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Boston University
The GCRC Brings Medical Research to the People
IN THIS DEAN’S REPORT, we highlight clinical research and particularly the General Clinical Research Center (GCRC), which for more than three decades has provided researchers at the School of Medicine with proper tools and a controlled clinical environment to carry out innovative research. Major programs which previously have benefited from the GCRC included those dealing with heart and vascular diseases, hypertension, aldosteronism, cancer, amyloidosis, scleroderma, osteoporosis, reproductive disorders, diabetes, and AIDS.

With more than 13,000 square feet of research space on campus, the center supports research services, specialized laboratories and a clinical research training program for physician scientists in medicine, surgery, psychiatry, pediatrics, neurology, dentistry, and public health.

Our cover story offers a glance at some of the most recent innovative, multidisciplinary research at the GCRC and shows a wide variety of studies aimed at children and adults. These include the testing of new medicines in the fight against addiction, investigating whether non-steroidal anti-inflammatory drugs prevent Alzheimer’s disease, determining if sleep apnea in children is associated with attention deficit/hyperactivity disorder, and learning how children with autism respond to social interaction.

This issue also revisits the Framingham Heart Study. Led by BUSM, the world-renowned study is recruiting a third generation of participants into the oldest continuous observational study in the world. A new generation of family members will provide information that will lead to new insights and hallmark medical advances in areas beyond heart and vascular disorders.

We also look at students taking the International Health elective and experience first hand how their medical school education was enhanced by this opportunity to study hands-on medicine in areas of the world such as Japan, Bolivia, and Ecuador, and how their experiences have changed their outlook toward medicine.

With this excitement, there has also been sadness, brought by the recent deaths of esteemed colleagues Robert Wilkins, MD, former chairman of the Division of Medicine; Ruth Levine, PhD, associate dean and chairman emerita of the Division of Graduate Biomedical Sciences; J. Stephen Fink, MD, PhD, chairman of Neurology; and Sidney Gellis, MD, former chairman of the Department of Pediatrics and Acting Dean of the School of Medicine. The loss of Dr. Wilkins had particular significance to me since he had been by mentor and predecessor in hypertension for many years.

Looking forward, we highlight the arrival of an extremely talented group of new leaders at the school: Linda Heffner, MD, PhD, will lead the Department of Obstetrics and Gynecology; Donald Marion, MD, MSC, FACS, chairs the Department of Neurosurgery; and Jonathan Olshaker, MD, heads up the Department of Emergency Medicine.
Clinical research – bringing the bench to the bedside – has surged dramatically at BUSM in the last several years. The School’s physician-scientists are testing people for the causes, effects, and treatments for a variety of conditions, including drug and alcohol dependence, Alzheimer’s disease, autism, and sleep apnea. Their work is, in large part, made possible by the recently renovated and expanded General Clinical Research Center (GCRC).

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Laboratory, and more centrally located for investigators. In 2000, the GCRC also added a dental unit, located in the BU Goldman School of Dental Medicine. Outpatient visits to the GCRC have more than tripled since 1996, with much of the growth due to the expanded facilities at the GCRC and the School's renewed emphasis on clinical research.

Established in 1998, the Office of Clinical Research (OCR) has also contributed to this growth. The OCR provides the central focus for clinical research support, conduct, and training at Boston University Medical Center. The OCR seeks to serve the needs of investigators who are engaged in the entire spectrum of clinical research, while also safeguarding the human subjects who participate in research.

The GCRC is available to students, young investigators, and senior researchers. It is one of 78 centers in a network funded by the National Institutes of Health (NIH) and provides an optimal setting for medical investigators to conduct safe, controlled, advanced, inpatient and outpatient studies of both children and adults. GCRC resources include highly trained research personnel, a core laboratory, a bioinformatics system, and a metabolic kitchen. The GCRC research staff—nurses, dietitians, biostatisticians, skilled technicians, and administrative personnel—help investigators by facilitating the day-to-day research process and assisting the research patients in a supportive and efficient environment. Specialized equipment at BUSM's GCRC includes a bone densitometer, which can measure total body fat, as well as bone health; a sleep laboratory; tanning beds that mimic exposure to sunlight; an indirect calorimeter for measuring metabolic rate; and an ultrasound machine and treadmill to observe cardiac function under stress.

"The ultimate goal of individuals who make great strides in basic research is to see it being developed to help people, either to prevent, mitigate, or treat disease," says GCRC Director Michael Holick, PhD, MD, professor of medicine, dermatology, physiology, and biophysics.
Having a resource at Boston University that provides investigators with the ability to take the basic research concepts and test them for practical applications bridges that gap.

**Fighting Addiction**

DOMENIC CIRAULO, MD, professor and chairman of the Division of Psychiatry, is bridging that gap for those who suffer from drug and alcohol dependence. Ciraulo will use the GCRC's facilities in several placebo-controlled studies that will test experimental medications for the first time in people. "We are looking for medications that reduce cravings, weaken drug reinforcement by diminishing the 'high' users feel, or improve mood," explains Ciraulo.

The studies will include those who wish to quit, as well as those still using alcohol or drugs. Both groups will remain hospitalized for 20-30 days, so GCRC and hospital staff can monitor them to ensure adherence to study protocol. Participants will spend their days in the GCRC, where staff will provide alcohol or drugs in safe doses for those still using them. Users and non-users alike will also receive either an experimental drug or a placebo. A staff that can manage often difficult patients while maintaining study integrity is one of the GCRC's greatest assets. "It's a very good nursing staff that is skilled in a number of areas," says Ciraulo. "Medically and psychologically, these are complex patients and the GCRC staff have the skills to provide the medical oversight that is so necessary in this type of research."

Ciraulo will analyze data gleaned from samples taken by GCRC nurses to evaluate the effectiveness of the medications. He will also use the new 3.0T Magnetic Resonance Imaging (MRI) unit recently purchased by the School — another sign of the increased emphasis on clinical research. This newest generation imaging machine depicts which parts of the brain are affected by addicting drugs. It can also be used to assess structural and functional changes in the brain caused by aging, Alzheimer's disease, or other brain disorders, as well as the structural integrity of other organs and major blood vessels.

While Ciraulo's subjects will spend their days in the GCRC, they will be in comfortable surroundings with carpet, curtains, and pictures on the wall. Such seemingly minor touches are an important feature for studies whose participants need to feel at ease.

"The ultimate goal of individuals who make great strides in basic research is to see it being developed to help people, either to prevent, mitigate, or treat disease."
Robert C. Green, MD, MPH, associate professor of neurology and clinical director of the NIH-funded BU Alzheimer's Disease Center, is conducting several clinical studies of Alzheimer's disease and uses the GCRC for neurological and neuropsychological exams.

"We would have no place to see the participants if we didn't have the GCRC," says Green.

Green is the principal investigator of the Alzheimer's Disease Anti-inflammatory Prevention Trial, or ADAPT study, which is investigating whether non-steroidal anti-inflammatory drugs (NSAIDs) prevent Alzheimer's disease. In another study, the first of its kind in the world, Green is providing genetic risk assessments for adult children of parents with Alzheimer's disease. Participants use the GCRC's interviewing rooms for genetic counseling.

"I think it's a fantastic time for our institution," says Green. "BUSM is starting to really distinguish itself as a site for major clinical research trials in a number of disciplines. We have begun to meet the challenge of providing excellent clinical research space, just as we provide excellent lab space for lab research. In doing that, we are better able to compete for the newest medication trials to diagnose, treat, and prevent Alzheimer's disease."

Studying Sleep

WITH A PLAY AND EATING AREA designed for children, their parents, and siblings, the GCRC meets NIH's mandate to include children in clinical research. In 2002, 15 percent of outpatient visits were by participants younger than 21. Daniel Gottlieb, MD, MPH, associate professor of medicine and an associate director of the GCRC, has been using the GCRC's sleep laboratory to examine the neuropsychological consequences of obstructive sleep apnea in preschool children.

In a National Heart Lung and Blood Institute-funded study, Gottlieb has tested about two hundred fifty 5-year-olds to determine if obstructive sleep apnea is associated with the cognitive and behavioral symptoms of attention deficit/hyperactivity disorder. Sleep apnea might account for some of the children that are being labeled," says Gottlieb, also the director of the sleep laboratory at the Boston V.A. Medical Center. While sleep apnea in adults is often caused by excess weight, sleep apnea in young children is usually due to the relatively large size of their tonsils and adenoids, and it may be worth investigating the effectiveness of removing them, says Gottlieb.
In two visits, several weeks apart, the children undergo detailed neurological questioning and an overnight sleep study, which employs GCRC equipment to make an electroencephalogram (EEG), record eye movements, and measure breathing, air flow, and blood oxygen. While having sensors stuck to one’s head might seem intimidating for a young child, Gottlieb says the GCRC’s technicians are very good at putting the children at ease and having fun with the equipment. An infrared camera in the ceiling allows technicians to monitor the children while they sleep and an extra bed lets parents spend the night as well. “The GCRC has been very helpful,” says Gottlieb. “It’s so much nicer than having to bring the children into a clinical hospital setting, which can be frightening for most children.”

The GCRC Advantage

The GCRC also gives investigators an advantage when applying for funding. Helen Tager-Flusberg, PhD, professor of anatomy and neurobiology, recently applied for a federal grant to establish an Autism Center of Excellence at BUSM. She says her application reviews emphasized the presence of the clinical research facilities at BUSM. “Having the right facilities, having the right environment is really extraordinarily important to us,” she says. “Children with autism like things to be very predictable and quiet. Our children wouldn't be able to attend carefully to all the things we require of them if they were in a more hectic setting. They can really concentrate in the GCRC and we can obtain high-quality data in a facility like this.”

In one study Tager-Flusberg is conducting at the GCRC, she is investigating how children with autism respond to social interaction. Using a battery of standardized tests, she is measuring their cognitive and overall abilities in a variety of experiments. One uses computerized eye-tracking equipment to record how children with autism look at and interpret facial expressions.
Study subjects are shown pictures of people on a computer screen and asked how they think the person is feeling. In addition to eye movements, the study is recording physiological responses, such as skin conductance, to determine if children with autism have different arousal patterns. Another experiment is examining how study subjects process language by gauging how well they interpret tone of voice and integrate tone with other information they are given about the people speaking, as well as how well they understand the use of language.

The GCRC’s interview rooms, with one-way mirrors and video- and audio-taping equipment, are ideal for such studies. “The GCRC is especially designed, equipped, and staffed for these purposes and the staff are trained specifically for these types of experiments,” says Tager-Flusberg. “It’s crucial for all our data collection which involves families.”

Like Tager-Flusberg’s work, much of the research at the GCRC would not be undertaken in the private sector, either because costs would be considered too high, or the return on investment too low. Facilities like BUSM’s GCRC enable physician-scientists to look for ways to improve people’s lives that might otherwise go undiscovered. “Having a resource at Boston University that provides investigators with the ability to take the basic research concepts and test them for practical applications is something that industry cannot do cost effectively,” says Holick. “Industry has to spend millions of dollars in a kind of hit or miss activity to be successful, whereas in the GCRC, we can develop things in a more cost-effective manner, because the investigator is able to transition their basic research to the bedside in a more efficient manner.”
Replacing a “lost generation” of physician-scientists

In addition to providing space, equipment, and trained staff for clinical research, the General Clinical Research Center (GCRC) is also charged with encouraging young people to enter the field. With competition from other research disciplines like genomics, and school debt drawing many students toward more lucrative private practice, the ranks of clinical researchers have declined markedly in recent years. “There’s no longer a pipeline of young physician-scientists willing to do this,” says GCRC Director Michael Holick. “We’ve lost almost a whole generation of clinical researchers.”

To remedy this situation, the GCRC has a student program run by Peter Merkel, MD, assistant professor of medicine and associate director of the GCRC. It sponsors students conducting clinical research through the Office of Student Affairs’ Medical Student Summer Research Program. This program provides mentored research experiences for first-year medical students during the summer between their first and second year – when most of their classmates are enjoying the last free time they will have for several years. Students work full-time on their projects for 8-10 weeks in a variety of departments. Natalia Colon, Heema Kaul, and Shirley Wang chose to work with Holick, researching whether cancer patients were vitamin D deficient. Vitamin D, obtained from food and sunlight, is protective for cancer and a lack of it can cause rickets, osteoporosis, and osteomalacia. In a pilot study involving 50 cancer patients, the students found that 72 percent of the patients had an average vitamin D level that was significantly below the recommended minimum for adequate cellular health and 46 percent were vitamin D deficient. They determined that vitamin D levels should be monitored in cancer patients, and if they are found deficient, the patients should be given vitamin D supplements.

“It was a very fulfilling experience. I learned so much in just two months,” said Colon. “Doing clinical work and meeting cancer patients allowed me to see so many different conditions.”
The Framingham Heart Study (FHS), led by Boston University School of Medicine (BUSM), is recruiting a third generation into what is already the oldest continuous observational study in the world. The Third Generation Study, known as Gen3, will give BUSM researchers opportunities to build on an already impressive history well into the Twenty-first Century.

The National Heart Institute (now the National Heart Lung and Blood Institute or NHLBI) launched the Framingham study in 1948 to learn more about what was then a poorly understood, yet increasingly prevalent problem — cardiovascular disease. With death rates rising since the beginning of the century, it had become an American epidemic. Cardiovascular disease is still the leading cause of death and serious illness in the United States, but since the Framingham study began, death rates from coronary disease have declined by more than 50 percent and death rates from stroke by more than 60 percent. To a large extent, this momentous decline is a consequence of lessons learned through the Framingham Heart Study. Decades of careful observation of the more than five thousand men and women who enrolled in the study have revealed common patterns in the development of heart disease. FHS researchers coined the term “risk factor,” now an established concept in the study of disease, to describe the behaviors or conditions, such as high blood pressure, cigarette smoking, high blood cholesterol, and physical inactivity, that they found increased the chance of cardiovascular disease. A testament to just how important the Framingham study has been is the more than one thousand leading medical journal articles it has generated. Another is its place
Kenneth Kimball, center, signed up for the original Framingham Heart Study in 1948. His six children, and one daughter-in-law, right, joined the Offspring Study in 1971. Today, he has seven grandchildren, left, enrolling in the Third Generation Study. The Framingham study hopes to learn more about the genetic factors of heart disease and other illnesses from such large families.

among the top ten medical accomplishments of the Twentieth Century, as chosen by the editors of the Merck Manual for the Washington Post.

Since its beginnings, the Framingham study has been affiliated with BUSM, and every FHS director has held an academic appointment at the School. The relationship became even stronger in 1971, when BUSM began providing its administrative expertise and medical leadership to the Framingham study, through a contract with the NHLBI. That same year, the study enrolled 5,124 men and women – children of the original participants and their spouses – in the Offspring Study. Like their parents, they return every two years to give detailed medical histories, take comprehensive physical examinations, and provide samples for laboratory testing – providing more of the data from which researchers glean their findings. The Offspring Study enabled Framingham researchers to begin to
look for genetic patterns of disease and risk factors within families. This effort will be greatly expanded with the addition of Gen3, which is in the process of recruiting about 3,500 grandchildren of the original participants, and about 500 of their parents not already enrolled in the Offspring Study. The results are expected to reach beyond heart and vascular disorders, offering new insight into other diseases affected by heredity, including Alzheimer’s disease, osteoarthritis, osteoporosis, obesity, diabetes, and some cancers.

Philip Wolf, MD
professor of neurology
at BUSM and principal investigator of the Framingham Heart Study

“There’s a lot of interest now in trying to figure out to what extent genetic factors contribute to diseases or conditions,” says Philip Wolf, MD, professor of neurology at BUSM and principal investigator of the Framingham Heart Study. “In Framingham, we have large families on whom we have 30-50 years of information and now we’re extending into the third generation, which will give us even more power to explore these genetic and environmental relationships.”

Emelia Benjamin, MD, associate professor of medicine at BUSM, is collecting data on endothelial function in Gen3 to add to data already collected from the Offspring Study. The endothelium, which lines the arteries, is thought to play a dynamic role in cardiovascular disease. When healthy, the endothelium releases substances such as nitric oxide, which protects against the development of atherosclerosis and vascular events. To gauge endothelial function, Benjamin is using ultrasound to measure dilation of the blood vessels in the arms of Offspring and Gen3 participants. Another study by Benjamin is measuring blood vessel stiffness in all three generations using a new, specially developed device that measures pressure wave forms in the arteries in the arm, neck and groin. “This third generation is just a gold mine,” says Benjamin. “With the information they provide, we can tease out genetic differences, such as why the heart walls of some people thicken as they age, and others don’t. We will begin to be able to dissect what are environmental and what are genetic determinants of cardiovascular disease.”

More amazing than the research opportunities presented by the Framingham study, says Benjamin, are the Framingham Heart Study participants. “These participants have just been astonishing. Their devotion and adherence to returning year after year at their own expense is unparalleled,” she says. “They allow us to poke, prod, and test. The density of the phenotypic information we have on Framingham participants is just unprecedented.”

New technology is allowing researchers to learn more from FHS participants than the study’s founders could have ever imagined. “We will be able to do much more because of the introduction of new technology and the new genetic mission of the study,” said NHLBI Medical Director Daniel Levy, MD ’80, associate professor of medicine at BUSM. “We are now invested with new tools that are far more sensitive and identify with great precision some of the factors involved in the disease progress continuum.”

Dan Levy, MD ’80
associate professor of medicine at BUSM and NHLBI medical director

Rather than look for the presence of possible risk factors after a heart attack has occurred, new imaging technology is allowing researchers to see disease in coronary arteries before any outward symptoms appear. From the first set of computed tomography (CT) scans of the hearts of
Offspring Study participants, researchers have made several interesting observations, including the finding that high cholesterol and cigarette smoking measured when participants were younger predicted the presence of coronary artery disease 25 years later. Further studies will help determine whether the extent of calcium deposited in arteries, which is related to risk factors for heart attacks, can itself be considered a risk factor. "For the first time in the history of the heart study," says FHS associate medical director Christopher O'Donnell, MD, "we are able to detect atherosclerosis in otherwise healthy men and women by measuring the calcium deposited in their coronary arteries." Other studies are using magnetic resonance imaging (MRI) to detect heart abnormalities and disease in the aorta and echocardiograms to learn more about the structure and function of the heart.

Extending these studies to a third generation will enable researchers to better understand coronary artery disease, other forms of heart disease, and their risk factors. "Gen3 will allow us to now study genetic contributors to developing disease and developing risk factors for disease, like high cholesterol, obesity, and asthma," says Levy.
Each year, the Boston University School of Medicine’s (BUSM) International Health Organization helps as many as 30 students study abroad by contributing to their travel costs. The program has established electives in seven countries - Armenia, Cameroon, Cuba, Greece, Hong Kong, India, and Italy, but will also fund electives in other countries if language, safety, and other requirements are met. “An International Health elective has many benefits for students, such as giving them a chance to work with patients who have illnesses unfamiliar to most U.S. health care providers, and allowing them to experience vastly different health care systems,” says Suzanne Sarfary, MD, assistant dean of Student Affairs and director of the International Health Programs at BUSM. “Students who choose an International Health elective develop knowledge, skills, and sensitivity for cross-cultural medicine that is applicable to the practice of health care in most urban settings in the United States.”

Students also practice language skills useful for health care delivery in special populations, as well as enhance their understanding of global health issues, primary care, and public health. Many get the chance to improve their physical exam skills and understanding of the practice of medicine without technology, while others choose to develop a research focus in an international setting. For some, an International Health elective can be a life changing experience.

Marisa Bell examines a boy in La Paz, Bolivia.

Marisa Bell, '03, wanted an elective in a country where she could speak Spanish, her first language. Her trip abroad more than fulfilled her hopes. It sparked a passion that has completely altered her career choice. Before she went to Bolivia, Bell says she didn't really know what area of medicine she would go into, but now she knows she wants to pursue primary care pediatrics and a master's of public health degree.

“I hadn't found a passion, and going to Bolivia helped me find it,” says Bell. “It really cemented in my heart what I want to do.”

Through a nurse practitioner she worked with at Boston Medical Center (BMC), Bell met Chi-Cheng Huang, MD, a BMC pediatrician who returns to La Paz, Bolivia every year to care for street children and child prostitutes. The Bolivian Street Children's Project addresses the issues of the children from a medical, social, economic, political, and spiritual standpoint. Huang agreed to be her preceptor and Bell accompanied him to Bolivia last August. In addition to listening to lectures from Huang three times a week, Bell worked in a free-care clinic with Bolivian physician Ruben Rocha for 12 hours a day, 6 days a week. Located in the slum of El Alto, the clinic served the indigenous Ayamara and Kechua people. Bell treated many patients with salmonellosis, transmitted by contaminated drinking water, as well as pneumonia, tuberculosis, and urinary tract infections. She also spent several nights each week roaming the streets of La Paz into the wee hours, administering free care to children and playing occasional soccer games with them to earn their trust. Homeless, many of the children she saw lived in the sewers. Sent to La Paz to earn money for their rural families, these children often become addicted to drugs, supporting their habit by shining shoes or prostitution. Many are the victims of police brutality and Bell treated...

One weekend, Bell traveled 14 hours into the Amazon jungle to set up a free-care clinic in the village of Sorato. She was the first non-Bolivian to ever visit there. The clinic saw more than one hundred patients in two days. “There was so much need there that it was overwhelming,” she says. “I learned that you can really do a lot of good in a low-tech setting. You can really help people without MRIs and CT scans.”

Bell also delivered textbooks, medical supplies, and expensive breast pumps, donated by the BMC Division of Pediatrics, to the Hospital de Mujer in La Paz. Formula feeding is treacherous in Bolivia because the water is contaminated and the formula is expensive, she explains. While in the hospital, Bell and Huang were consulted on a child born with neonatal progeria syndrome, a very rare genetic disorder, in which a child who exhibits normal growth during its first year develops the characteristics of old age, including hair loss, wrinkled skin, and senility. The child later died, but Bell and Huang brought samples of her skin and blood back to U.S. research centers, so her legacy will help children born with progeria in the future.

“I worked my butt off in Bolivia and learned more about life, compassion, and outreach than I could have ever learned in a lecture hall,” says Bell. “I plan to return to Bolivia and volunteer with Chi and Dr. Rocha one month a year for the rest of my career.”

Lars Hansen, ’03, designed an International Health elective that returned him to Shiroyama Hospital in Habikino City, Japan, which he had visited more than ten years ago, while in high school. He had been in an exchange program with the American Field Service and his host mother was a nurse at the small, private hospital, which specializes in stroke care. In November, Hansen spent four weeks in a neurology rotation under the hospital’s director, Hideki Tanabe, MD.

Every day, Hansen met with residents to go over patient medical histories, and he was also able to meet individually with patients. The patients were mostly female, from 13 to 67, and had diverse diagnoses, including arachnoid cyst of cervical spine, atypical meningioma, trigeminal neuralgia, and moyamoya disease. Although he had studied Japanese while an undergraduate at the University of Arizona, Hansen says he was nervous about the language barrier. He was not fluent in the more formal style of Japanese that he assumed was used in doctor-patient conversations.

To his surprise and relief, he found that physicians used the more familiar forms of address he had learned with his host family. During his time at the hospital, Hansen noticed many differences with the U.S. health care system. The nurse-patient relationship was much different, he says. Rather than expect their nurses to do everything for them, patients cleaned their own areas and family members brought their food.

“Their attitude toward being in the hospital was quite different,” says Hansen. “They did not have a ‘fix me’ attitude.”

Another difference in Japan was the less distinct division between the neurology and neurosurgery services. Hansen routinely had the opportunity to assist with surgery. Also during his rotation, the hospital hosted a small conference on radiotherapy and radiosurgery, and Hansen was able to attend several lectures and assisted in planning gamma knife therapy for a number of patients. Before his rotation, Shiroyama Hospital did not host medical students,
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says Hansen, but now Tanabe is interested in starting a program for Japanese students.

“When you go abroad, you can see a completely different health care system and a completely different set of patients,” says Hansen. “I think it’s a great opportunity. I urge students to seek out the chance to go abroad.”

Adam Bernstein, ‘03, also visited Japan, where he explored his interest in health and longevity on the island of Okinawa. He worked on the Okinawa Centenarian Study with his preceptor, Thomas Perls, MD, MPH, associate professor of medicine and director of the New England Centenarian Study.

Bernstein had a mix of clinical and nonclinical experiences during the eight weeks he spent at the University of Ryukyu last June and July. During the first part of his elective, he spent many long days in the library, researching the environmental factors that contribute to the remarkable longevity of Okinawans. For religious reasons, most Okinawans decline to allow autopsies, but Bernstein had a chance to work with the pathologist who has done the only autopsy of an Okinawan centenarian.

Bernstein wrote a case report that he used as a springboard to research and write about normal vs. pathological aging and causes of death in the very old. The report relates autopsy findings to diseases the woman, who died at 100, was known to have had during her life. He found that for the first 97 years of her life, the woman was very healthy, but she had a series of respiratory infections, and eventually, a fatal case of pneumonia. Near the end, says Bernstein, hospital staff noted that the woman was not eating properly because she was depressed and no longer had the will to live, which made her even more vulnerable to infection.

In addition, Bernstein also spent one day each week in the cardiology clinic of Makato Suzuki, MD, a principal investigator of the Okinawa study. He typically saw 20-30 patients during a 6-hour period. They were adults more than sixty-five years old, with heart failure, high blood pressure, and valvular disease. “Language was not as much of a barrier as I anticipated,” says Bernstein. “The physicians speak English rather well, and the Okinawans, both young and old, were friendly and agreeable. They were eager to try out what English they knew.” During his last two weeks on the island, Bernstein visited with Okinawa’s centenarians, as the study has done for the last 25 years.

Ranging in age from 100-107, they were nearly all free from dementia and could converse easily with the team. The visits gave Bernstein the opportunity to work with and complete a physical exam on very elderly and sometimes frail patients. He learned to work with basic technology — briefcase-sized EKG machines and portable blood pressure cuffs — unseen in modern western hospitals.

“Participating in the Okinawa Centenarian Study was rewarding beyond my expectations,” says Bernstein. “I was able to do independent research, see patients in a busy cardiology clinic, make house calls to conversant centenarians, and leave some weekend time to explore the mountains, beaches and remote villages of Okinawa.”

Mark Franciosa, ‘05, wanted to participate in a research project that would let him learn more about infectious disease and public health. He found one in Guanote, Ecuador, 140 kilometers south of the capital Quito, conducted by the Catolica University, Corporacion Ecuatoriana de Biotechnologia. An area of extreme poverty, the region is known for having a high rate of tuberculosis transmission and antimycobacterial drug resistance. Last summer, Franciosa helped begin implementation of a treatment plan recommended by the United Nations World Health Organization (WHO) for indigenous people.

Tuberculosis transmission rates are so high in the region because large families live in close contact in small, poorly ventilated homes. Mistrusting of outside health care workers, the indigenous people often fail to complete their treatment regimen, leading to the considerable emergence of drug-resistant bacteria. Residents often migrate to large cities to find work, increasing the risk of drug-resistant bacteria to large populations. To combat the problem, WHO has recommended having a health care worker directly observe patients taking their medicine, but the distance between the far-flung villages makes it impossible for members of the project.
Mark Franciosa (back) helped train local villagers in a World Health Organization effort to stem the spread of tuberculosis in Ecuador.

to reach all the people suspected of being infected. Franciosa worked with other students to design a protocol for training health workers from communities surrounding Guamote to assist in identifying and collecting samples from suspected cases. The initial part of the training consisted of a discussion of the basic pathology of tuberculosis and how it is transmitted. There was also a short discussion of nutrition dealing with which locally grown foods could help prevent the onset of the disease. The villagers were then trained to identify common symptoms and take sputum samples from people symptomatic for 15 days.

Unlike most students who choose an International Health elective, Franciosa went between his first and second years of medical school, rather than during his fourth year. He also received funding from the Miller Family Scholarship, which is designated for research in international health that may be completed either in the summer of first year or as a fourth-year elective.

"I've done basic science research, but this was my first opportunity to do field work involving infectious agents and communities," says Franciosa.

"Working with the indigenous peoples of Ecuador showed me how difficult it can be trying to treat a group of people with very different beliefs about medical care and illness." Despite these difficulties, Franciosa says his experiences in Ecuador have reinforced his desire to pursue a career in infectious disease and increased his interest in public health.

He hopes to continue to participate in the project by using the first set of results collected to write a grant proposal for funding the community health workers he worked with.
Linda Heffner, MD, PhD, has been appointed professor and chair of the Department of Obstetrics and Gynecology at Boston University School of Medicine (BUSM) and chief of Obstetrics and Gynecology at Boston Medical Center (BMC), effective September 1.

Heffner said she plans to make BUSM a national leader in obstetrics and gynecology by enhancing clinical care, education, and research. Best known locally for her clinical expertise in the areas of poor fetal growth and pregnancy in older women, Heffner will continue her research in both these areas, including an investigation of whether increased monitoring of mothers older than 35 can reduce the stillbirth rate. She has also conducted basic laboratory research into the biology of uterine prolactin and on the role of decidual hormones in pregnancies complicated by poor fetal growth. She is the senior investigator on several collaborative epidemiological studies on the obstetric determinants of fetal outcomes in such conditions as preterm labor and cervical incompetence. Heffner was previously an obstetrician-gynecologist and chief of Maternal-Fetal Medicine at Brigham and Women's Hospital and associate professor of obstetrics, gynecology, and reproductive biology at Harvard Medical School. She has also held teaching appointments at the University of Pennsylvania School of Medicine, and medical appointments at the Hospital of the University of Pennsylvania and Presbyterian-University of Pennsylvania Medical Center.

Heffner has published more than eighty original articles, reviews, chapters, editorials, syllabi, and books, including Human Reproduction at a Glance, the first, and only, medical student textbook that covers both the physiology of normal reproduction and the pathophysiology of human reproductive disorders in both men and women.

She received her BS from Bucknell University, her PhD from Cornell University and her MD from Johns Hopkins School of Medicine. She completed her internship and residency in obstetrics and gynecology at the Hospital of the University of Pennsylvania, a research fellowship at the University of Pennsylvania School of Medicine, and a clinical fellowship in maternal-fetal medicine in the Department of Obstetrics and Gynecology at Brigham and Women's Hospital.

Donald Marion, MD, MSC, FACS, has been appointed to the position of professor and chairman of the Department of Neurosurgery at BUSM, as well as chief of Neurosurgery at BMC.

Marion received his undergraduate degree from St. John's University in Collegeville, Minn., and his medical degree from the University of California in San Francisco. Following his residency training in surgery and neurosurgery at the University of Pittsburgh, he joined the faculty there in 1990 and advanced to the rank of professor of surgery and professor of rehabilitation science and technology.

Marion has performed important basic and clinical research on the metabolic changes that occur after traumatic brain or spinal cord injury and on the development of new therapeutic approaches to limit brain damage after severe trauma. He received the Young Investigator Award from the National Head Injury Foundation.

With more than one hundred fifty articles and one book to his credit, Marion has been principal investigator or co-investigator for several National Institutes of Health and industry grants. Marion serves on the editorial boards of the Journal of Neurotrauma, Journal of Trauma, and the Journal of Medicine and Surgery of Trauma.
Marion has served as chairman of the Scientific Sessions of the Neurotrauma Society and president of the National Association of Injury Control Research Center. In addition, he has served as a Peace Corps volunteer working on leprosy control in Korea.

Jonathan Olshaker, MD, has been named chairman of Emergency Medicine at BUSM and chief of Emergency Medicine at BMC.

Before coming to BUSM, Olshaker was at the University of Maryland School of Medicine for 13 years, most recently as professor of surgery and medicine. He was also director of Emergency Care Services at the Veterans Affairs Medical Center in Baltimore.

Olshaker earned his medical degree from George Washington University in 1982. Following an internship at the Oakland Naval Hospital, he completed an emergency medicine residency at Georgetown/George Washington University Hospitals. He served as a staff physician at the San Diego Naval Hospital before joining the faculty at the University of Maryland School of Medicine in 1989. He is currently a captain in the U.S. Naval Reserve.

Olshaker has won numerous honors and awards, including the Georgetown University School of Medicine Hussey Award for Outstanding Student Teaching, the National Defense Medal, and the Naval Reserve Services Award. He has published approximately fifty journal articles and book chapters on various aspects of emergency care. He has also lectured extensively on such emergency medicine topics as near drowning, acute asthma treatment, and pre-hospital trauma care.

Olshaker is senior editor of Forensic Emergency Medicine and on the editorial review board of the Journal of Emergency Medicine.

Carlos S. Kase, MD, professor of neurology and associate professor of pathology at BUSM, and acting chairman of Neurology at BMC, has been appointed chairman ad interim of the Department of Neurology at BUSM.

Before coming to BUSM in 1984, Kase was the acting chairman of the Department of Neurology at the University of South Alabama, where he was also an associate professor of neurology. From 1974-1977, he was an assistant professor of neurology at The Catholic University of Chile in Santiago.

Kase graduated from The Catholic University of Chile School of Medicine in 1966 and completed residencies in neurology at Massachusetts General Hospital and Harvard Medical School in 1973 and 1978.

Kase has received many honors, including the C. Miller Fisher Award for Excellence in Stroke in 2001 from the Massachusetts chapter of the American Stroke Association and Teaching Attending of the year for 1997 from the Boston University Training Program in Neurology. He has been featured in The Best Doctors in America. In February 2002, he received an honorary doctorate from the University of Santiago de Compostela, Spain. He is a member of the editorial boards of the Journal of Stroke and Cerebrovascular Disease, Neurology Chronicle, and Stroke. Since 1991, he has served as an examiner for the American Board of Psychiatry and Neurology.

Kase’s special research interests include stroke and cerebrovascular disease. He has authored or co-authored more than one hundred thirty journal articles and publications, including a book titled Intracerebral Hemorrhage.
Michael J. O’Brien, MD, MPH, professor of pathology and laboratory medicine at BUSM, professor of epidemiology at BU School of Public Health, and chief of Anatomic Pathology at BMC, was recently appointed chairman ad interim of the Department of Pathology and Laboratory Medicine at BUSM. O’Brien was previously the department’s vice-chairman for Anatomic Pathology. He joined the faculty at BUSM in 1976.

O’Brien studied medicine at the National University of Ireland in Galway, from which he received his MBBCH (MD equivalent) in 1971. He received his MPH, with a concentration in quantitative methods, from Harvard School of Public Health in 1993. He received his pathology residency training at University College Hospital in Galway, Ireland and the Mallory Institute of Pathology at Boston City Hospital, now BMC. He is a diplomate of the American Board of Pathology in Anatomic Pathology and Cytopathology, and a Fellow of the College of American Pathologists and the Royal College of Pathologists.

A nationally recognized expert in the field of gastrointestinal pathology and liver disease, O’Brien has published more than one hundred seventy reports, abstracts, chapters, and reviews.

Paul O’Bryan, PhD, professor of physiology and biophysics at BUSM, was appointed assistant dean for Student Affairs last fall. O’Bryan joined the BUSM faculty in 1975, as an assistant professor, and has taught physiology, neuroscience, and endocrinology at the School for more than twenty-five years. He served for ten years as the director and assistant dean of Premedical Programs at the Boston University College of Arts and Sciences, including Accelerated Pathways. He continues to serve as an academic advisor for the MA Program in Medical Sciences in the Division of Graduate Medical Sciences.

O’Bryan earned his BS from Brescia College in Owensboro, Ky. in 1964 and his PhD from Tulane University, in New Orleans, La. in 1969.

O’Bryan is the recipient of many teaching awards, including the Thomas Robitscher Medical Faculty Award for Excellence in Teaching Preclinical Sciences (9 times); the Proctor & Gamble Dental School Award for Excellence in Teaching Basic Sciences (4 times); and the Stanley Robbins Medical School Annual Award for Excellence in Teaching, in 1989. He has won several teaching awards, including the Stanley L. Robbins Award for Excellence in Teaching in 1999; the Thomas Robitscher Faculty Award, in recognition of excellence in teaching the pre-clinical sciences (3 times); BUSM’s Educator of the Year Award in pre-clinical sciences in 2001; and the Golden Apple Award from the American Medical Student Association, in recognition of excellence in teaching, in 1998.

Vaughan’s major research interest is the cellular morphology of the central nervous system and the effects of aging, as well as peripheral nerve regeneration. She has created a CD-ROM and guide titled A Learning System in Histology, published by Oxford University Press.
Simon Parisier, MD '61, is the founder and medical director of The Children's Hearing Institute, a not-for-profit agency established to support otologic research and educational programs. He is the former chairman of the Department of Otolaryngology – Head and Neck Surgery at the Manhattan Eye, Ear and Throat Hospital, and clinical professor of otolaryngology at Mount Sinai School of Medicine of the City University of New York.

A gifted surgeon, he ranks among the pioneers in the development of cochlear implants and related operative techniques that effectively restore hearing to children and adults afflicted with profound neuro-sensory deafness. He is a leader in the field of chronic ear diseases, and is world renowned for his research on the cellular biology of cholesteatoma which has led to a better basic understanding of this destructive ear disorder.

He is the author of more than one hundred twenty publications. He is a member of numerous professional organizations, including the American Academy of Otolaryngology, the American Otological Society, the American College of Surgeons, the New York Academy of Medicine, and the Society of University Otolaryngologists. He has also served as president of the New York Otologic Society and on the board of governors of the American Academy of Otolaryngology-Head and Neck Surgery. The American Academy of Otolaryngology has recognized Parisier with its Award of Merit and the American Academy of Otolaryngology Head and Neck Surgery Foundation gave him its Distinguished Service Award.

Parisier completed an internship and residency in surgery and otolaryngology at Mount Sinai Hospital, New York.

Deborah Cotton, MD '76, MPH, is chief of the Medical Service for the Veterans Affairs Boston Healthcare System, professor of epidemiology and biostatistics at the School of Public Health, as well as professor of medicine and vice-chair of the Department of Medicine for Veteran Affairs at BUSM. She is a former director of the Office of Clinical Research at Boston University Medical Campus.

An infectious disease specialist and distinguished clinical scientist, she is nationally recognized for her work in HIV/AIDS research and treatment.

Her research has focused on the clinical epidemiology of HIV infection, HIV/AIDS in women, and health science policy related to clinical research. She has served on numerous national committees and boards, including the Institute of Medicine AIDS Oversight Committee, the National Academy of Sciences Committee for AIDS Research, the Institute of Medicine Board on Health Sciences Policy Steering Committee, the National Institutes of Health Advisory Council for the Office of AIDS Research, and the U.S. Department of Health Human Services National Task Force on AIDS Drug Development. She was also chair of the Food and Drug Administration Antiviral Drug Advisory Committee, chair of the National Institute of Allergy and Infectious Diseases (NIAID)/National Institute of Child Health and Human Development panel on HIV Pathogenesis in Women, and a member of the Institute of Medicine Planning Committee on the Inclusion of Women in Clinical Trials. She serves as medical editor of AIDS/HIV Treatment Directory, editor of AIDS Clinical Care and is on the editorial board of the Journal of Women's Health and Gender-Based Medicine.

Cotton completed an internship and residency at Beth Israel Hospital, Boston and a fellowship at Harvard Medical School. She served as a clinical associate at the NIAID Laboratory of Clinical Investigation and was a senior fellow in the Infectious Disease Section, Pediatric Branch, of the Clinical Oncology Program of the National Cancer Institute. In 1985, she received a master's in public health from Johns Hopkins University School of Hygiene and Public Health.
Frank Marcus, MD '53, is an emeritus professor of medicine at the University of Arizona Health Sciences Center and former chief of the Cardiology Section at the University of Arizona College of Medicine. In 1982, he was named as the first Distinguished Professor of Cardiology there.

Renowned for his work in clinical cardiology, cardiovascular pharmacology, and clinical electrophysiology, Marcus introduced radiofrequency energy for cardiac ablation, a safer energy source for catheter ablation, which has changed the treatment of supraventricular arrhythmias. He was among the first to describe the phenomenon of the postextrastolic decrease in pulse pressure in patients with idiopathic hypertrophic cardiomyopathy, and he initiated early studies to elucidate the metabolism of digoxin and other cardiac glycosides using radioisotopes. The National Heart, Lung and Blood Institute of NIH recently awarded him a $5 million grant to study right ventricular dysplasia.

Marcus has published 250 articles in peer-reviewed journals and has contributed to 49 book chapters. He is the recipient of numerous awards, including the Outstanding Reviewer Award of the American Journal of Cardiology, and the Laureate Award from the Arizona Chapter of the American College of Physicians. He is an associate editor for the American Journal of Cardiology and is on the editorial boards of The American Journal of Geriatric Cardiology, the Journal of the American College of Cardiology, Cardiovascular Pharmacology & Therapeutics, and Cardiology, among others.

Marcus' involvement in professional organizations is extensive. He is a Fellow of the American College of Cardiology, the American College of Physicians, and the Council on Geriatric Cardiology. He is the founder and first president of the Arizona Chapter of the American College of Cardiology, and a member and past president of the Association of University Cardiologists. He serves on the board of directors of the American Heart Association Arizona Affiliate.

Marcus completed his internship and residency in medicine and a fellowship in cardiology at the Peter Bent Brigham Hospital in Boston and was a fellow in cardiology at Georgetown University Hospital, Washington, where he was also chief resident in medicine.

HUMANITARIAN AWARD

After the break up of the Soviet Union in 1991, a lack of state funding put medical care in Latvia in a state of crisis. Edward Zalitis, a pediatrician and son of Latvian immigrants, spent a month working at the Children's Hospital in Riga, Latvia. As a result, he founded "For the Future of Latvia," a medical relief committee dedicated to raising funds and providing volunteer services to pediatric institutions in Latvia. With his wife, Dace Micane-Zalitis, he produced a documentary depicting the pediatric crisis in Latvia and distributed it internationally to businesses, drug companies, Latvian communities in the United States, Canada, Europe, and Australia, as well as the World Health Organization and the United Nations. He was able to raise $800,000 in donations and supplies, arrange for Latvian children to receive medical and surgical care at the Shriners Burns Institute in Boston, and sponsor Latvian physicians to receive post-doctoral training in the United States. In 1997, he gave up his extensive pediatric practice with the Harvard Community Health Plan in Boston and moved to Latvia and now dedicates himself, full time, to his pediatric practice in Riga, providing care and educating the public, as well as local pediatricians, about pediatric health issues.

He is an associate professor of pediatrics at the University of Latvia School of Medicine, a lecturer for the World Bank sponsored project to upgrade family practitioners' expertise in pediatrics, and a medical advisor in pediatrics to the U.S. Embassy in Riga. He has served as a Soros Foundation lecturer in rural Latvia, speaking to physicians about the psychological and medical issues in child physical and sexual abuse, and he has consulted on the establishment of the first Child Abuse Center in Riga.
Howard Bauchner, MD, professor of pediatrics at BUSM, was named editor-in-chief of Archives of Disease in Childhood, the official publication of the Royal College of Paediatrics and Child Health in London. First published in 1926, it is the leading pediatrics journal outside the United States and is part of the British Medical Journal Publishing group. Bauchner is the first editor-in-chief not from the United Kingdom.

Lewis Braverman, MD, professor of medicine at BUSM, received the American College of Endocrinology's Distinguished Clinician Award in recognition of his "outstanding contributions to clinical endocrinology." The award was presented at the college's annual meeting in Chicago.

Robert Feldman, MD, chairman emeritus of the Department of Neurology, professor of neurology and pharmacology at BUSM, and professor of environmental health at BU School of Public Health, received the 2002 Fred Springer Award from the American Parkinson's Disease Association at the 54th Annual Meeting of the American Academy of Neurology. The award honored Feldman for his many significant contributions to clinical and basic research for advancing the understanding and treatment of Parkinson's disease.

Haralambos Gavras, MD, professor of medicine at BUSM, was installed as president of the American Society of Hypertension, Inc. at the society's 17th annual scientific meeting. Gavras is also the director of a National Institutes of Health-supported Specialized Center of Research in the Molecular Genetics of Hypertension.

Alice K. Jacobs, MD, professor of medicine at BUSM, has been named president-elect of the American Heart Association (AHA). She will serve in this capacity for one year before assuming the title of president on July 1, 2004. Jacobs will be the fourth BUSM professor to hold this honor. The others are Robert Wilkins (1954), Thomas J. Ryan (1984), and the immediate past president, David P. Faxon.

As president, Jacobs will serve as the AHA's chief scientific and medical officer and as spokesperson for all medical, scientific, and public health matters of the association. Jacobs has been involved with the AHA for more than 15 years. Currently, she serves as the president of the newly formed Northeast Affiliate. She also serves as the chairperson of the national organization's Professional Education Committee, as a member of the Science Advisory and Coordinating Committee, and as chairperson of the Council on Clinical Cardiology Program Committee.

Jacobs is also the recipient of AHA'S 2002 Distinguished Leadership Award for her role as president of the New England Affiliate. The award recognizes her outstanding leadership in pursuit of the AHA's mission to reduce disability and death from cardiovascular disease and stroke.

Kenneth Grundfast, MD, professor and chairperson of Otolaryngology – Head and Neck Surgery at BUSM and chairperson of the Division of Otolaryngology – Head and Neck Surgery at BMC, has been elected president of the New England Otolaryngology Society. Grundfast's term will run through December 2003.

Michael Holick, MD, PhD, director of the General Clinical Research Center and professor of medicine, physiology and biophysics, and dermatology at BUSM, is the recipient of the American College of Nutrition's Award for 2002. Holick was honored for his ongoing contributions in the area of the nutritional aspects of complex diseases, such as psoriasis and osteoporosis. Holick was also recently presented with the McCollum Award from the American Society for Clinical Nutrition for his innovative research in the field of photobiology.
IN BRIEF

Mark Klempner, MD, associate provost for Research at BU Medical Campus and Conrad Wesselhoeft Professor of Medicine at BUSM has been named an associate editor of The New England Journal of Medicine (NEJM). Associate editors at NEJM play a critical role in the process of manuscript review, serving as the initial arbitrator for original articles submitted to the journal. Joseph Loscalzo, MD, PhD, Wade Professor and chairman of the Department of Medicine and director of the Whitaker Cardiovascular Institute at BUSM, also serves as an associate editor of the journal, making two of NEJM’s eight associate editors members of the BUSM faculty.

Conan Kornetsky, PhD, professor of psychiatry, pharmacology and experimental therapeutics at BUSM, received the 2002 Mentorship Award from the College on Problems of Drug Dependence. Kornetsky, a BUSM faculty member for 43 years, was honored as an exemplary mentor for developing researchers at the college’s annual meeting held in Quebec City.

Kyriakos Kypreos, PhD, instructor of medicine in the Molecular Genetics Section of BUSM’s Whitaker Cardiovascular Institute, won first place in the AHA’s Irvine H. Page Arteriosclerosis Research Awards for the Young at the annual Arteriosclerosis, Thrombosis, and Vascular Biology conference. Offered annually, the Page award is considered one of the most prestigious award in the field of arteriosclerosis.

Barbarajean Magnani, MD, PhD, associate professor of pathology and laboratory medicine at BUSM, is the recipient of a 2002 American Association for Clinical Chemistry Outstanding Speaker Award. Magnani received the award for her presentation, “Toxicology: What the Clinical Laboratorian Needs to Know in 2001,” at the association’s 15th Annual Northeast Region Conference and Exhibition. Magnani was also appointed to the Toxicology Resource Committee by the College of American Pathologists.

John Noble, MD, professor of medicine at BUSM, has received a special Ernest A. Codman Award from the Joint Commission on Accreditation of Healthcare Organizations for his contributions in creating and sustaining the commission’s annual quality awards. The award recognizes organizations and individuals for excellence in the use of performance measurement to achieve improvements in the quality and safety of health care.

Richard Saitz, MD, associate professor of medicine at BUSM, received one of the Boston Junior Chamber of Commerce Ten Outstanding Young Leader Awards for 2003. Since 1952, the group more commonly known as the Jaycees has honored leaders from Greater Boston younger than 40 for their exceptional professional and personal achievement and unwavering commitment to the community. Honorees are selected by an independent panel of Boston leaders and join a select group of past recipients, who include John F. Kennedy, and Boston University’s John Noble, MD, and also Dr. Deborah Prothrow-Stith, MD, formerly of Boston University. Nomination letters cited Dr. Saitz’ clinical, research, and educational efforts as an academic primary care physician in alcoholism treatment and prevention. The primary achievement qualifying him for the award is developing and leading the charge to have alcohol use and related problems addressed by the medical profession. Saitz, who maintains a primary care practice and serves in leadership positions for local and national organizations, has been recognized internationally as an expert in alcohol abuse.
M. Stuart Strong, MD, FACS, professor and chairman emeritus of BUSM’s Department of Otolaryngology – Head and Neck Surgery (1958-1985), and Charles Vaughan, MD, FACS, associate clinical professor in Otolaryngology, were honored at the department’s annual Alumni Day Scientific Program, held this summer in the Bakst Auditorium, for their many years of dedicated teaching and contributions to the department.

John Wiecha, MD, MPH, assistant professor of family medicine and director of Predoctoral Education in the Department of Family Medicine at BUSM, is the recipient of the 2002 eHealth Developers’ Summit Award for Application Excellence – Best Online Continuing Medical Education (CME) Course. The award recognizes the best-accredited online CME course through a national competition of nearly fifty entries. Wiecha’s entry is an interactive, Department of Family Medicine course titled “Treatment and Management of Type 2 Diabetes,” designed to update primary care physicians on the latest concepts in diabetes care.

Diego Wyszynski, MD, PhD, research assistant professor of medicine in the genetics program at BUSM, and assistant professor of epidemiology at SPH, has been honored with the 2002 Outstanding Professional Reference or Scholarly Work award in the clinical medicine category for his recently published book Cleft Lip and Palate: From Origin to Treatment.

Pulmonary Center receives $11.4 million, 5-year NIH grant

The Pulmonary Center at Boston University Medical Campus (BUMC) has received five additional years of funding from the National Institutes of Health for the center’s Program Project Grant on molecular regeneration of lung development and epithelial cell differentiation. The grant, now in its eleventh year, will bring in $11.4 million during the next five years. The grant includes five subprojects and a bioinformatics core exploring lung development from inception of the initial embryonic lung bud to adaptation of the lung to air breathing at birth. The roles of principal and co-principal investigator will be assumed by Mary Williams, PhD, professor of medicine at BUSM, and Jerome Brody, MD, director of the Pulmonary Center at BUMC and professor of medicine at BUSM, respectively.

NIH awards $12 million to BUSM for new proteomics center

The NIH’s National Heart, Lung, and Blood Institute has awarded BUSM a $12 million, 7-year contract to create a Cardiovascular Proteomics Center that could yield new diagnostic tests, medications, and other treatments for illnesses such as heart disease, arteriosclerosis, and sickle cell anemia.

Proteomics seeks to catalogue proteins – which serve as biological signals – and determine their levels, activities, and how they are regulated, as well as how they respond to disease, drugs, or DNA alteration. With the help of Waltham, Mass.-based company, Beyond Genomics, the multidisciplinary BUSM Cardiovascular Proteomics Center will develop new technologies to accelerate proteomics research and incorporate proteomic techniques into 12 existing biological studies to better understand the cardiovascular damage that occurs when proteins are oxidized by free radicals.

NIEHS gives $3.2 million, 5-year grant for Parkinson’s disease research

Robert Feldman MD, chairman emeritus of Neurology and professor of neurology and pharmacology at BUSM, and professor of environmental health at the Boston University School of Public Health, along with Howard Hu, MD, PhD, MPH, of Brigham and Women’s Hospital, will lead a collaborative study of gene-metal interactions in Parkinson’s disease. The five-year, $3.2 million grant from the National Institute for Environmental Health Sciences, will examine the role of genetic and environmental factors, including exposure to lead in Parkinson’s disease. Feldman is the director of the American Parkinson’s Disease Association’s Center for Advanced Research at BUSM and the author of the book Occupational and Environmental Neurotoxicology.
Grunebaum Foundation establishes cancer research professorship

The trustees of the Karin Grunebaum Cancer Research Foundation contributed $2 million to endow the Grunebaum Professorship in Cancer Research at BUSM. Since the foundation began supporting fellowships at the School in 1958, a total of $246,000 in stipends has been awarded to support students involved in cancer research. Fritz Grunebaum, who died in 1992, was a friend of BUSM and established the foundation in memory of his first wife, Karin, who died of cancer in 1958, leaving behind her husband and a young family, including a 3-month-old infant.

NIDA grants $1.6 million to fight drug addiction

A $1.6 million, 5-year grant from the National Institute of Drug Addiction (NIDA) has funded the creation of an interdisciplinary program linking the schools of Medicine, Public Health and Social Work. The Clinical Addiction Research and Education program (CARE) aims to reduce drug abuse by teaching hospital-based physicians how to care for substance abusers, training physicians as drug abuse specialists, and guiding community-based organizations in following NIDA-recommended treatments.

Pharmaceutical companies give $1.4 million for pediatric research

Two pharmaceutical companies have supported the research of Colin Marchant, MD, adjunct associate professor of pediatrics. The GlaxoSmithKline Foundation has contributed $803,121 to support Marchant’s work on Centers for Disease Control recommendations for treatment of ear infections in children. Wyeth-Ayerst Pharmaceuticals has contributed $629,080 to support his survey of streptococcus pneumonia in children.

Donor gives $5 million for sexual medicine

An anonymous donor has contributed $1 million, part of a $5 million grant in support of the work of Irwin Goldstein, MD, director of the Institute for Sexual Medicine and professor of urology and gynecology at BUSM, and other researchers at the institute.

Celgene gives $960,000 for thalidomide research

Celgene Corp. has contributed $960,000 for continuation of research by Allen Mitchell, MD, director of the Slone Epidemiology Center, professor of epidemiology at the BU School of Public Health, and professor of pediatrics at BUSM, for an evaluation of a thalidomide fetal exposure prevention program.

Lecturship honors ophthalmologist Haimovici

The Robert Haimovici Lectureship Fund in Retinal Disease, has been established in memory Robert Haimovici, MD, associate professor of ophthalmology at BUSM, whose devotion to the ideals of academic medicine has served as an inspiration to faculty, friends, family, and all who knew him. Haimovici died in October 2002 after a long illness.

Award established in memory of Spatz

The Edward L. Spatz, MD, Award for Excellence in Neurosurgery has been established in his memory. A visionary physician and surgeon who touched the lives of many patients and the careers of many medical students and physicians in more than four decades at BUSM, Spatz died in September 2002. The award will be given to a fourth-year medical student who has excelled in neurosurgery and exemplified the characteristics of Spatz.
Kechejian doubles family scholarship

Sarkis Kechejian, MD '63, has doubled The Kechejian Family Scholarship with a pledge of an additional $1 million. The philanthropist established the scholarship honoring his family three years ago with an initial gift of $1 million. Kechejian's gift was inspired by his memory of how hard he and his family worked to achieve the highest levels possible in their chosen fields and how much the School's financial aid meant to them. Having met some of the recipients of the Kechejian scholarships, he has commented upon the joy he feels in helping these bright young professionals and seeing, in his lifetime, just how much these scholarships mean.

Klein Trust donates another $1 million to scholarship fund

An estate gift by alumnus Benjamin Klein, MD '27, has provided the School an additional $1 million, for a total of $4 million. The contribution will fund the Dr. Benjamin and Ella Klein Scholarship to help BUSM students with the costs of medical school education.

Wolfson Foundation adds to revolving loan fund

The Louis E. Wolfson Foundation has given an additional $200,000, for a total of more than $6 million, in support of the Wolfson Revolving Loan Fund. This fund was established in 1981 by Louis Wolfson, MD, who personally experienced the financial difficulties confronting medical students. He established this fund to provide loans to students in Boston's three medical schools: BUSM, Harvard Medical School, and Tufts University School of Medicine. The foundation contributes annually in his name.

CAS grad establishes BUSM scholarship

Robert Melikian, a graduate of BU's College of Arts and Sciences, has established a $100,000 charitable gift annuity, which, when mature, will provide scholarships for BUSM students. Melikian, a retired resident of New York City, is the former president of Horizon West Marketing Corp., a food consumer-marketing group.

Wolfe establishes scholarship fund

Henry Wolfe, MD '45, and his wife, Grace, have established a $100,000 charitable trust for BUSM. Wolfe, who resides in Mission Viejo, Calif., made his career in infectious disease. At maturity, the trust will benefit students as the Henry and Grace Wolfe Scholarship Fund.
IN MEMORIAM

Ruth R. Levine, PhD

Boston University and BUSM lost a fierce advocate February 22, 2003, with the death of Ruth R. Levine, PhD, who died of cancer at age 84. Associate dean and chairman emerita of the Division of Graduate Biomedical Sciences, University Professor Emerita, and professor of pharmacology and experimental therapeutics at BUSM, Dr. Levine was regarded as a brilliant and tough woman who always had the best interests of the School and the University in mind.

A member of the BUSM faculty for more than forty years, Dr. Levine served first as chairman, then as associate dean for Graduate Biomedical Sciences from 1964-1989. During her tenure, Dr. Levine laid the foundations that allowed enrollment in the graduate division to increase from 23 students enrolled in 2 programs to 300 students in 15 programs.

An internationally recognized expert in pharmacokinetics, a branch of pharmacology concerned with the study of how the body absorbs, distributes, metabolizes, and disposes of drugs, Dr. Levine achieved many firsts in her career. She was the first to conduct a quantitative study of drug absorption in living animals. She wrote the first introductory textbook on pharmacology principles for non-medical professionals. Originally published in 1973, Pharmacology: Drug Actions and Reactions is now in its sixth revised edition and still considered the definitive text in pharmacology at the pre-professional level. Dr. Levine was also the first woman elected an officer in at least two national chemical societies, including the American Society for Pharmacology and Experimental Therapeutics.

But for Dr. Levine, who had no children of her own, students always came first. “You get a lot of pleasure from research,” she once said, “but there’s nothing like the response from a student.”

“She touched many lives at Boston University deeply, because of her devoted concern and affection for her students and colleagues,” said Carol Walsh, PhD, associate professor of pharmacology at BUSM and a co-author of Pharmacology Drug Actions and Reactions. “I owe her my life as a pharmacologist and am forever grateful for her mentorship.”

Dr. Levine graduated from Hunter College in 1938 with a degree in chemistry, received a master’s degree in organic chemistry from Columbia University in 1939, and a doctorate in pharmacology from Tufts University in 1955. She also began her career in pharmacology as a researcher at Tufts University. Dr. Levine’s projects included work on the oral drug therapy of addiction, and study of the physiologic factors in psychotropic drug therapy.

She was a member of the Scientific Advisory Board of the Environmental Protection Agency from 1976 to 1982, and a member of the International Joint Committee of the State Department from 1983 to 1989. Her research projects were funded for 35 years by grants from the National Institutes of Health, the U.S. Army and Air Force, the National Institute of Mental Health, and other public and private agencies.

In 2001, Dr. Levine established the permanently endowed Ruth and Martin Levine Scholarship Fund in Graduate Medical Education, which gives annual scholarship awards to one or more graduate students enrolled in the school’s Division of Graduate Medical Sciences who have demonstrated excellent scholarship. Recognizing some of the difficulties many women face in completing their advanced academic studies, Dr. Levine organized the permanently endowed fund to ensure that preference is given to at least one female student who has reached her 30th birthday and is returning to academia after an interruption.
Robert Wilkins, MD, chairman of the Division of Medicine at BUSM from 1960-1972, brilliant hypertension researcher, and inspirational teacher, died April 9, 2003 at the age of 96.

Dr. Wilkins left many research milestones during his 30-year career as a hypertension specialist. During World War II, he helped give American fighter pilots and paratroopers an upper hand with his crucial research on blood-pressure control and ways to support circulation under stress. The work led to his development of a “G-suit” to prevent pilots from blacking out under the increased force of gravity during combat maneuvers and a special parachute harness that protected paratroopers from the same problem when parachuting from high altitudes. In 1947, he was honored by the War and the Navy departments for outstanding wartime contributions to the Office of Scientific Research and Development.

After the war, Dr. Wilkins quickly returned to his research on hypertension. Refusing to believe the prevailing medical opinion of the time, which stated that high blood pressure was necessary to force blood through a patient’s narrowed arteries, Wilkins and his collaborators persisted in researching ways to lower blood pressure. The result was the first effective medical therapy for hypertension. By demonstrating the efficacy of the drug rauwolfia serpentina in the treatment of high blood pressure, Wilkins ushered in a new era in the pharmacotherapy of hypertension.

During the 1950s, Dr. Wilkins introduced the “step care” approach to treating hypertension, a method that endures as a foundation for the treatment of high blood pressure. He, with associates, William Hollander, MD, professor of biochemistry and medicine at BUSM and Aram Chobanian, MD, dean of BUSM and provost of the BU Medical Campus, were among the first hypertension specialists to use the diuretic chlorothiazide and the aldosterone antagonist spironolactone for the treatment of high blood pressure. In 1958, Dr. Wilkins received the prestigious Albert Lasker Award "for distinguished contributions to the control of heart and blood vessel diseases through outstanding investigation in the causes, diagnosis, and treatment of hypertension."

Wilkins succeeded Chester Keefet, MD, as chairman of Medicine and continued to build the department to national prominence. He appointed several young clinician scientists to head the different sections in the department, including Norman Levinsky, MD; Alan Cohen, MD; James Melby, MD, PhD; Robert Donaldson, MD; Jay Coffman, MD; Thomas Ryan, MD; and Chobanian. Each of these individuals later achieved national prominence in their fields of interest and built strong programs on the Medical Campus.

Dr. Wilkins was involved in several national medical organizations, as a member of the Advisory Heart Council of the National Institutes of Health and as the president of the American Heart Association. From 1950-1951, he led the Council of High Blood Pressure Research, the most important hypertension research organization in the world.

In 1963, President John F. Kennedy chose Dr. Wilkins as one of six medical researchers to represent the United States in the Soviet Union on one of the earliest cultural exchanges during the Cold War. In 1972, BUSM named the Wilkins Board Room to honor his many years of dedication to the School.

Dr. Wilkins earned a bachelor's degree, summa cum laude, from the University of North Carolina at Chapel Hill in 1928, then taught science, and coached football and track at the Greensboro High School from 1928-1929. When the Great Depression began in 1929, he enrolled in the University of North Carolina Medical School. After completing its two-year course, he transferred to Harvard Medical School, from which he graduated first in his class in 1933.

Dr. Wilkins completed his internship, residency, and research training at the Boston City Hospital, Harvard Services, and Thorndike Memorial Laboratories from 1933-1937. He then spent a year in
London on an American College of Physicians traveling fellowship, researching the autonomic nervous system, and a year at the Johns Hopkins as an instructor in medicine. In 1940, Dr. Wilkins was recruited by Keefer to head the section on cardiovascular diseases at the Evans Memorial, and be an assistant professor of medicine at BUSM.

He is survived by three children, Margaret Wilkins Noel of Portland, Ore., Mary Wilkins Haslinger of Bloomfield, Conn. and Newburyport, and Robert Wallace Wilkins, Jr., of Yarmouthport; a sister, Kate Woolley of Baton Rouge, La.; a brother-in-law, Frank Forrest Morrill of Newburyport; and six grandchildren.

J. Stephen Fink, MD, PhD

J. Stephen Fink, MD, PhD, of Wellesley Hills on December 30, 2002, of a brain tumor at the age of 52. He was professor and chairman of Neurology at BUSM and chief of the Department of Neurology at Boston Medical Center (BMC).

Despite his unfortunately brief tenure, Dr. Fink distinguished himself as a brilliant administrator, scientist, teacher, and clinician, and moved the Department of Neurology forward to new levels of achievement. Colleagues, patients, and staff remember him as a person of the highest integrity, with warm personal qualities, who was somehow able to maintain his dedication to the department during his last weeks despite his serious illness.

He received his PhD in neurobiology from Cornell University Medical College before earning his MD at the same school. He completed a neurology residency at Massachusetts General Hospital, where he was on staff for 16 years. Before joining BUSM in 2000, Dr. Fink was the medical director of neurology programs at the biotech company Genzyme for five years. He was also an associate professor of neurology at Harvard Medical School.

A clinical teacher and scientist, Dr. Fink was recognized internationally for his study of Parkinson's disease and other movement disorders. He authored more than seventy-five scientific papers, symposia and book chapters. He was a member of numerous professional associations, including the American Neurological Association, the American Society for Experimental Neuro Therapeutics, the Movement Disorder Society, the International Society of Movement Disorders, and the Tourette Syndrome Association, where he served on the Scientific Advisory Board.

He is survived by his wife, Dr. Linda Specht; two daughters, Sarah and Emily Fink; a son, Andrew Fink, all of Wellesley Hills; and two brothers, Peter Fink, of Wallingford, Conn.; and David Fink, of Tampa, Fla.

Sydney S. Gellis, MD

Sydney S. Gellis, MD, of Newton, Mass. on December 6, 2002, at the age of 88. A former acting dean of BUSM, he helped shape modern pediatrics.

An expert on birth defects and liver disease in children, Dr. Gellis was professor and chairman of Pediatrics at BUSM from 1956-1965, and acting dean from 1963-1964. He continued to lecture at BUSM until 1987. He also taught at Tufts and Harvard, and published hundreds of research papers. Dr. Gellis continued to edit his weekly publication Pediatric Notes until just before his death.

A native of Claremont, N.H., Dr. Gellis earned his medical degree from Harvard Medical School in 1938. During World War II, he was a U.S. Army captain and traveled the world as a field epidemiologist. After the war, he became assistant physician-in-chief at Children's Hospital in Boston. In 1965, he began working for the Floating Hospital for Children at Tufts University's New England Medical Center, where he stayed until his official retirement in 2001.

At the Floating Hospital, Dr. Gellis started a birth defects center and that institution's first full-time pediatrics department. He also helped develop a family participation unit, which allows parents to stay with their children dur-
Robert Haimovici, MD, of Weston, Mass. on October 9, 2002, at the age of 40. He was an associate professor of ophthalmology at BUSM and director of the Vitreo-Retinal Service at BMC.

Dr. Haimovici graduated from Northwestern University’s Feinberg School of Medicine in Chicago, Ill., in 1986. He completed an internship in internal medicine at the Boston VA Medical Center and Tufts University School of Medicine in 1987. He completed a residency in ophthalmology at the University of Miami School of Medicine and the Bascom Palmer Eye Institute in 1990, where he was also a fellow for six months, before becoming a retinal fellow at Moorfields Eye Hospital Institute of Ophthalmology in London, England in 1991. From 1992-1994, he was a vitreo-retinal fellow at Harvard Medical School and the Massachusetts Eye and Ear Infirmary. Haimovici joined the faculty at BUSM in 1994 as an assistant professor of ophthalmology and was promoted to associate professor just before his death.

Sister Claire Hayes, CDP, of Kingston, Mass. on January 8, 2003, at the age of 64. A Sister of Divine Providence for nearly 50 years, she officiated BUSM’s commencement ceremony and comforted patients, their families, and employees at Boston Medical Center, where she served as chaplain for 12 years.

Born to the late Francis and Margaret (McGee) Hayes of Marshfield, Mass., she was known as Peggy Ann until she joined the Congregation of the Sisters of Divine Providence in Pittsburgh, Penn., at the age of 16.

Before becoming a hospital chaplain, Sister Claire taught parochial students from the preschool to high school levels and worked with women prisoners, becoming director of Charlotte House, a pre-release center for women serving sentences at the Massachusetts Correctional Institute in Framingham.

She worked with young people at St. Mary’s Parish in Hanover and was active in a number of causes. For years, she provided support to a group of women living with breast cancer. She also devoted her time to the children and staff of Camp Fatima and was involved with SIGN, a weekend retreat for high school and college women.

She is survived by a sister, Clara Barrett of Hingham, Mass., and two nephews

Edwin Yale Stanton, MD ’34, of Flushing, N.Y., on January 16, 2003, at the age of 92. He was an otolaryngologist at Flushing Hospital for 44 years before retiring.

He served in World War II and was discharged from the U.S. Army Reserves in 1947 with the rank of lieutenant colonel.

He is survived by his wife, Arline, two sons, and two daughters.

Nicholas T. Phillips, MD ’44, of Norwich, Conn., on October 1, 2002, at the age of 83. A retired general surgeon, he was affiliated for 35 years with Backus Hospital in Norwich, Conn., where he served as chief of staff.

A U.S. Army veteran of World War II, he also served with the rank of lieutenant in the U.S. Navy Medical Corps during the Korean Conflict.

He served as president of the New London County Medical Association. He was a diplomat of the American Board of General Surgery; a fellow of the American College of Surgeons; and a member of the American Medical Association, the Connecticut State Medical Society, and the Connecticut Society of the American Board of Surgeons.

He is survived by his wife, Bette (Hines) Phillips, a daughter, two sons, four grandchildren, two great grandchildren, two brothers, two sisters, and several nieces and nephews. He is predeceased by a sister and a grandson.

Alan N. Goodman, MD ’60, of Boca Raton, Fla., on August 23, 2002, at the age of 68. He practiced internal medicine, specializing in hematology/oncology at Boca Raton Community Hospital and was chief of Hematology at Booth Memorial Medical Center in Flushing, N.Y.

He served as a pathologist and commanding officer in the U.S. Army during Vietnam, and served at the First U.S. Army Medical Laboratory, New York, N.Y.

He is survived by his wife, Yoshiko Goodman.
BU names new student village complex
and arena

In October, BU celebrated the naming of its new housing, sports, and family entertainment and recreational complex as the John Hancock Student Village, in recognition of a $20 million corporate sponsorship from John Hancock Financial Services, Inc. The University also officially dedicated its new Track and Tennis Center, a modern facility for indoor track and field meets, tennis tournaments, student intramural programs, and similar events.

As part of its sponsorship, John Hancock gave BU the honor of naming the 7,200-seat multi purpose arena - the centerpiece of the student village complex - for Harry Agganis, the University's most famous sports alumnus, former Red Sox player, and local sports legend.

The Harry Agganis Sports and Entertainment Arena, scheduled to open in fall 2004, will be home to Terrier hockey and basketball. In addition to the Harry Agganis Arena, the John Hancock Student Village will include a 270,000 square-foot fitness and recreation center facing Commonwealth Avenue, offering an 18,000 square-foot cardiovascular fitness and weight training center, a raised jogging track, competition-quality and recreational pools, squash and racquetball courts, a dance center, a climbing wall, sports medicine center and locker complex, and other activity areas. Total cost for the arena, fitness and recreation center, open spaces, underground parking garage, and other infrastructure is estimated at $220 million.

The site also will feature up to four residence halls. The first, an 817-bed, 18-story high-rise opened in the fall of 2000 and is considered one of the finest student residences in the country. After construction is completed on the arena and fitness and recreation center, work on the additional new housing is slated to begin. When the John Hancock Student Village is completed, it will be home to 2,300 students and the new focus of student life.

BU to develop chemical libraries with $10.7 million NIH grant

To enhance biomedical innovation, the National Institute of General Medical Sciences (NIGMS) of the National Institutes of Health (NIH) awarded BU a $10.7 million, 5-year “Centers of Excellence” grant last fall establishing the Center for Chemical Methodologies and Library Development (CMLD) on the Charles River Campus.

The grant is the largest ever received by the BU Chemistry Department. “This grant,” said Tom Tullius, PhD, chairperson of the department, “puts Boston University at the forefront of one of the most exciting frontiers of synthetic organic chemistry: the development of new methods to make highly diverse libraries of organic compounds.”

Christopher Barreca elected chairman of BU Board of Trustees

In January, the BU Board of Trustees unanimously elected Connecticut attorney Christopher Barreca as chairman. Barreca succeeds Richard DeWolfe, who recently announced his intention to step down following the sale of his business, The DeWolfe Companies, Inc.

“Chris Barreca is an extraordinarily generous and loyal trustee,” said DeWolfe. “He has dedicated himself to the advancement of Boston University from the first day following his graduation from BU, and his service has proved that.”

Barreca attended BU's General College and earned his JD from the School of Law in 1953. He earned his LLM from the Northwestern University School of Law in 1968. He is senior counsel in the Stamford, Conn, office of Paul, Hastings, Janofsky, and Walker, and has served on the BU Board from 1970 to 1973, and has served as a Trustee since 1977.

“I'm flattered to be elected chairman,” said Barreca, “and very proud of Boston University as one of the premier universities, not only in our country, but in the world.”