A recent gift to support cancer research at Yale seems, at first blush, to follow a familiar pattern: It came from a man who, having parlayed his Ivy League education into a successful career, wanted to make a donation because of academic loyalties he forged long ago.

What sets the donation apart is that, in this case, Yale is the beneficiary of a windfall.

The donor, Cliff Burnstein, has no ties to the university (he went to the University of Pennsylvania). And unlike many philanthropists, his fortune wasn’t made in paneled boardrooms but in concert halls and recording studios.

Burnstein is the co-owner of QPrime, a talent agency that represents Grammy-winning, multi-platinum musical acts like Shania Twain, Metallica, and the Red Hot Chili Peppers. His $1.5 million gift stems from a connection with Professor of Pathology and Laboratory Medicine Jeffrey L. Sklar, M.D., Ph.D., which began in middle school in Highland Park, Ill. The link between Burnstein and Sklar was one of association rather than abiding friendship—they were in the same classes but never bosom buddies—but Burnstein’s eye for talent was keen even then.

"When you know somebody before there is any pretense," Burnstein says, "in some ways you really know them the best. Jeff was the premier intellectual of our class, and that was saying a lot." Highland Park High School’s Class of 1966 produced a bumper crop of achievers, including ABC investigative journalist Brian Ross; Penn State University President Graham Spanier, Ph.D.; producers/screenwriters Mark Victor and Michael Grais, co-authors of "Doonesbury.

Dean Robert Alpern (left) joined Susan and Michael Cummings on a recent visit to the School of Medicine, where the Cummingses met on a blind date in the 1960s.

"great camaraderie and very difficult driving," the couple have brave snowstorms at high elevation in the Rockies in Utah and Colorado, and once drove four and a half hours to traverse a mere quarter-mile of a boulder-strewn Virginia riverbed.

Now, to help ensure that the paths taken by the physicians and scientists of Yale’s Department of Orthopaedics and Rehabilitation are a bit less hazardous than those the Cummingses have surveyed through many a mud-splattered windshield, the couple have bequeathed their entire estate to the School of Medicine.

The Cummingses met on a blind date at a church coffeehouse when Michael was in medical school and Susan was receiving clinical training at Yale-New Haven Hospital and Susan was receiving clinical training at Yale-New Haven Hospital and Susan was receiving clinical training at Yale.

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One encounter overcomes tragedy with generosity, p. 4

Smoothing the road
To advance orthopaedics, couple bequeaths estate to the School of Medicine

For someone who spent a lifetime in orthopaedics—mending hands, knees and hips damaged by age or trauma, Michael J. Cummings, M.D., a 1965 graduate of the School of Medicine, has adopted a rather bone-jarring hobby in retirement. He and his wife, Susan, a retired practitioner, educator and consultant in acute-care nursing, are enthusiastic participants in extreme off-road driving events arranged by AM General, the Indiana company that manufactures the military and civilian versions of the Hummer truck/SUV.

Cummings was smitten by the Hummer in 1993, when he saw television coverage of Arnold Schwarzenegger (who owned the first Hummer built for civilian use, and now drives a hydrogen-powered model) and wife Maria Shriver elegantly emerging in tuxedo and gown from a jet-black Hummer at the Academy Awards.

“That was impressive,” he says.

In 1997, Cummings became a proud Hummer owner himself, and the following year he and Susan took the first of their annual off-road adventures, which Michael says offer more than "great camaraderie and very difficult driving." The couple have brave snowstorms at high elevation in the Rockies in Utah and Colorado, and once drove four and a half hours to traverse a mere quarter-mile of a boulder-strewn Virginia riverbed.

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Road, page 6

Cartoonist’s work on wartime trauma garners an award

In April, cartoonist Garry Trudeau, of “Doonesbury” fame, received the annual Mental Health Research Advocacy Award from the Department of Psychiatry for his portrayal of the physical and psychological challenges faced by soldiers returning from the wars in Iraq and Afghanistan. Trudeau, who holds undergraduate and master’s degrees from Yale, was honored at the department’s Neuroscience 2008 symposium, “Stress, Resilience and Recovery.”

In a prolific series of strips, Trudeau has chronicled the wartime experiences of B.D., a venerable “Doonesbury” character who was modeled on Trudeau’s classmate Brian Dowling, a legendary Yale quartermaster in the late 1960s. The character made his debut in 1968 in the opening installment of “Bull Tales,” Trudeau’s first published strip, which appeared in the Yale Daily News in the late 1960s. The strip’s name changed to “Doonesbury” in 1970, when it was also syndicated in about two dozen other newspapers.

In an April 2004 strip, B.D. lost part of one leg—and his trademark football helmet—in an explosion; “Doonesbury,” page 6

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E-mail us at medicine@yale.edu or phone (203) 775-5824.
Making practice perfect

Head of Yale’s practices makes it his mission to serve patients’ needs

David J. Leffell, M.D., deputy dean for clinical affairs, CEO of the Yale Medical Group (YMg) and professor of dermatology, describes himself as “physician, academic, and administrator,” in that order. “If the dean needs to speak with me, but I have an appointment with a patient,” Leffell says, “he understands that the patient comes first.”

A surprising statement for an academic official, perhaps, but as an unflagging champion of first-rate patient care at the School of Medicine, an institution that has largely built its reputation on research and educational prowess, Leffell feels duty-bound to practice what he preaches—and he preaches about practice. “I am an advocate,” he says, “for the elevation of clinical practice to the same level of recognition as teaching and research.”

After graduating from Yale College in 1977, the Montréal-born Leffell returned to his hometown to attend medical school at McGill University, but never imagined he would specialize in dermatology. Then, during his residency in internal medicine at Memorial Sloan-Kettering Cancer Center in New York in the early 1980s, patients began arriving with purple skin lesions, the first wave of the AIDS epidemic. Leffell returned to Yale as a dermatology resident attracted by the excitement and understanding of the immunology of the skin. He spent a year as a postdoctoral fellow on a National Institutes of Health Training Grant, where he developed a patented laser device for measuring sun-induced skin aging. In 1983, he moved to the University of Michigan Medical School for training in Mohs surgery, a technique in which skin cancers are removed layer by layer and studied immediately under a microscope using a frozen section method. The Mohs surgeon creates a map of the specimen to allow removal of the entire tumor, providing the highest cure rate and minimizing scarring.

He soon was recruited back to Yale to develop a skin cancer program in the Department of Dermatology. Colleagues were skeptical that Leffell would find enough patients to make his Mohs training worthwhile. “There’s no skin cancer in Connecticut, you’re crazy,” Go to Arizona, go to Florida,” Leffell recalls hearing in those days. However, the population of coastal Connecticut spends a lot of time outdoors, a prime risk factor for skin cancer. “Now our program is one of the busiest in the country,” Leffell, who heads YMg’s dermatologic surgery practice, says. “We treat about 4,000 cases per year, and also do significant clinical research.”

Leffell collaborates with several investigators across the medical school and was a member of the team that discovered the skin cancer gene PTCH in 1996. As CEO of YMg, Leffell manages a practice with more than 800 physicians in over 100 specialties. “There’s no one-size-fits-all at Yale,” he says. “We have a very diverse faculty with many different interests and skill sets; there are many, many moving parts. Out of that soup we need to create an experience for our patients that’s seamless.” His own dermatologic surgery practice fares well on that front, scoring in the 99th percentile in nationwide surveys.

Leffell finds refuge from his many duties at his weekend house in Norfolk, Conn.; at the suggestion of his son, Alex, and daughter, Dahlia, he brought some country to the city in the form of eight chickens that the family keeps for fresh eggs. He is an avid sculptor, photographer and painter, and his photographs, many of Norfolk landscapes, adorn the walls of his offices. A much sought-after speaker and consultant, Leffell is the author of Total Skin, a layperson’s guide to dermatology and skin health.

Along with his wife, Cindy, Leffell recently made a $500,000 gift to the medical school to endow an annual prize for clinical excellence. “It’s a complex environment at Yale; it can be challenging and frustrating. But at the end of the day when you stand back, you can see signs that you’ve made a difference.”

A match made in medical school: students find residencies

Each spring, fourth-year students at medical schools across the country eagerly anticipate Match Day, when students receive word of acceptance in residency training programs. On the afternoon of March 20, word spread across the medical school campus that, for the second year in a row, the entire class had “matched,” meaning that every fourth-year student had been accepted as a resident at one of their chosen institutions, and no student would have to scramble to find an unfilled slot.

Lindsay McGuire (back to camera) congratulates fellow student Sarah Frasure.

This is the third year out of the last four where we’ve had a 100 percent match,” says Associate Dean of Student Affairs Nancy R. Angoff, M.D., M.P.H. “Four students will specialize in ophthalmology, four in dermatology and seven in anesthesiology. An unusually high number of students—nine—will begin residencies in psychiatry.

Ten students will head to the University of California—San Francisco, and 17 to the Boston area.

Expert on myeloma, cancer vaccines to head hematology

Madhav V. Dhodapkar, M.D., an expert on multiple myeloma and monoclonal gammapathy of unknown significance (MGUS), the pre-malignant state from which myeloma often develops, has been named chief of the Section of Hematology in the Department of Internal Medicine.

Dhodapkar comes to Yale from Rockefeller University, where he headed the Laboratory of Tumor Immunology and Immunotherapy since 2001.

Dhodapkar studies the effects of tumors on the immune systems of patients with multiple myeloma, and how the immune system permits the transition from MGUS to myeloma.

His laboratory explores the use of dendritic cell vaccines and immunomodulatory drugs to bolster the immune system against tumor formation. As professor of medicine at Yale, he intends to expand his clinical research.

Jack A. Elias, M.D., chair and Waldemar Von Zedtwitz Professor of Medicine, says that Dhodapkar is a “world-renowned expert on the immunobiology of cancers,” MGUS and multiple myeloma. He will add vibrant and visionary leadership to the Section of Hematology, the Department of Internal Medicine and Yale Cancer Center.

Dhodapkar received his medical degree in 1987 from All India Institute of Medical Sciences in New Delhi, and completed his residency in internal medicine at St. Louis University Hospitals in Missouri.
A scientific assault on brain diseases

Program to unravel Alzheimer’s, Parkinson’s gears up for a tough battle

The School of Medicine is home to outstanding research programs in cell biology and neurobiology, and members of its faculty have made major contributions to our understanding of how nerve cells are organized and function in the brain. However, despite strong clinical programs in Alzheimer’s disease and other age-related disorders, up until a few years ago there was surprisingly little basic research at the medical school on the growing problem of neurodegenerative disease, and little effort to translate new insights into badly needed therapies.

To remedy that deficiency, the medical school called on two members of Yale’s Kavli Institute for Neuroscience, Stephen M. Strittmatter, M.D., Ph.D., the Vincent Coates Professor of Neurology, and Pietro De Camilli, M.D., the Higgins Trust Professor of Cell Biology and Howard Hughes Medical Institute Investigator, to create and direct a new Program in Cellular Neuroscience, Neurodegeneration and Repair (CNNR). The CNNR program, launched in 2006, has expanded the reach of cellular neuroscience at the School of Medicine from learning how healthy nerve cells work to understanding what goes wrong in disease.

During brain development, nerve cells send out long extensions, known as axons, that seek out and make contact with other nerve cells at specialized sites called synapses. In the normal adult brain, these connections form a network in which electrical signals are sent along axons to synapses, where they are converted to a chemical signal that passes the “neural message” on to other cells. Neurodegenerative diseases, stroke and spinal cord injuries cause damage to axons, synapses or both, and the CNNR program’s first recruit, Assistant Professor of Neurology Sreeganga S. Chandra, Ph.D., is also a specialist on the synapse. Chan- dra is studying the synapses family of synaptic proteins, one of which malfunctions in Parkinson’s disease.

The CNNR program has drawn in prominent scientists from other departments as affiliated faculty: • Cellular & Molecular Physiology: Susumu Tomita, Ph.D., whose studies on the role of the excitatory neurotransmitter glutamate may produce new insights into Alzheimer’s and Parkinson’s disease; and David Zenisek, Ph.D., who studies how vesicles transport and release neurotransmitters into the synapse, as well as how neurotransmitters are “recycled” by being gathered up from the synapse in newly formed vesicles; • Genetics: Arthur Horwich, M.D., Ph.D., a widely recognized authority on protein folding who has recently turned his attention to the missfolded proteins that are characteristics of amyotrophic lateral sclerosis (ALS, or Lou Gehri-g’s disease); • Molecular Biophysics and Biochemistry: Thomas Biederer, Ph.D., who studies the development of synapses and how deficits in synapse formation may cause neurodegenerative diseases; and Anthony Koleske, Ph.D., who is seeking ways to prevent dendrite regression, an early hallmark of Alzheimer’s disease; • Neurobiology: David A. McCormick, Ph.D., an expert on neural electrophysiological function from the cellular to the network level;

The role of creativity in research

Solving the mysteries of Alzheimer’s, Parkinson’s and other neurodegenerative diseases will require creative, innovative ideas from the best minds in medical research. Creativity can’t be programmed to occur on a tight schedule or within a specific budget, yet that is precisely how most research grants are administered. Today’s tight budgets and risk-averse grant committees favor research awards that provide funds to build on what is already known—not what is novel or unexpected.

Private support for endowed professorships, like the Vincent Coates Professorship held by Stephen Strittmatter and the Higgins Trust Professorship held by Pietro De Camilli, provide researchers with secure, flexible funding to pursue new ideas... to think creatively... to discover new treatments. This is the hope, and the promise, of the best biomedical research.

The Campaign for Yale School of Medicine seeks donors who are not satisfied with a conservative approach to research, who wish to participate in pushing the boundaries of knowledge. A commitment of $5 million or more can create a named, endowed research professorship in neurodegeneration and neural repair or in any other area of donor interest.

For more information, visit yalatemorroryale.edu or contact Jancy Houck, associate vice president for development and director of medical development at (203) 436-8360.

Primary and affiliated faculty in the medical school’s Program in Cellular Neuroscience, Neurodegeneration and Repair include (back row, from left): Anthony Koleske, Thomas Biederer, middle row, from left: David McCormick, Sreeganga Chandra, Co-Director Stephen Strittmatter, (front row, from left): Susumu Tomita, Marino Picciotto, Co-Director Pietro De Camilli and David Zenisek.

MEDICINE→tomorrow

A two-pronged tactic to grow new bone

School of Medicine researchers have devised an innovative technique—removing bone marrow and injecting a hormone—that promotes rapid formation of new bone. “This could radically change the way patients are currently treated for weakened or fractured hips, vertebrae and acute traumatic long-bone fractures,” says senior author Agnés M. Vignery, D.O., Ph.D., associate professor of orthopaedics and rehabilitation. Existing therapy, which involves surgery and artificial materials, often leads to unsatisfactory outcomes.

As reported in the February issue of Tissue Engineering: Part A, Vignery’s team removed marrow from thigh bones in rats and then gave them daily injections of parathyroid hormone (PTh), which stimulates bone growth (see right panel of photo). The procedure created new bone tissue that appeared structurally and biologically normal, and endowed the bone with improved biomechanical properties at a rate that can’t be achieved by injecting hormones alone, Vignery says.

New research will determine whether the newly formed bone can be preserved and whether the technique is effective in other animals.

Age no barrier for heart bypass surgery

Over the last 40 years, coronary artery bypass graft (cABG, pronounced “cabbage”) surgery has become commonplace; the National Center for Health Statistics estimates that 469,000 bypass procedures were performed on 261,000 patients in 2005. According to a Yale study published in the December issue of The American Journal of Cardiology, even individuals in their 90s with heart disease may benefit from cABG surgery.

A research team led by Judith H. Lichtman, Ph.D., M.P.H., associate professor of epidemiology at Yale School of Public Health, studied outcomes of the procedures in 4,224 Medicare patients in their 90s who underwent the surgery from 1993 through 1999. The group found that age did not significantly lessen the procedure’s success.

Lichtman and senior author Harlan M. Krumholz, the Harold H. Hines, Jr. Professor of Medicine, note that women, while more likely to be discharged to nursing homes after the surgery, had better post-surgical survival rates than men. They also caution that additional research is needed to fully assess the suitability of cABG surgery for this elderly population.

A scientific assault on brain diseases

Program to unravel Alzheimer’s, Parkinson’s gears up for a tough battle

The School of Medicine is home to outstanding research programs in cell biology and neurobiology, and members of its faculty have made major contributions to our understanding of how nerve cells are organized and function in the brain. However, despite strong clinical programs in Alzheimer’s disease and other age-related disorders, up until a few years ago there was surprisingly little basic research at the medical school on the growing problem of neurodegenerative disease, and little effort to translate new insights into badly needed therapies.

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After heartbreak, a commitment to make a difference

To honor a daughter, New Jersey couple builds a new fund for research

Few events are more tragic than the death of a child. When Steven and Carolyn Wortman of Livingston, N.J., lost their first child, Abby, in 2006 to necrotizing enterocolitis (NEC), an inflammatory disease of the gastrointestinal tract that affects roughly one in 20 premature babies, they grieved deeply, but they also resolved that they would keep Abby’s memory alive by doing whatever they could to see that someday NEC would be understood and defeated.

Given how common NEC is in premature births, the Wortmans were surprised to find very little information on NEC research or advocacy groups devoted to the disorder. Steven Wortman, a small-cap mutual fund analyst who oversees small-cap mutual funds for Lord Abbett, a Jersey City, N.J.-based firm, surmises that the apparent lack of support for studies of NEC partly stems from parents’ understandable desire for psychological closure when a child dies from the disease, and partly from the fact that these same parents are usually young, lacking the sort of financial resources to give the disease a high philanthropic profile.

“When you say that your daughter passed away from necrotizing enterocolitis, most people have no idea what you’re talking about,” he says. “Most of the time young parents aren’t in a position to give significant amounts of money, and it’s also a disease where in many cases, parents have another child—not that they get over their loss, but they do try to ‘move on’ mentally,” Carolyn D. Wortman, an accountant for Olympus Capital, a private equity firm in New York City, agrees. “People tend to become reclusive about it,” she says.

One bright spot in a mostly bleak landscape of fruitless Internet searches was the work of the School of Medicine’s R. Lawrence “Larry” Moss, M.D., the Robert Pritzker Professor of Pediatric Surgery and chief of pediatric surgery at Yale-New Haven Children’s Hospital. “The outcome for this disease has improved almost zero in 30 years, but we’re beginning to make some very positive baby steps in the right direction,” says Moss.

In 2006, Moss and colleagues published the results of a six-year study comparing the effectiveness of surgical options for NEC in the New England Journal of Medicine—the first randomized, controlled, multi-center clinical trial in pediatric surgery ever conducted.

“That study sent us in a new and more sophisticated direction in our research, looking at biologic markers that may allow us to predict which babies are most at risk of the disease and at risk for a bad outcome,” Moss says. “We’re beginning to get a handle on this disease, and I think in our lifetime we’re going to see significant improvement.” The Wortmans have no personal affiliation with Yale, and Abby—who was born at 27 weeks, contracted NEC at three weeks old and died two weeks later—was never treated in New Haven. But after reading about Moss’s work they contacted Yale and decided to raise funds to support his research.

“When we told our friends and family about our idea, they really responded to it,” remembers Steven Wortman. “We had a lot of support, and it just kept growing. It definitely helped us heal, and gave us something to look forward to while we were in our grieving process, and it was a way to give our daughter’s life some meaning.”

So far, the Wortmans have raised $46,000 for the Abby Lauren Wortman Fund. With an insider’s eye, Steven says that his admiration for the “unparalleled” record of Yale’s chief investment officer, David E. Swensen, Ph.D., was added incentive to establish the endowment at the School of Medicine, which they hope will grow into an official endowment that will generate significant annual income to support pediatric research.

“What our relationship with the Wortmans illustrates is that Yale has the opportunity, and one could argue, the responsibility to impact patients who will never come to this medical center,” Moss says of the couple’s gift. “What we’re trying to do here is change the field—change the way we treat certain diseases, change the outcomes, change the way we look at premature babies, and develop new treatments that can be offered to affected patients.”

As the Wortmans adjust their routines to care for their 10-month-old son, Ryan, born in June, 2007, Steven says that their fundraising efforts help to keep Abby on their minds.

“We want to make some difference in studies,” Steven says. “That obviously takes a lot of money, and this will take a long period of time. But we don’t want this to be a flash in the pan. We want this to be sustained. It allows us to keep her memory fresh.”

Out & about

February 4: Former First Lady, senator from New York and presidential candidate Hillary Clinton made a campaign stop at the medical school’s Child Study Center (csc), taking questions from the audience on children’s issues and health care policy. Clinton, who graduated from Yale Law School in 1973, volunteered at the csc during her second year as a law student.

March 14: At a celebration of professorships endowed by David W. and Jean McLean Wallace of Greenwich, Conn., four School of Medicine faculty members holding chairs endowed by the Wallaces joined the couple at the home of Yale President Richard C. Levin. Standing, from left: Levin; Jean McLean Wallace; Ruslan M. Medzhitov, Ph.D., the David W. Wallace Professor of Immunobiology; Margaret K. Hostetter, M.D., chair and Jean McLean Wallace Professor of Pediatrics; James C. Tsai, M.D., M.B.A., chair and Robert R. Young Professor of Ophthalmology and Visual Science; Charles J. Lockwood, M.D., chair and Anita O’Keefe Young Professor of Obstetrics, Gynecology and Reproductive Sciences; Robert J. Alpern, M.D., dean and Ensign Professor of Medicine. Seated: David W. Wallace.

March 27: During a visit by Francis S. Collins, M.D., Ph.D., director of the National Human Genome Research Institute, Collins attended the Department of Internal Medicine’s grand rounds, speaking on “Medical Implications of High-Throughput Genomics,” and later gave a lecture in the medical school’s Anlyan Center on “Genomics, Medicine and Society.” After the latter talk, Collins (left), who directed the Human Genome Project, exchanged ideas with Fred S. Kantor, M.D., the Paul B. Beeson Professor of Medicine.

April 4: The Department of Psychiatry presented its annual Mental Health Research Advocacy Award to Garry Trudeau, the Pulitzer Prize-winning creator of the “Doonesbury” comic strip, for his strips highlighting post-traumatic stress disorder among veterans of the Iraq and Afghanistan wars (see related story, p. 1). At the department’s 2008 Neuroscience Symposium, “Stress, the Child and Adolescent Research and Education (care)” program in the Department of Psychiatry. Manhattan Home.
Advances
Health and science news from Yale

Taking a bite out of stroke

It may seem hard to believe that the rather menacing creature above, the Malayan pit viper, could be good for your health, but a Phase III research study of a compound found in the snake’s venom could provide new hope for stroke victims.

Doctors at Yale-New Haven Hospital (YNH) are administering ancrod (trade name Viprinex), a drug derived from pit viper venom, to eligible patients who enter the hospital with symptoms of acute ischemic stroke.

In such cases doctors typically administer a clot-breaking agent known as tissue plasminogen activator, or tPA, but it must be given no more than three hours after stroke symptoms appear to be effective. Ancrod, which has a potent anticoagulant effect, may be effective up to six hours after symptoms begin. “If ancrod is proven safe and effective,” says Joseph Schindler, M.D., clinical director of the Stroke Center, “it will double the time frame during which stroke patients can be treated.”

YNNH is the only Connecticut hospital participating in the trial, which is expected to last for one to two years.

Sloppy gene repairs: a cause of lymphoma?

The blood and lymphatic systems transport the immune system’s infection-fighting B cells throughout the body. During an immune response, random mutations are introduced in B cell genes by a process known as somatic hypermutation (SHM), which makes the cells more effective at fighting a variety of foreign invaders.

To keep harmful mutations at bay, B cells contain DNA repair enzymes that repair faulty genes created by SHM, but little is known about how effective these repair mechanisms are, or whether they might be related to the development of the cancerous B cells seen in lymphoma.

In the February 14 issue of Nature, a team led by David G. Schatz, Ph.D., professor of immunobiology and Howard Hughes Medical Institute investigator, found that almost 25 percent of B cell genes accumulated mutations, including genes that are strongly associated with human lymphomas.

“The implications of these findings are considerable,” Schatz says. “It now seems likely that anything that compromises the function of these DNA repair processes could lead to widespread mutations and an increased risk of cancer.”

A ‘reluctant honoree’ receives his due at last

Endowment in honor of surgeon enables students to treat disadvantaged

The late Gustaf E. Lindskog, M.D., who chaired the medical school’s Department of Surgery from 1948 to 1966, reflected on his time at Yale as if every turning point in his career. A pioneer in thoracic surgery and a participant in the development of several important medical procedures that arose in the twentieth century, including chemotherapy and the clinical application of penicillin, Lindskog nonetheless remained an ever-relevant honoree.

According to Andrew J. Graham, M.D., associate clinical professor of surgery, and John E. Fenn, M.D., clinical professor of surgery—both Lindskog trainees—when the idea of commissioning a portrait of Lindskog was tossed around, Lindskog not only issued a resounding no, but by way of explanation, trudged to a certain closet where portraits of esteemed medical school professors lay stacked away, hidden and unappreciated.

Superficial honors were not his cup of tea. “We had found something appropriate to keep his memory alive,” says Graham, president of the Yale Surgical Society (YSS), a fellowship of graduates and faculty of Yale School of Medicine’s surgical training program founded in 1944.

Fenn, in his roles as YSS treasurer and faculty advisor to first- and second-year students in the Yale Surgical Interest Group, conceived the idea of support to students at the School of Medicine to travel abroad to developing countries to perform much-needed surgery. Graham believed the initiative was something that would have appealed to Lindskog’s sense of propriety and his longstanding interest in helping the disadvantaged.

Lindskog’s son, Carl W. Lindskog, of Woodbridge, Conn., heartily agreed, and the Lindskog International Travel Award was born.

This year, the two winners of the prize were fourth-year medical students Matthew MacRae and Yuen-Jong Liu. Both traveled abroad in February, MacRae to Ubon Ratchathani, Thailand, and Liu to San Pedro Sula, Honduras. For nine days MacRae and a team that included School of Medicine faculty members Deepak Narayan, M.D., M.B.B.S., associate professor of surgery, and Mark H. Weinstein, M.D., assistant clinical professor of surgery, treated cleft lips and palates, repaired congenital heart defects, and managed the care of burns, says Graham. “This was a team effort led by Associate Professor of Surgery J. Grant Thornton, M.D., performed a wide variety of procedures, including carpal tunnel releases, skin grafts, bone settings, bone fusions, and conjointed finger releases.”

Jong realized on arriving in San Pedro Sula that outdated hospital equipment and otherwise limited resources would require some creative thinking. “There was an intellectual challenge in trying to see what was the most you could get out of your limited supplies. We were a little bit less comfortable when sitting at the operating tables, but they all still functioned well,” he explains. “We had to approach some of the cases differently.

For example, we didn’t have C-arms, which we use for live radiological imaging. So we had to do more anatomical exploration or use more hands-on, more old-fashioned traditional techniques.”

In contrast, the operating room facilities at Sappasitiprasong Hospital, where MacRae and his team worked, were up to modern standards, McRae says. But the amount of unmet need there was palpable. “Children would be in bed, three rows of beds lined up, with their parents staying right next to the beds,” he says. “It was an absolute jam of people, some of them there for over a week.”

The flight of many of the hospital’s surgeons from Ubon Ratchathani to Bangkok means that the hospital is severely understaffed, says McRae.

Sappasitiprasong serves a population of 2 million, but only two plastic surgeons were on staff when McRae arrived in February.

“There was a huge number of trauma cases and they’d never be able to get to these kids,” he says. “By operating on these kids and by making them look more normal, it allows them to integrate in society in a way that they just wouldn’t be able to do without these operations. You’ll bring these kids out and their parents would be there in tears, incredibly grateful. It was an amazing, heartwarming experience.”

Although the award endowment is in its infancy, Fenn and Graham believe the initiative is essential. “It is a significant part of the total YSS endowment, and “as the endowment grows, we will be able to do more,” says Graham.

For Fenn and Graham, the Lindskog Award not only offers Yale medical students an unparalleled opportunity, but also honors a man whose memory had lived on in the minds of his trainees but had gone publicly unrecognized.

“This is gratifying for me, personally, to see these students rewarded this way. It’s also gratifying that we can honor Dr. Lindskog,” says Fenn.
of the "They’re heeeere!" catch-phrase from the 1981 film Poltergeist; and many others accomplished in academia, business, and the professions. "Everybody in the class said [of academia, business, and the professions] is an area of medicine that needs people who can translate basic science into clinical applications for real patient scenarios."

Robert J. Alpern, M.D., dean and Ensign Professor of Medicine, says that the Cummingses’ intentions align squarely with the School of Medicine’s goals. "Physician-scientists are crucial to the future of medicine, medical research, and medical education. It is becoming more and more difficult, especially in procedure-intensive specialties such as orthopaedics, to be a master in both medical care and research," Alpern says. "Michael and Susan’s gift will provide much-needed support for such an individual, and we are grateful for their generosity and commitment to the medical school.”

Gary E. Friedlaender, M.D., chair and Wayne O. Southwick Professor of Orthopaedics and Rehabilitation, says that the Cummingses’ gift is thought-ful in both senses of the word. "What makes great donors is a combination of generosity and vision. Without both of those, a gift doesn’t reach its full potential. Michael and Susan Cummings are generous and vision-ary," Friedlaender says. "Gifts like this allow us to pursue our missions—in the clinical arena, as well as in educa-tional and research—with increased vigor."

The department’s longstanding strength in biomechanics research has led to advances in the treatment and prevention of injuries. In the case of the spine, Friedlaender says, "our basic understanding of the mechanics has provided a basis for us and for others to expand on those observations and make the world a safer place, both in how we can best take care of patients with spinal injuries and protect their neurologic function, and in terms of how we can redesign our environ-ment to help prevent some of these injuries, whether by designing a new seat or headrest for a car, or a new piece of athletic equipment for the playing field.”

During the past 20 years, the bio-mechanics faculty has been comple-mented by a first-rate group of biolo-gists who seek to understand how musculoskeletal tissues are assembled at the cellular and molecular levels, as well as how bones grow and repair themselves in health and disease." The synergy between these two groups, the form and the function, the way things are put together at the cellular and molecular level and the way they function at the macro level will di-rectly improve well-being of patients, such as the large number of people over age 60 who have some degree of osteoporosis, says Friedlaender.

Joint replacement surgery is extremely well developed, Friedlaender says, "but the time will come when we regenerate joints rather than replace them.” To do that, he explains, "we need to learn how to regenerate cartilage so you wind up with a ‘genuine GM part’ rather than a metal-and-plastic replacement. That’s going to involve tissue engineering: understand-ing how pluripotential stem cells recreate themselves into popula-tions of cells that make up tissue-like cartilage and then maintain it for a lifetime.”

Friedlaender sees the clinical and research missions of his department as tightly intertwined and mutually reinforcing, and gifts like the Cum-mingeses’ crucial to continuing the department’s tradition of excellence. “Sometimes we turn to basic sci-ence and at other times we turn to clinical process, product or procedure development—a new operation, a new implant, an improved way of treating patients,” he says. "There’s not a single subspecialty of orthopaedics that’s not important, or that can’t be improved in terms of our ability to treat and prevent disorders and diseases.”
Yale geneticist wins Wiley Prize for hypertension research

At an April event marking Richard Lifton’s winning of the 2008 Wiley Prize (front page, lower left), Nobel laureates Joan Steitz; Lifton; Deborah Wiley, senior vice-president of John Wiley & Sons, and chair of the Wiley Prizes committee; (back row, from left) Arthur Horwich, Kaye Pace, vice-president and executive director of Wiley & Sons; Günter Blobel; Patrick Kelly, vice-president and director of professional publishing at John Wiley & Sons; Qais Al-Awqati; Elizabeth Cox, John Wiley & Sons editor; and Colleen Bean, associate publisher at John Wiley & Sons.

Nobel Prize-winning scientists Andrew Z. Fire, Ph.D., Craig C. Mello, Ph.D., and H. Robert Horvitz, Ph.D. Last year the School of Medicine’s Arthur Horwich, M.D., was a joint recipient of the prize for his research detailing molecular machinery that guides proteins into their proper functional shape, work that is important in fighting a wide range of diseases from Alzheimer’s and Parkinson’s diseases and amyotrophic lateral sclerosis, or ALS.

Grants from page 7

Pseudomonas aeruginosa Pulmonary Infection, 5 years, $507,420; Michael Kozal, University of Pittsburgh, 2 years, $60,000

Endothelial Dysfunction in African-American Phoma Society, The Leukemia and Lymphoma Society, 2 years, $99,318

Ischemia-Reperfusion Lung Injury, Pump Trafficking and Function, Pseudomonas aeruginosa, 3 years, $507,420

Pulmonary Infection, Protein Progression of Motivation for Food in Animal Depression, 1 year, $74,525

Increased Endothelial Nitric Oxide Activity and Chitotriosidase Mutations in Gaucher Disease, Genomic Copy Number Variation in Obsessive Compulsive Disorder, 1 year, $325,500

Epigenetic and Chromatin Mechanisms of Vulnerability to Cognitive Stress in Healthy Humans, 3 years, $239,502

Genetics of the Hepatobiliary Tree, Pathophysiologic Mechanisms of the Hepatobiliary Phenotype of Gaucher Disease, 1 year, $10,000

The Patrick and Vinod Srihari Scholarship, The Leukemia and Lymphoma Society, 1 year, $60,000; Jona van Dyk, Alzheimer’s American Society, Amyloid Binding in Subjects for Risk of Alzheimer’s Disease, 3 years, $199,976; Fred Volkmer, The Leukemia and Lymphoma Society Medical Research Institute, The Use of Spectral and Spatial Analysis to Improve the Utility of Urine Cytology in the Diagnosis of Transitional Cell Carcinoma (TCC) of the Bladder, 3 years, $150,500; Flora Vaccarino, Autism Speaks, Neurogenic Growth Factors in Autism, 3 years, $43,000; Chad Biggio, A Randomized Controlled Trial of Two Treatments for Verbal Communication, 3 years, $240,000; Charles Walker, AmericanGeriatrics Society, Geriatrics for Specialty Residents (GIS), Yale Geriatric Urology Initiative, 2 years, $40,000; Joanne Weidaal, American Society for Therapeutic Radiology and Oncology, Defining the Genetic Basis of the Radioresistance Using A.c. elegans Tissue Model, 1 year, $125,000; Andrew Weinberger, National Alliance for Research on Schizophrenia and Depression, Caspase Reactivity in Cigarette smokers with and without Major Depression, 2 years, $60,000; Christopher Wender, American Heart Association, The Role of Sphingosine-1-Phosphate Signaling during Cardiac Cushion Formation, 3 years, $150,000; Daniel Williams, American Cancer Society, Inc., The Role of Sphingosine-1-Phosphate in Neuronal Survival, 1 year, $150,000; Xiaogang Yue, Medtronic Inc., Medtronic Charitable Spine Fellowship Program, 1 year, $50,000

Depuy Inc., 2007–2008 Spine Surgery Fellowship Program, 1 year, $75,000; Synthes (USA), 2007–2008 Spine Surgery Fellowship Program, 1 year, $75,000; Synthes (USA), 2007–2008 Spine Surgery Fellowship Program, 1 year, $75,000; Synthes (USA), 2007–2008 Spine Surgery Fellowship Program, 1 year, $75,000

Masaaki Torii, Patrick Kelly, Kaye Pace, and Stephen Horwich, vice-president and chair of the Wiley Foundation, 2008 Wiley Prize committee. The Wiley Prize, which includes a $35,000 cash prize, was pre-