consisting of 21 physicians, four Ph.Ds, six nurse midwives, four nurse practitioners and one physician assistant, increased this year with the recruitment of Kristin Wright, M.D., as a new reproductive endocrinology and infertility (REI) faculty member. Recruitments were also initiated for a Maternal Fetal Medicine division director, an Ob/Gyn generalist and another REI. We celebrated the graduation of three chief residents followed by the arrival of three new first year residents and a new REI fellow.

Academic highlights included the tenure appointment for Stephen Brown, M.D., and the promotion of Natalia Gokina, Ph.D., to research associate professor. Ira Bernstein, M.D., was appointed the senior associate dean for research for the College of Medicine, and Julia Johnson, M.D., became the Ob/Gyn department chair at the University of Massachusetts. Appointments included Marjorie Meyer, M.D., as the interim director for MPRA, Peter Casson, M.D., as the division director for REI, and Elizabeth Bonney, M.D., as the director for the Reproductive Science Research division. Mark Phillippe, M.D., completed his fourth year on the Advisory Council for the NICHD, and Dr. Bernstein and Bonney continued to serve on NIH research grant review committees.

Research highlights included the acquisition of over $2 million in grants from NIH and others to support faculty research. Dr. Casson had a productive first year with the NIH-funded Reproductive Medicine Network. Peter Cherquiury, M.D., continued to chair the Pernatal IMPACT group for the Institute of Healthcare Improvement. Dr. Meyer was an invited speaker at the American Society of Addiction Medicine meeting, and Eleanor Capless, M.D., served on the NEPERG (planning committee to develop regional perinatal quality initiatives). During our eighth annual departmental Education Retreat in April, Catherine Spong, M.D., from the NIH was our invited guest lecturer.

Clinical highlights included ongoing utilization of the DaVinci surgical robot for minimally invasive surgery, especially by Cheung Wong, M.D., and Emmanuel Soutlanakis, M.D., our gyn-oncologists, and Julie LaCombe, M.D., our urogynecologist. Over 4,000 obstetrical ultrasounds were performed under the direction of David Jones, M.D., and over 2,000 gynecological procedures under the direction of Elisabeth Wegner, M.D. Kelley Clark, M.D., successfully incorporated her obstetrical simulation program into the clinical teaching program for the Ob/Gyn residents and subspecialty fellows. Roger Young, M.D., who was named to the national March of Dimes board, continued to enhance the breadth of services being provided by the physicians, CNMs and APRNs within the ObGyn generalist division.
The past year has been successful for the Department of Pathology and Laboratory Medicine. The following paragraphs highlight our mission in the three areas of our mission.

The research focus of the department continues to be Environmental Pathology and Cardiovascular Disease/Thrombosis. The research focus of the Environmental Pathology investigators are asbestosis and asthma with an emphasis on oxidative stress. The Laboratory for Clinical Biochemical Research (Russell Tracy, Ph.D., director) at our Colchester Facility is the center for cardiovascular research in the department. The cardiovascular research group works in the area of molecular and genetic epidemiology and has one of the principal laboratories in the country. Our Division of Experimental Pathology, directed by Kum Cooper, M.D., is focused on translational research and has led to our department being in the top 10 percent for invited presentations at the premier national anatomic pathology meeting. The department has 38 extramurally funded projects across these areas and wrote 172 publications.

The department has an active graduate student program offering a Masters Degree in Environmental Pathology and a Ph.D. degree through the Cell and Molecular Biology Program. Our highly competitive clinical training programs include 16 residents and three fellows. Our faculty is heavily involved in the Vermont Integrated Curriculum (VIC) at all levels. This past year eight faculty members were nominated for VIC teaching awards with four being nominated for more than one award. Faculty also teach in the Fletcher Allen School of Cytotechnology, whose students score at the top on their national qualifying exams every year. All three students won awards at the national cytotechnologist meeting for the best research presentations. Finally, our faculty also teach courses and mentor students in the College of Nursing and Allied Health at UVM.

Current grants include three National Institutes of Health R01 grants in ACL risk injury factors, biomarkers of cartilage metabolism and osteoarthritis, and progressive scoliosis, respectively. Noted publications have occurred in the Journal of Bone and Joint Surgery, American Journal of Surgery, and Spine.

Selected Highlights

- Grants: National Heart, Lung and Blood Institute, National Human Genome Institute, National Cancer Institute, and the Vermont AHS Department of Disabilities, Aging and Independent Living.
- Among 172 publications by faculty were those in Blood, Atherosclerosis, Annals of Occupational Hygiene, Journal of Cell Biology, and Advances in Anatomic Pathology.
- Russell Tracy, Ph.D. was honored as a University Scholar, the highest academic honor awarded by the University of Vermont.
The Department of Pediatrics was voted Clinical Department of the Year for its outstanding teaching efforts. In addition, our faculty continue to play leadership roles in national organizations, and continue editorships of publications for the American Academy of Pediatrics (AAP) and AAP Grand Rounds (the monthly AAP newsletter).

From a research perspective, we continue to receive federal, state, and foundation grants and project awards. We are currently focusing our research excellence in the areas of health outcomes in neonatology, gastroenterology, and in pediatric offices across our state, as well as in translational research, particularly in the field of cancer and nutrition, and in a variety of roles in national organizations, and continue editorships of publications for the American Academy of Pediatrics (AAP) and AAP Grand Rounds (the monthly AAP newsletter).

The Department of Pediatrics continued to make substantial contributions to the academic mission of the College of Medicine and the University. In the area of research, the department published 30 peer-reviewed articles in top biomedical journals. Departmental research was cited in other publications nearly 2,000 times in the past year. The department’s research effort was largely focused on understanding the function and dysfunction of the vascular and cerebrovascular systems, providing fundamental new insights and new therapeutic modalities in the areas of urinary incontinence, cerebral vasospasm, regulation of vascular tone, cell migration, modulation of sympathetic innervation and ion channel function, gene expression changes in hypertension and following exposure to applied and how computationally active neurons regulate regional blood flow in the brain.

Nationally, faculty members served on grant review committees of the NIH and the American Heart Association. Faculty members also serve on numerous editorial boards, including Circulation Research, Molecular Pharmacology, and the American Journal of Physiology. Departmental members support the College of Medicine’s efforts to expand its national and international symposia. Extramural support remained strong, with a total funding of nearly $4 million from the NIH, American Heart Association, foundations, and industry. New NIH grants were awarded, including a prestigious 10 Year MERIT (Method to Extend Research in Time) Award. The faculty were active participants in several NIH training grants for graduate and postdoctoral trainees. The department continued to receive generous support from the Totman Medical Research Trust to support an interdepartmental research effort to understand cerebrovascular function and disease. Mark T. Nelson, Ph.D., was inducted as a Fellow of the Biophysical Society and was one of the first four University Distinguished Professors. William Jeffries, Ph.D., newly recruited senior associate dean for medical education, joined the faculty as an associate professor.

The department continued its high quality teaching and mentoring of medical, graduate, and advanced undergraduates as well as to postdoctoral fellows. This effort included one-on-one mentoring in research laboratories, didactic lectures in Molecular and Cellular Pharmacology, Toxicology, Medicinal Chemistry, Cancer Biology, and Molecular Biology, and Introduction to Pharmacology. The department also now offers a Minor in Pharmacology for undergraduates. The Pharmacology faculty taught in virtually all courses in the Foundations of the Vermont Integrated Curriculum, as well as in a Medical Summer Pharmacology course.

The College of Medicine and the University.

DEPARTMENT OF Pediatrics
Lewis R. First, M.D., Chair

DEPARTMENT OF Pharmacology
Mark T. Nelson, Ph.D., Chair

Selected Highlights
Faculty and house staff contributed more than twenty presentations and workshops at the annual Pediatric Academic Society meetings, and produced more than sixty different publications this past year in such journals as Cancer Research, Pediatrics, Journal of Pediatric Gastroenterology and Nutrition; Pediatric Critical Care Medicine. Faculty are officers or Executive board members of such organizations as the American Board of Pediatrics, the Council on Medical Student Education in Pediatrics, and the National Board of Medical Examiners.

Jerrold Lucey, M.D. (center) was presented with the Howland Medal from the American Pediatric Society in May. With him are George Lamont, M.D., and department chair Lewis First, M.D.
Selected Highlights

Research funding in the department included five R01 grants from the National Institutes of Health. Faculty published in such journals as the Journal of the American Academy of Child and Adolescent Psychiatry, Academic Psychiatry, Addiction Science & Clinical Practice, Journal of Medical Imaging, and Academic Radiology.

DEPARTMENT OF Psychiatry

Robert Pierattini, M.D., Chair

Research in the Department of Psychiatry focuses on substance use disorders, the neuropharmacology and functional imaging of memory disorders, and the classification and genetics of childhood psychopathology. Stephen Higgins, Ph.D., Sarah Heil, Ph.D., and Stacey Sigmon, Ph.D., continue their collaborative research on addiction to cocaine, opioids, and tobacco, supported by nine NIH research grants. They are gaining special recognition for their contributions to reducing drug use in pregnant women and other special populations, and launched new projects on the neurobiology of heat-related decision making and behavioral genetics. John Hughes, M.D., continues his internationally recognized work on tobacco control and, more recently, marijuana addiction, funded by three NIH research grants. These four faculty continued their NIH-supported pre- and postdoctoral training program in addictions.

The brain imaging research program under the leadership of Paul Newhouse, M.D., in the Clinical Neuroscience Research Unit, has continued to develop and grow with over 35 active projects and five NIH-funded grants supporting this research. Magdalena Naytlow, M.D., Ph.D., is continuing her NIH-funded research on the treatment of chronic pain and has received funding to expand functional imaging on the effects of CBT therapy in relieving chronic pain.

The Vermont Center for Children, Youth, and Families (VCCYF), directed by James Hudziak, M.D., continues to excel in research, teaching, and patient care, including a new $3.8 million ARRA grant. This year their clinic had over 5000 visits. Other active projects in the VCCYF include a new state-of-the-art 1.5 Tesla MRI scanner at our Tilley Drive Orthopedic Site.

This year we were fortunate to be able to recruit two new musculoskeletal subspecialty trained radiologists, Mark Lach, M.D., and Diego Lemos, M.D. David Johnson, M.D., also joined us as our second interventional neuroradiologist. The Chair of the department is very proud of how flexible members of the department are in adapting all challenges that we are faced with as we enter a new era of health care delivery. We are positive to continue to provide excellent care to our patients, excellent, first-rate consultative services to our referrers, and advancing excellence in research. These are indeed exciting times.

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Selected Highlights

Publications appeared in such journals as the Journal of the National Cancer Institute, Clinical Neuroradiology, Emergency Radiology, and Radiographics.

PET CT is one of two in the nation.

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Medical student Lily Gentry ’10 during a radiology clinical rotation with Jan Gallant, M.D./Ph.D.
The Department of Surgery continued its successes during the academic year, with noteworthy accomplishments in the fields of research, education, service, and clinical excellence.

The divisions of Ophthalmology, Urology, Trauma and General Surgery recruited prominent new faculty. Ted James, M.D., began serving as a director for the New England Division of the American Cancer Society. James Hebert, M.D., was elected president-elect for the New England Surgical Society. Bruce Tannner, M.D., was elected president of the New England Neurosurgical Society, and David McFadden, M.D., served as president of the Society for Surgery of the Alimentary Tract. Others serving on a national level include Stephen Jeffers, M.D., on the national public relations committee of the American College of Emergency Physicians; Mark Plante, M.D., on the finance committee of the American Urological Association; and Kaley Freeman, M.D., on the editorial board of the Annals of Emergency Medicine.

Our outreach into the community was strong again this year. Bruce Leavitt, M.D., served as a member of Doctors Without Borders in Sri Lanka; Peter Calsada, M.D., continued his outreach at Haiti, and monthly surgical clinics were performed at children's hospitals and the Community Health Center.

The department expanded its research mission significantly with more than 50 articles published in peer-reviewed journals. David Krag, M.D., received additional NIH funding to develop methods for staging breast cancer patients. Dr. James received NIH funding for measuring and improving breast cancer surgery quality. Katarina Zvarova, M.D., received funding to develop methods for staging breast cancer patients. At the end of the year, the department's commitment to research was acknowledged by the granting of a prestigious COBRE grant to support the development of core facilities as well as active seminar series. A given institution can receive no more than three COBRE grants. UVM has distinguished itself in its commitment not only to translational research but also to initiatives that serve to broaden the scope of research, the institution plays an important role in Vermont and northern New York, influencing standards of cancer prevention and treatment across the region. VCC research is conducted primarily at the University of Vermont, and encompasses cancer prevention and control, clinical research, cell signaling and growth, and genome stability and expression. High quality patient care is provided through the VCC's clinical partnership with Vermont's academic medical center, Fletcher Allen Health Care. VCC physicians and scientists have also made significant contributions to advances in cancer research that are keys to understanding, preventing, and treating this disease. The development of clinical trials and translation of laboratory science to patient-directed studies remain high priorities for the VCC.

Selected Highlights

Faculty grants included large grant under the American Recovery & Reinvestment Act for sentinel node study and an R01 grant, and funding from the National Cancer Institute. Research was published in more than 50 articles in such journals as Immunological Investigations, Stroke, Journal of Thoracic and Cardiovascular Surgery, Diseases of the Colon & Rectum, and the Journal of Urology.

Emergency Medicine Division member Mario Trabuloj, M.D., exemplified the department's core mission of education by winning the University-wide Kroesch-Maurice Award for Excellence in Education. In addition, Jolle Adams, M.D., was honored as the department's Teacher of the Year. Resident Program directors Dr. Tramer, Kenneth Sartorelli, M.D., and William Brundage, M.D., all provide first-rate mentoring for our outstanding residents in general surgery, neurosurgery, and otolaryngology.

COBRE in Neurosurgery

Lead investigators are Rodney Parsons, Ph.D., chair and professor of Anatomy and Neurobiology and Cynthia Forsland, Ph.D., professor of Anatomy and Neurobiology. Faculty supported in current projects are: Alan Howe, Ph.D.; Miguel Martin-Cavallaro, Ph.D.; Jeffrey Spees, Ph.D.; and Uma Wesley, Ph.D.

COBRE in Lung Biology

Lead investigators are Ronald Iverson, Ph.D.; professor of Medicine and Molecular Physiology and Biophysics; and director of the Vermont Lung Center. Faculty supported in current projects are: Anne Doss, M.D.; Steven Lidlind, M.D., Ph.D.; Lennart K.A. Lundblad, Ph.D.; Laurie Slaugenhaupt, M.D.; Renee Stapleton, M.D.; Richard Frayton, Ph.D.; and Laurie Whittaker, M.D.

COBRE in Immunology and Infectious Diseases

Lead investigators are Ralph Budd, M.D., Richard Pratley, M.D., and Laurie Spaulding, M.D. Projects are: Jonathan Boyson, Ph.D.; Jane Kirkpatrick, M.D.; Matthew Hill, Ph.D.; Christopher Huston, M.D.; Beth Flanagan, M.D.; and Gary Ward, Ph.D.

COBRE in Urology and Renal Disease

Lead investigators are Richard Branda, M.D., interim director. The Vermont Cancer Center (VCC) is a nationally recognized comprehensive clinical and research cancer center committed to innovative cancer research, life-saving prevention and treatment programs, and public education. With more than 100 scientists engaged in a full range of basic, translational, clinical and outcomes research, the institution plays an important role in Vermont and northern New York, influencing standards of cancer prevention and treatment across the region. VCC research is conducted primarily at the University of Vermont, and encompasses cancer prevention and control, clinical research, cell signaling and growth, and genome stability and expression. High quality patient care is provided through the VCC's clinical partnership with Vermont's academic medical center, Fletcher Allen Health Care. VCC physicians and scientists have also made significant contributions to advances in cancer research that are keys to understanding, preventing, and treating this disease. The development of clinical trials and translation of laboratory science to patient-directed studies remain high priorities for the VCC.

Centers of Biomedical Research Excellence

The University of Vermont Centers of Biomedical Research Excellence (COBRE), have been established by funding from the National Center for Research Resources of the National Institutes of Health. COBRE grants are designed to strengthen an institution’s biomedical research capacity through flexible support to expand and develop biomedical faculty research capability and enhance research infrastructure through support of multi-disciplinary centers. COBRE funds are used in part to support existing junior faculty in developing their research programs and to establish new junior faculty in research, the institution plays an important role in Vermont and northern New York, influencing standards of cancer prevention and treatment across the region. VCC research is conducted primarily at the University of Vermont, and encompasses cancer prevention and control, clinical research, cell signaling and growth, and genome stability and expression. High quality patient care is provided through the VCC’s clinical partnership with Vermont’s academic medical center, Fletcher Allen Health Care. VCC physicians and scientists have also made significant contributions to advances in cancer research that are keys to understanding, preventing, and treating this disease. The development of clinical trials and translation of laboratory science to patient-directed studies remain high priorities for the VCC.

Departmental Recognition

The Colon & Rectum Journal of Thoracic and Cardiovascular Surgery | February 21, 2010
In March, 2009, the College of Medicine’s 120-seat Case Method classroom, the main lecture hall for medical students since its construction in 2005, was officially renamed the Sullivan Classroom to recognize the generosity of Thomas Sullivan, MD’66.

A retired radiologist from Etna, New Hampshire, Sullivan practiced at Mt. Ascutney Hospital in Windsor, Vermont, and Dartmouth-Hitchcock Medical Center in Lebanon, New Hampshire, and served as a professor of radiology at Dartmouth Medical School. Also a 1962 UVM undergraduate alumnus, Sullivan completed his residency at the former Medical Center Hospital of Vermont, so his ties to the academic health center are deep. Sullivan says his giving is motivated by a wish to give something back to Vermont. “I’ve always felt this kinship with Vermont and with UVM,” he says. “It didn’t cost me a penny to go there, what with scholarships and all, so I thought it would be a nice thing to give something back.”

Dr. Sullivan’s philanthropy throughout 2009 has been extraordinary, and all of it has been directed to advance the College’s top priorities through the Dean’s Fund. “Dr. Sullivan’s giving has been extremely generous,” says Dean Rick Morin. “It’s a natural outgrowth of his strong attachment to his medical alma mater.”

Dr. Sullivan’s initial gift, which prompted the lecture hall renaming, was used to help fund a priority for the College, the renovation of the 260-seat Carpenter Auditorium, which had not been upgraded since it first opened more than forty years ago. After an intensive renovation that began as soon as classes ended in May, the auditorium was completely redone, with new seating, painting, lighting, electrical, and audiovisual equipment, and was ready to welcome returning UVM students on their first day of classes in August. The project significantly enhanced the technological resources available to students in the College of Medicine’s Vermont Integrated Curriculum.

Dr. Sullivan’s generosity has also laid the groundwork for the next important educational facility for medical students, a comprehensive center for clinical simulation. Students today train with mannequins and standardized patients in the Student Assessment Center in the Given Building. An expanded simulation program will increase opportunities for clinical training not only for medical students, but also students from the College of Nursing and Health Sciences, health professionals at Fletcher Allen Health Care and the Vermont National Guard.
During a time of international economic upheaval, Fiscal Year 2009 was reason to be grateful for the continued support of the alumni and friends of the College of Medicine. While new gifts and future pledges reflected the uncertain times — falling from $11.5 million in FY08 to $6.9 million in FY09 — payments on previous pledges made over the past few years coupled with loyal donors giving what they could brought the College’s total cash receipts higher than ever before. For the first time, cash received in the year rose beyond $12 million. Despite a tough financial year, the College’s donors remained extraordinarily loyal, with nearly 3200 individuals and organizations donating, virtually unchanged from the previous year.

New national data cast further light on the loyalty of the College’s donor constituency — alumni. Results of a survey by the Association of American Medical Colleges showed that the College of Medicine ranks second in the nation in percentage of alumni who gave in the most recent year (2008). UVM alumni again gave more than double the median coverage by giving 39 percent compared to a national mark of 17 percent. UVM medical alumni also gave unrestricted annual gifts of $1,000 or higher at more than double the national average — signaling strong loyalty to the core College of Medicine Fund.

The data also confirmed that UVM raises significantly less from corporations and foundations than other medical schools. To address this opportunity, the College in fiscal year 2009 provided reason to be grateful for the continued support of friends, parents, faculty, and organizations that have made generous contributions of $1,000 or more to the College of Medicine during fiscal year 2009 (July 1, 2008–June 30, 2009).
Crossing the Lake for Cancer Research

Brawling strong winds and cold, choppy water, Vermont native Tyler Brown swam a challenging nine-mile stretch of Lake Champlain on July 25, honoring the memory of three family members who died recently from cancer and raising more than $7,000 for cancer research at the Vermont Cancer Center. A long-distance swimmer, Brown entered the lake in Westport, NY, and swam to Kingsland Bay State Park in Ferrisburgh, VT, in tribute to his uncle Frank Leary Jr., and aunt, Arloa Dean Leary, both University of Vermont alumni, and their son, Brown’s cousin Michael Leary, who braved strong winds and cold, choppy water, supporting Brown as he completed his longest swim to date — more than five hours in the water — and fulfilled a meaningful personal promise.

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Friends & Emeriti Faculty

The College of Medicine is grateful for contributions ranging from $100 to $999 from the following friends and emeriti of the College. (Please note that friends who contributed to the Vermont Cancer Center are recognized on pages 48-49.)

J. Christian Abajian, MD'69
J. Hiroshi Abe, MD
Johanna Kashiwa Brakeley, MD
John C. Stewart II

Maria E. Ramos, PhD
R. Jeffrey Bergquist, MD'75
Laura Ann Bellstrom, MD'88

Judy E. Ulshafer, PhD
Dr. Jody Maxmin

Majestic Car Rental Group, Inc.
Pamela A. Phalen, MD

Sandra Bossick

L. Luise Brander, MD
Bruce K. Batterman, MD
Sally H. Brown, MD
Charles N. Balian

Community Health Partners
Betsy lawn, MD

Dr. Thomas H. Naylor
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Morton Newburgh

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The College is honored to receive gifts in memory of the following individuals.

Third-year medical student Tara Giove leaves the Plantae Student Lounge, named for the Class of 1915 alumnus Ulric Plante, M.D.

Memorial Gifts

The College's "Legacy Wall."

Gifts to the College in fiscal year 2009.

Matching Gifts

Many donors have helped match their or their spouse's employer. The following companies made matching gifts to the College in fiscal year 2009.

Honorary Gifts

During fiscal year 2010, the College of Medicine received gifts in honor of the following individuals.

 mysticalmedicalbooks.com
Julia Rosenthal points out her husband Murray from the class of 1959 photo during Reunion 2009.

Michael Wayne Abdalla, MD’58

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Classes that have already

Lei Zhang, PhD’93

Paula Fives-Taylor, PhD’73

John Jerome Brink, PhD’62

donald H. Lambert, PhD’70,

PHD ALUMNI

Michael Wayne Abdalla, MD’58

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Endowed Chairs & Professorships
Listed chronologically by year created.

The Thayer Professorship in Anatomy (1910)
Robert Pears, PhD
Lillian W. Shipman Professorship in Ophthalmology (1934)
Vacant
Ernest Hiram Bults Chair in Pathology (1928)
John Lande, MD
McClure Professorship in Musculoskeletal Research (1987)
Bruce Raynor, PhD
R.L. Amidon Chair in the Department of Medicine (1899)
Polly Parsons, MD
Harry W. Wallace Professorship in Neonatology (1990s)
Jerold F. Lucey, MD

Henry and Carleen Tuve Chair in General Internal Medicine (1999)
Benjamin L. Golding, MD
S.D. Ireland Family Professorship in Surgical Oncology (1999)
Dwight E. King, MD
Roger H. Allbee, MD ’51 Professorship in Surgery (2000)
Vacant
Robert B. and Genevieve B. Patrick Professorship in Ophthalmology (1934)
Vacant
John Van Siclen Nephropathy (2000)
Bruce Garra, MD
Robert A. Pierattini, MD Green & Gold Professor in Colon & Rectal Surgery (2005)
Jeffrey Klein, MD
Robert Larner, M.D.’42 Loan Fund
Austin W. Lane, M.D.’21 and Janet C. Lane Scholarship Fund

Members of the Class of 2009 applaud their supportive family and friends during Commencement 2009.

Benjamin Almon, M.D. ’99 Loan Fund
Eliot M. Atten, M.D. ’79 Memorial Scholarship Fund
Danae Anthony Ralston, M.D. ’08 Medical School Endowed Fund
David Adler, MD ’10 Career & Service Award Endowed Fund
Eliot-Bernard Young Fellows Loan Fund
Peery M. Berger, M.D. ’72 Medical Scholarship Fund
John A. Berry, M.D. ’39 and Kathleen H. Berry Fund
Albert Bixler, M.D. ’43 Medical Endowed Scholarship Fund in memory of Margaret Maria Bixler

Shelley S. Carbone Scholarship Fund
Lewes Chester, M.D. ’10 Medical School Scholarship Fund
Class of 1990 Scholarship Fund
Leo C. Clapp Scholarship Fund
Edward C. Collins, M.D. ’72 Medical Scholarship Fund*
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Edward Vincent Farrell, M.D. ’10 Scholarship Fund
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Freeman Foundation
Anna C. Green Medical Scholarship Fund
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James Roy Greene, M.D. ’72 Scholarship Fund
Harold Haskel, M.D. ’31 Scholarship Fund
Edward Hessey Scholarship Fund
Charles E. and Richard Hall Medical Scholarship Fund
The Henry A. Howe, M.D. ’54 and Thea O. Howe Endowed Scholarship Fund
Percy A. Hoyt, M.D. ’36 Scholarship Fund
Robert W. Hyde, M.D. ’71 Medical Scholarship Fund
Simon and Helen Joyce Posthorn Scholarship Fund
Bernard M. Lyons, M.D. ’49 Scholarship Fund
John A. Keane, M.D. ’10, Med Student Grant Fund
Gold-Volker Scholarship Fund
Margaret J. Kloppling, M.D. ’73 Scholarship Fund
Kenneth and Beatrix Laddie Holt
Avery L. Lane, M.D. ’20 and Jean L. Lane Scholarship Fund
Robert Lerner, M.D. ’12 Loan Fund
Dr. Allen L. Levin and Margaret L. Levin Scholarship Fund
J.F. Caudill Medical Scholarship Fund
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National Health Service Corps Scholarship Program
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Harriett Valentine Pendleton, M.D. ’39 Memorial Medical Grant Fund
George and Frances Phelps Memorial Fund
John Potokac, M.D. ’13 and focused on Pediatrics Medical Scholarship Fund
Institute for Quality Scholarship Fund
Dr. Shepard Queen Medical Scholarship Fund
Evel C. Quinn Medical Student Grant Fund
Jonathan Harris Ramney, M.D. ’10 and Elizabeth Rayney Scholarship Fund
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Weston A. Sargent, M.D. ’10 Medical Scholarship Fund
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Leo C. and Ruth C. Tracy Fund
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University of Vermont College of Medicine Scholarship Fund
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Vermont Student Assistance Corporation
Mary S. Wein, M.D. ’26 Medical Scholarship Award Fund*
Winde Family Endowed Scholarship Fund
Keith Wool, M.D. ’07 and Elaine Wool Medical Scholarship Fund

* UVM Medical Alumni Association Challenge Scholarships
Chris Leach was one of a group of Vergennes Union Middle School students who presented information on adolescence for the class of 2012 medical students in their “Generations” class in the Sullivan Classroom.
Scholarships Help Students Realize Their Dreams

Jersey Shore, Pa., native Chantell Hemsley's higher education career has been marked by firsts. A 2003 graduate of Mercyhurst College in Erie, Pa., she was the first in her family to earn an undergraduate degree. As a member of the UVM College of Medicine's Class of 2013, she will also be the first in her family to become a doctor, a dream she once considered unattainable. A Medical Alumni Association (MAA) Scholarship helped her overcome the challenge of affording the pursuit of her dream.

"My family is of limited resources," Hemsley wrote in a thank you letter to MAA President Ruth Seeler, M.D.'62, which she delivered to the College's alumni office in December along with a festive poinsettia. "I’ve struggled every step, paying my own way through my undergraduate years and then through my post-baccalaureate premedical program and have accumulated quite a bit of debt in the process. The Alumni Association’s incredible generosity has helped immensely."

Alumni have had a similarly profound impact on hundreds of medical students over the years. This year, a total of 114 students have MAA need-based scholarships, and Seeler has received dozens of glowing thank you letters like Hemsley’s.

With the completion of her first semester of medical school behind her, Hemsley, who's lived in Vermont for the past six years, feels enormously grateful for the MAA's support.

"This semester has reinforced my passion for medicine and I’ve learned volumes," she says. "Little by little, my challenges have been met, one at a time, thanks in large part to people like those in the Medical Alumni Association, who have believed in me against the odds."

For more information about how you can support the College of Medicine please contact the Medical Development and Alumni Relations Office.

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