And at the University of Chicago, the constant evolution of research, technology and clinical practice keeps the Medical Center and the Division of Biological Sciences at the forefront of those worlds.

Change demands that we extend research into the basic biology of disease. It requires us to use new tools, such as robotic surgery, to improve treatment. It prompts us to collaborate with local health institutions to create a network of medical care for our immediate neighbors.

Technology transforms the way people work and learn, the way scientists conduct research, and the way patients receive treatment. Science and medicine are evolving, and the University of Chicago Medical Center is steering the way.
The words etched into this entryway encapsulate the three branches of the one institutional tree: the University of Chicago Medical Center. “The University of Chicago University Clinics” is inscribed above, with “The Pritzker School of Medicine” on one side and “The Division of the Biological Sciences” on the other. As our three branches intertwine, they align with our Shared Mission and Mission of the Institution.

At the University of Chicago Medical Center, evolution is more than a field of study or classroom discussion. It is an expectation, a way of making things better day after day. Physicians, scientists, nurses, staff, students and administrators here drive institutional evolution. They advance our understanding of the world and of medicine, and apply those advances to patient care.

This year the pace of change has quickened. The result is an institution that is constantly adapting to new methods and to novel circumstances. It is an institution that is coming closer together—forming innovative, cooperative partnerships with other institutions and collaborating with the community.

One example of this comes from a new book, Your Inner Fish, by Neil Shubin, PhD, associate dean for organismal and evolutionary biology. As a paleontologist, Dr. Shubin studies fish fossils, including a species that evolved to live on land 375 million years ago. “It turns out,” he wrote, “that being a paleontologist is a huge advantage in teaching human anatomy... The best road maps to human bodies lie in the bodies of other animals. The simplest way to teach students the nerves in the human head is to show them the state of affairs in sharks.”

That sort of cross-boundary thinking also reaches into the realm of patient care and cost efficiency. Medical Center President David Hefner has consolidated, standardized and streamlined many of the Medical Center’s complex processes in ways that have improved our patients’ experiences and outcomes while reducing costs, a key component in the Medical Center’s strong financial performance in a difficult fiscal environment.

Another evolution in thinking is the growing link between the Medical Center and the surrounding community. Our work through the South Side Health Collaborative has helped patients find primary care close to home, and the ongoing evolution of that program has inspired us to expand our connections to multiple health care centers and general care hospitals nearby.

In research and education, our ties with other institutions are helping us expand our reach. Our deepening relationship with Argonne National Laboratory, a Department of Energy facility 25 miles to the west, has enabled our researchers to exchange ideas and technologies with those at Argonne and to advance research in a variety of fields. Due to these collaborations, our reputation as a leading center for research, teaching and patient care continues to rise.

Due to these efforts, our ties with other institutions are helping us expand our reach. Our deepening relationship with Argonne National Laboratory, a Department of Energy facility 25 miles to the west, has enabled our researchers to exchange ideas and technologies with those at Argonne and to advance research in a variety of fields. Due to these collaborations, our reputation as a leading center for research, teaching and patient care continues to rise. Not only was the Medical Center on the U.S. News & World Report Honor Roll of the nation’s best hospitals, but also the Pritzker School of Medicine rose another notch in the education hierarchy, making it the fastest rising medical school in the country, moving up seven slots since 2004.

At this institution, diverging branches of science and medicine change, evolve and continue to grow together. This is, in fact, written in stone.

Valerie B. Jarrett
Chair, University of Chicago Medical Center Board of Trustees
James L. Madara
Chief Executive Officer, University of Chicago Medical Center
Vice President for Medical Affairs, University of Chicago
Dean of the Division of the Biological Sciences and the Pritzker School of Medicine

The words etched into this entryway encapsulate the three branches of the one institutional tree: the University of Chicago Medical Center. “The University of Chicago University Clinics” is inscribed above, with “The Pritzker School of Medicine” on one side and “The Division of the Biological Sciences” on the other. As our three branches intertwine, they align with our Shared Mission and Mission of the Institution.
Building STRENGTH

Innovation is a hallmark of the University of Chicago. The University’s reputation for advancing the boundaries of education is shared—and strengthened—by the Medical Center, the Division of Biological Sciences and the Pritzker School of Medicine. It’s a reputation built on the care and innovation that faculty and staff exhibit every day. Evidence of it can be found in the national rankings, grant funding and awards the institution continues to accrue. Each year, U.S. News & World Report ranks the nation’s health care centers, as well as colleges and graduate programs. In 2007, as in years past, the University of Chicago was well represented on those lists.

Academically, the University of Chicago fared exceedingly well in those rankings. Two bioscience graduate programs—paleontology and ecology/evolutionary biology—were ranked the best in the nation. The Pritzker School of Medicine was 15th on the list. Graduate programs in the biological sciences ranked 18th overall.

Of more than 5,400 hospitals evaluated, the Medical Center tied for 17th, and because the University of Chicago scored highly in so many areas, it earned a spot in the magazine’s elite list of “Honor Roll” hospitals. Two specialty programs were ranked in the top 10 nationally: digestive disorders at No. 6 and cancer at No. 7. Six other programs ranked in the top 25 of their fields: endocrinology (No. 11), neurology and neurosurgery (No. 14), kidney disease (No. 22), heart and heart surgery (No. 23), geriatrics (No. 24) and ear, nose and throat (No. 25). Additionally, the gynecology and respiratory disorders programs scored in the top 50. These lists put the University of Chicago in a class of its own in Illinois.

Physicians and professors were not the only Medical Center employees recognized nationally this year. In the United States, the best hospital nursing staffs are honored with Magnet status by the American Nurses Credentialing Center. Fewer than 5 percent of hospitals nationwide have earned that status. In February 2007, Medical Center nurses won that prestigious honor. Magnet status recognizes only hospitals where patient care is at the highest level of excellence, with outstanding patient outcomes and shorter stays.

University of Chicago physicians have long been recognized as among the best in the nation. Now, with Magnet status, Medical Center nurses are receiving recognition for their national prominence as well.

“This was an important step for us as an institution,” said Medical Center President David S. Hefner. “If we’re going to focus on the most difficult cases, we have to provide superb nursing care. Receiving Magnet status is evidence that we do. It provides outside verification of the excellence of our nurses—something we are proud of and have always known.”

Opening next year, the Jules and Gwen Knapp Center for Biomedical Discovery will house translational research programs in cancer and other medical specialties.
A recent addition to the faculty, Sudhir Srivastava, MD, is the world leader in totally endoscopic coronary artery bypass surgery, a revolutionary procedure that frees the patient from an invasive, sternum-splitting operation.

The past year has been a time of transition, as well as honor. In 2006, the hospitals and the Biological Sciences Division reorganized to create the University of Chicago Medical Center. By combining resources and services, the two parts of the institution have been able to work more cooperatively and smoothly under the umbrella leadership of CEO and Dean James Madara.

The organizational change is just one sign of how the institution is evolving to create a better place for inquiring, learning and healing. Success in attracting support from public and private sources is another. Chicago physicians and scientists continue to compete successfully for grants and awards that support their work.

An $11.5 million National Institutes of Health grant recently awarded to Chicago is a prime example. One of 12 Clinical and Translational Science Awards made by NIH nationally, this grant ultimately will enable researchers to provide patients new and better treatments more efficiently and quickly. Chicago will apply that funding in a variety of ways to transform research discoveries into new therapies.

An $11.5 million National Cancer Institute grant obtained in the past year has enabled Olufunmilayo Olopade, MD, and a team of doctors to explore new avenues of research in breast cancer. Olopade, a 2006 MacArthur Fellow, and co-principal investigators Gini Fleming, MD, and Maryellen Giger, MD, lead a team of 11 basic, clinical and population-science investigators to focus on more effective ways to prevent and detect an aggressive type breast cancer and treat women at increased risk for it.

The Medical Center also has become a national leader in health disparities research, and the nonprofit, health-focused Robert Wood Johnson Foundation selected the Medical Center to distribute $6 million in grants for work in this area. Those grants fund numerous ways to study and eventually help remedy the inequities in health care at clinics and research institutions both here and abroad.

The Medical Center especially stands out when patients with complex diseases need urgent access to multiple specialists. Since 1983, the University of Chicago Aeromedical Network (UCAN) has transported critically ill or injured neonatal, pediatric and adult patients to the University of Chicago Medical Center or other hospitals from the scenes of emergencies and in inter-hospital transfers. Staffed by specially trained flight nurses, residents, dispatchers and pilots who are prepared to fly at a moment’s notice, UCAN is one of only a few such programs in the United States.

Individuals at the Medical Center also have earned high honors. In June, Richard Schilsky, MD, an internationally recognized expert in gastrointestinal cancers, cancer pharmacology and drug development, was named president-elect of the American Society of Clinical Oncology, the world’s leading professional organization representing physicians who care for people with cancer. Schilsky, who served as associate dean for clinical research at the Medical Center prior to his election, will take office in June 2008. And after serving as president-elect, Jeffrey Apfelbaum, MD, the chairman of anesthesia and critical care, recently was installed as president of the American Society of Anesthesiologists during the organization’s annual meeting, held this past October.

An authority on the surgical treatment of diseases of the pancreas, bile ducts and liver, Jeffrey Matthews, MD, joined the Medical Center team in late 2006. As chair man of surgery, Matthews has brought new leadership to an already well-recognized department.
When a spot on his tongue first appeared, Achatz’s dentist told him not to worry. When it got bigger he saw a doctor, but a biopsy came back negative. When it continued to grow and began causing pain, discomfort while eating and impediments to his speech, another doctor found a tumor. Achatz, one of the world’s top chefs, had stage 4B squamous cell carcinoma of the oral tongue. Then 33, he consulted with several cancer specialists from across the United States who all told him that his only treatment option was surgery to remove nearly three-quarters of his tongue, which would include his taste buds. Faced with a life-threatening disease and a career-threatening decision, Achatz turned to University of Chicago oncologist Everett Vokes, MD, for yet another opinion.

Vokes, along with several other University of Chicago head and neck cancer experts, suggested a clinical trial that compared two slightly different combinations of chemotherapy and radiation therapy to treat the cancer. If the first-line therapy worked, Achatz would not require surgery—saving his taste buds.

For Vokes, Achatz’s treatment plan was no different from what other University of Chicago patients with advanced, non-metastatic tongue cancer receive. “We’re giving Grant what we think should be the first line for the typical patient,” Vokes said in the Oct. 22, 2007, issue of People magazine. “We don’t change that because a famous chef comes here.” Though Achatz is a star in the world of modern cuisine, doctors use the same pioneering treatment for anyone looking for innovative ways to beat cancer.

The treatment worked. In December 2007, just a few months after beginning therapy, doctors told Achatz that his cancer was in full remission. Achatz released a statement at the time: “Where other doctors at prominent institutions saw little hope of a normal life, let alone a cure, these doctors saw an opportunity to think differently, preserve my tongue and taste, and maintain a long-term high quality of life. Through the use of a new and rigorous chemotherapy and radiation protocol, they were able to achieve a full remission while ensuring that the use of invasive surgery on my tongue was not needed.”

In its more day-to-day operations as well, the Medical Center is renowned for advanced care and individualized treatments. Modern technology and new research drive new interventions, and patients reap the benefits of those advances. For example, couples have flown from as far as Nigeria and Norway for treatment at the Center for Reproductive Medicine and Fertility, a University of Chicago clinic and laboratory in Chicago’s West Loop. Directed by David Cohen, MD, the center serves women and couples who are searching for answers to complex reproductive health and infertility questions.

When a spot on his tongue first appeared, Achatz’s dentist told him not to worry. When it got bigger he saw a doctor, but a biopsy came back negative. When it continued to grow and began causing pain, discomfort while eating and impediments to his speech, another doctor found a tumor. Achatz, one of the world’s top chefs, had stage 4B squamous cell carcinoma of the oral tongue. Then 33, he consulted with several cancer specialists from across the United States who all told him that his only treatment option was surgery to remove nearly three-quarters of his tongue, which would include his taste buds. Faced with a life-threatening disease and a career-threatening decision, Achatz turned to University of Chicago oncologist Everett Vokes, MD, for yet another opinion.

Vokes, along with several other University of Chicago head and neck cancer experts, suggested a clinical trial that compared two slightly different combinations of chemotherapy and radiation therapy to treat the cancer. If the first-line therapy worked, Achatz would not require surgery—saving his taste buds.

For Vokes, Achatz’s treatment plan was no different from what other University of Chicago patients with advanced, non-metastatic tongue cancer receive. “We’re giving Grant what we think should be the first line for the typical patient,” Vokes said in the Oct. 22, 2007, issue of People magazine. “We don’t change that because a famous chef comes here.” Though Achatz is a star in the world of modern cuisine, doctors use the same pioneering treatment for anyone looking for innovative ways to beat cancer.

The treatment worked. In December 2007, just a few months after beginning therapy, doctors told Achatz that his cancer was in full remission. Achatz released a statement at the time: “Where other doctors at prominent institutions saw little hope of a normal life, let alone a cure, these doctors saw an opportunity to think differently, preserve my tongue and taste, and maintain a long-term high quality of life. Through the use of a new and rigorous chemotherapy and radiation protocol, they were able to achieve a full remission while ensuring that the use of invasive surgery on my tongue was not needed.”

In its more day-to-day operations as well, the Medical Center is renowned for advanced care and individualized treatments. Modern technology and new research drive new interventions, and patients reap the benefits of those advances. For example, couples have flown from as far as Nigeria and Norway for treatment at the Center for Reproductive Medicine and Fertility, a University of Chicago clinic and laboratory in Chicago’s West Loop. Directed by David Cohen, MD, the center serves women and couples who are searching for answers to complex reproductive health and infertility questions.

During the past year, the center’s doctors and staff have performed more than 300 assisted reproductive technology procedures. But the number of procedures is not what makes the center unique. It is the willingness and ability of the physicians, nurses and staff to individualize treatments. The facility is gaining national and international distinction as clinicians and staff dedicate themselves to care for patients who hope to preserve fertility prior to cancer therapies and for those who require gestational surrogacy or egg donors.
In early 2007, Susan Cohn, MD, came to Chicago to develop a pediatric clinical trials office. An expert in neuroblastomas (cancerous nerve tumors), Cohn has helped develop the infrastructure for such trials and actively encourages parents to enroll their affected children in the studies.

The number of pediatric patients enrolled in cancer clinical trials has increased six fold during the past year with the help of John Cunningham, MD, who joined the Medical Center staff in late 2006. Cunningham, section chief of pediatric hematology and oncology, is an internationally known expert in childhood cancers and blood diseases. He was part of a research team at St. Jude Children's Research Hospital that developed a technique enabling physicians to perform parental bone marrow transplants for children without an exact donor match. While typical donor matches require a six-point match on a specific chromosome, the scientists found a way to perform the transplant using a three-point match—which a willing, available, biological parent can provide.

In the past year, the researchers and doctors in pediatric hematology and oncology have focused on coordinating their efforts with adult-oriented research at the Medical Center. Cohn is teaming up with Christine Hartford, MD, a pediatric cancer specialist, and Mark Rutan, MD, an authority on solid tumors and a specialist in pharmacogenetics, to test new medications on children and young adults with cancer.

The new director of pediatric oncology, Stephen Skapek, MD, is tackling kids' cancer another way. Skapek studies several types of developing cells, specifically blood vessel cells in developing eyes and immature skeletal muscle cells. His research on how these cells grow—or don’t—will enable him to develop ways to stymie cancer cells.

As more patients participate in clinical trials and scientists discover new treatments for pediatric cancers and blood diseases, heart patients also will be helping to break new ground at the University of Chicago. The cardiac and thoracic surgery section currently is conducting two ongoing trials that take advantage of new technology or therapies.

A small piece of equipment about the size of a cardboard moving box, for example, could mean faster recovery times and increased chances for heart transplant patients. The small machine, called the TransMedics Organ Care System, can hold a beating heart and enable doctors like Valluvan Jeevanandam, MD, chief of the cardiac and thoracic surgery section, to transfer a heart without soaking it in a preservative solution and cooling it. Currently, a donor heart goes into a jar filled with such a solution. Sometimes that heart doesn't work well afterward.

Another hurdle of heart transplantation is that the donor heart must be transplanted within four hours, limiting the geographic boundaries of recipients. The TransMedics machine keeps the heart beating so that Jeevanandam and other physicians have more time to transport the organ. The device may increase the donor supply, too, by allowing a heart that might otherwise have been considered unfit for transplant to stabilize. The University of Chicago is the third medical center in the United States to use the device with patients.

Cardiac and thoracic surgeons also are exploring the use of a mechanical valve that is durable enough to last many years without replacement and doesn’t require the patient to stay on blood thinners indefinitely. This past fall, some Medical Center patients began participating in a study in which they received the On-X (SP) mechanical valve, allowing them to stop taking blood thinners after six months. The FDA has approved the valve for use with blood thinners; this study will determine if patients can safely stop taking that medication. A similar study has been completed successfully in Europe, and Chicago is one of many institutions participating in the U.S. trial.

Sometimes the evolution of medicine means using existing technologies for new purposes. Radiologist Abraham Dachman, MD, has been ahead of the pack with the use of the virtual colonoscopy, a procedure that uses a CT scan to look for polyps in the colon. Instead of using an invasive scope, Dachman inflates a patient’s colon with carbon dioxide, then acquires images from the CT scan to analyze the intestinal tract. Patients have minimal discomfort during the procedure, and, unlike traditional colonoscopy, they don’t have to undergo anesthesia.

The evolution of medicine also means improving patient care. Like many other specialties at Chicago, diabetes care has become more individualized for patients. The Kovler Diabetes Center, which opened in January 2007, offers patients examinations, second opinions and educational opportunities. The center also partners with researchers, which could lead to more clinical studies and trials of innovative treatments with patients there.

The facility, which brings individual resources together under one umbrella, will help to communicate and foster interaction between the clinical and research halves. Biochemist Christopher Rhodes, PhD, oversees the center’s research side. Chicago scientists are investigating wide-ranging aspects of diabetes, including its complications, the effects of new drugs, genetic susceptibility and new forms of this disease.
Fossils of the creature, found on Ellesmere Island in Arctic Canada, are the most compelling examples yet of an animal that was at the cusp of the fish-tetrapod transition. Tiktaalik’s skull, neck, ribs and parts of its limbs are similar to those of four-legged animals known as tetrapods, but Tiktaalik also had fish-like features, such as a primitive jaw, fins and scales. The finding was featured on the cover of Nature and was the subject of back-to-back research papers. It was also the impetus for Shubin’s recent book, Your Inner Fish: A Journey Into the 3.5-Billion-Year History of the Human Body.

While Shubin was discovering a creature that was bridging an evolutionary gap, Michael Coates, PhD, another evolutionary developmental biologist at Chicago, was examining how one creature seems to defy that scientific process. Coates worked with researchers from the University of Witwatersrand in Johannesburg, South Africa, to show that modern lamprey species have remained much the same throughout at least 360 million years of independent evolutionary history. Lampreys lack jaws, teeth, scales, paired fins, and any trace of bone or hard tissue. Some of the modern forms are parasitic and attach themselves to and feed on other fish. Fossil lampreys are exceptionally rare, and Coates and his colleagues’ discovery of the earliest known example, found in the Eastern Cape of South Africa, revealed an extraordinary match between ancient and modern forms. Their finding, like Shubin’s, was featured in Nature.

Research at Chicago often leads to stimulating discussions, whether they focus on evolutionary biology, new technologies and treatments, or better care for patients. And no subject is off limits. The news stories flooded in when Stacy Tessler Lindau, MD, MAPP, and Chicago colleagues released the results of their survey of seniors’ sex habits in The New England Journal of Medicine. Canada’s Globe and Mail trumpeted, “Late-life love” indicates more than just mojo.” Even ABC News couldn’t resist having a little fun with the headline, “Grandma’s Still Got It: Sex Persists Into the 80s.” The survey found that most people ages 57 to 85 think of sexuality as an important part of life and that the frequency of sexual activity, for those who are active, declines only slightly from the 50s to the early 70s. The study also found that sexual activity is closely tied to overall health, which is even more important than age. As health declines steadily after the early 70s, so does the prevalence of sexual activity, particularly for women.

Fostering DISCOVERY

From 21st century research to fossils that are hundreds of millions of years old, University of Chicago scientists are making discoveries that reach the very foundation of biological evolution. Paleontologist Neil Shubin, PhD, was named associate dean for organismal biology and anatomy at the University and provost of the Field Museum in 2006. A few months before, with colleagues from the Academy of Natural Sciences in Philadelphia and Harvard University, Shubin published two reports about Tiktaalik roseae, a 375-million-year-old species that bridges the gap between fish and land animals.
Discovery at Chicago encompasses more than surveys and research studies. Collaboration is a major part of the work many scientists perform here, and the Howard T. Ricketts Regional Bioccontainment Laboratory is a leading example of Chicago’s cooperation with Argonne National Laboratory, a Department of Energy facility.

The Ricketts lab is a new Biosafety Level 3 (BSL3) facility—part of the National Strategic Plan for Biodefense and Infectious Disease Research and supported by the National Institutes of Health—that will provide bioscience containment space vital to scientists conducting advanced research in biodefense and infectious disease.

Once construction of the lab is completed in early 2008, researchers will study the biology of emerging diseases and disease-causing agents, test the usefulness of new drugs and vaccines, and develop novel tools to detect, treat and prevent illness. The facility will meet or exceed the highest standards for bioscontainment.

“Few laboratories in the United States are capable of safely working on multiple microbes that cause diseases such as anthrax, plague and hemorrhagic fever,” said Olaf Schneewind, MD, PhD, the Chicago microbiologist who heads the Ricketts project. The lab will support the very best science and technology in a central, state-of-the-art facility to produce drugs, vaccines and diagnostic devices to counter bioterrorism and emerging infectious diseases.

Though smaller BSL3 labs are in place at the University and at Argonne, the $31 million, 35,000-square-foot Ricketts facility will enable researchers to study more pathogens in greater depth. Some of the organisms considered for possible study are anthrax, methicillin-resistant Staphylococcus aureus and Yersinia pestis, which causes plague.

The lab—named for Howard Taylor Ricketts, a researcher at the University of Chicago who discovered the organisms that cause Rocky Mountain spotted fever and typhus—is one of nine Regional Biocontainment Laboratories funded by the National Institute for Allergy and Infectious Disease. Work at the Ricketts lab will support the Great Lakes Center of Excellence, a joint effort with Argonne National Laboratory.

Lilly’s treatment through newspaper articles or television coverage, diabetes in both children and adults. Many have heard about Lilly’s treatment through newspaper articles or television coverage, and they have turned to the University of Chicago for hope.
Without the right tools, even the best doctors in the world are hampered. To ensure that Medical Center physicians, researchers and staff can work at the highest possible levels, the University of Chicago provides equipment and facilities that foster medical evolution by advancing research in the basic sciences and offering improved patient care. Evidence of this can be seen in the G ordon Center for Integrative Science, where students and faculty conduct research in technologically advanced labs—and in close conjunction with the physical sciences.

It also can be seen in the pediatric emergency room at Comer Children’s Hospital. The hallways are hushed because each consultation or exam room has a sliding glass door, which keeps sound in—and out. A curtain inside the room shields the patient from passers-by. The area also includes two trauma rooms, an office for Child Protective Services and social workers, and a pelvic exam room for victims of sexual abuse. Big-screen TVs, computer play stations and lots of toys in the waiting room help distract kids from what ails them. The pediatric ER sees about 100 patients a day. Doctors and nurses slide in and out of the trauma rooms, which are equipped with X-ray machines and virtually all other tools needed in an emergency.

The pediatric emergency department—among the newest spaces at the Medical Center—is just one example of how the University of Chicago is taking advantage of architectural, technological and scientific innovation. And there is more architectural growth on the horizon: The Jules and Gwen Knapp Center for Biomedical Discovery is slated to open in 2008. That building—at the corner of Drexel Avenue and 57th Street—will house researchers studying tailor-made cancer treatments and the Ludwig Center for Metastasis Research, as well as laboratories and office space. Additionally, plans are in the works for the new hospital pavilion, an 11-floor facility that will be integrated into other facilities on the Medical Center campus. The pavilion will provide 240 private patient rooms for adult surgery and hematology/oncology, as well as 28 operating rooms. Cancer care, high-tech imaging, neuroscience and other specialties will also be housed in the pavilion. The design phase of the building is slated for completion in spring 2008.

Without the right tools, even the best doctors in the world are hampered. To ensure that Medical Center physicians, researchers and staff can work at the highest possible levels, the University of Chicago provides equipment and facilities that foster medical evolution by advancing research in the basic sciences and offering improved patient care. Evidence of this can be seen in the G ordon Center for Integrative Science, where students and faculty conduct research in technologically advanced labs—and in close conjunction with the physical sciences.

The new hospital pavilion, currently in the planning and design process, will combine the latest technology with the best use of space.

The new facilities at the Medical Center enable doctors and researchers to take advantage of innovative technology, which is one of the reasons patients turn to the University of Chicago for specialized treatment and advanced care.

During the past year, the Medical Center has advanced the use of robotics for a variety of surgeries that allow patients to recover more quickly and with less pain. Doctors use the da Vinci robotic system to make minimal incisions and precise movements during surgeries. Surgeons here use the robot to operate on patients with endometrial cancer and abdominal aortic aneurysms, and to perform cardiac bypasses and prostatectomies.

The shorter recovery periods appeal to patients in several departments that use the Medical Center’s two da Vinci machines: cardiac, gynecological, pediatrics, transplants, urological and vascular. Doctors here performed 517 robot-assisted surgeries in 2007, ranging from removing prostates and cysts to replacing the vaginal vault and performing liver resections. The popularity of robot-assisted procedures has led to frequent logistical discussions during robotic surgery meetings. Though the Medical Center has two of the massive robots, each requiring a room of its own, the increasing demand for robotic surgery means doctors keep them in frequent use.

This fall, cardiothoracic surgeon Sudhir Srivastava, MD, joined the staff. Srivastava, a pioneer in robotic surgery, has initiated a program that will enable patients to undergo minimally invasive heart surgery. By way of four to five fingertip-size holes on the side of the chest, he uses the surgical robot to perform coronary bypass surgeries. Patients recover in dramatically less time...
The computers he uses—at Argonne and other labs—work nonstop allowing some substances to pass in and out of the tiny structures. “It never sleeps,” Roux said. “Laboratory where it works 24 hours a day, seven days a week.” Science. Instead, the computer is housed at Argonne National Laboratory in his 10-by-12-foot office in the Gordon Center for Integrative Biology. The “brain” in Benoit Roux’s computer is so large that it doesn’t fit in his 10-by-12-foot office in the Gordon Center for Integrative Science. Instead, the computer is housed at Argonne National Laboratory where it works 24 hours a day, seven days a week. “It never sleeps,” Roux said. Roux, PhD, studies cells, their membranes and the channels that allow some substances to pass in and out of the tiny structures. The computers he uses—at Argonne and other labs—work nonstop for months at a time. The one at Argonne, for example, has 1,000 central processing units (an average personal computer has only one) and is typically 95 percent full of jobs. For Roux, the computers are estimating the forces between certain atoms, how atoms or molecules bind or don’t bind to each other, and the way certain substances permeate a cell membrane while others don’t. Roux and his colleagues combine computational and experimental data from multiple sources. By doing so, they are able to get a more complete story about or a more valid calculation of a particular topic. “We try to weave a tapestry of information,” Roux said. “That mix of information will change as more and more computer processing is available. For example, this fall, Argonne is starting to assemble the IBM Blue Gene supercomputer, which, when completed in about two years, will be the most powerful civilian computer in the world. Additionally, Roux and his team received a grant from the Department of Energy for 4 million computer hours at another facility in Oak Ridge, Tenn. “Tapestry of Information” A lot of brains work overtime at the University of Chicago. The “brain” in Benoit Roux’s computer is so large that it doesn’t fit in his 10-by-12-foot office in the Gordon Center for Integrative Science. Instead, the computer is housed at Argonne National Laboratory where it works 24 hours a day, seven days a week. “It never sleeps,” Roux said. Roux, PhD, studies cells, their membranes and the channels that allow some substances to pass in and out of the tiny structures. The computers he uses—at Argonne and other labs—work nonstop for months at a time. The one at Argonne, for example, has 1,000 central processing units (an average personal computer has only one) and is typically 95 percent full of jobs. For Roux, the computers are estimating the forces between certain atoms, how atoms or molecules bind or don’t bind to each other, and the way certain substances permeate a cell membrane while others don’t. Roux and his colleagues combine computational and experimental data from multiple sources. By doing so, they are able to get a more complete story about or a more valid calculation of a particular topic. “We try to weave a tapestry of information together,” Roux said. That mix of information will change as more and more computer processing is available. For example, this fall, Argonne is starting to assemble the IBM Blue Gene supercomputer, which, when completed in about two years, will be the most powerful civilian computer in the world. Additionally, Roux and his team received a grant from the Department of Energy for 4 million computer hours at another facility in Oak Ridge, Tenn.
The University of Chicago Medical Center is working to improve the quality of life and care not only for patients who enter its doors but also for those in the community surrounding the campus. The South Side of Chicago, one of the primary areas from which Medical Center patients come, is home to 1.1 million residents. But the health of those residents is often relatively poor, as reflected in extraordinarily high rates of common diseases and infant mortality.

The rates for heart failure, diabetes, renal failure, bronchitis, asthma and hypertension are all higher among those on Chicago’s South Side than for people in the state of Illinois as a whole. Infant mortality rates in some South Side neighborhoods are three to four times higher than the state average of 0.73 percent and the Chicago average of 0.9 percent.

Since 2004, when the Medical Center renovated and expanded its emergency room, patient visits have increased by 14 percent. The University of Chicago’s ER is the second busiest in the city. For these reasons, helping patients who use the ER find a medical “home” by connecting them to local clinics has become a priority for the Medical Center.

More than two years ago, the Medical Center began working to put some of its emergency room patients in touch with primary care physicians in the surrounding areas. After sick patients came to the Medical Center for urgent care, patient advocates helped connect those who didn’t have family doctors or regular care to area clinics where they could receive follow-up medical attention.

Emergency room physicians, nurses and other staff were relieved to know that their patients could get care after their visits to the Medical Center ER, said James Walter, MD, chief of emergency medicine.

The program also has provided a way for the Medical Center to practice more aggressive outreach and to help patients navigate the health care system, overcome barriers and clarify misconceptions about medicine or care. So far, the collaborative has connected more than 1,500 patients with primary care medical homes.

Patients have found that the health care facilities are convenient and well resourced. Fifteen of those centers are federally qualified health facilities; the others are private clinics, a substance abuse and mental health center, and Project Brotherhood, a clinic that serves African-American men.

Project Brotherhood now has an even closer tie to the University of Chicago. Its founder, Eric Whitaker, MD, MPH, joined the Medical Center in October as executive vice president for strategic affiliations and associate dean for community-based research. Whitaker, an authority in public health, will be a key player in implementing the Urban Health Initiative, an entity whose aims will be to connect patients to their communities’ health resources, as well as to each other.

As part of the effort to collaborate with community health facilities, the Medical Center has given grants to some of its partners. ACCESS, a health care organization that runs several clinics accessible to South Side residents, received $350,000 to increase the number of exam rooms at one of its sites. At these outside facilities, patients can seek primary care for basic health concerns and also receive treatment in some specialty areas. Pregnant women with a low risk of complications can visit obstetricians and even deliver their babies at some of these partner clinics. The care they receive is every bit as good as what they would receive at the University of Chicago, but the facilities are closer to home and, often, have more beds available.

The South Side Health Collaborative, initially led by Michelle Obama, vice president for community and external affairs, has become a model for the Medical Center’s work with the Urban Health Initiative. But the emergency room is a gateway to another issue that doctors, nurses, researchers and staff are helping to solve: disparities in health care.

“We’re a canary in the mineshaft,” said Thomas Fisher Jr., MD, PhD, an emergency medicine physician and health disparities researcher, speaking of the types of patient ailments seen at the ER. “This fall, the Hyde Park native is launching...
focus groups both inside and outside of the Medical Center—
with doctors and administrators, primary care providers and
patients. Fisher will be working with a leadership committee
of area residents in an effort to encourage community members
and health care providers to focus on special needs in the
area and to empower the community with tools to fill gaps in
health care.

To help build that leadership are grants totaling $6 million from
the Robert Wood Johnson Foundation. The grants are distributed
in part by Marshall Chin, MD, who leads the Finding Answers:
Disparities Research for Change program. For the past decade,
Chin has worked with the Health Disparities Collaborative, a
nationwide network of more than 1,000 health centers that aim
to make medical care more equitably accessible for understudied
groups. A major review of literature about disparities in health
cares has been published as a 300-page supplement to the
journal Medical Care Research and Review. All 20 authors
work at the University of Chicago.

Other University researchers have focused on specific conditions
that extend to afflicting certain races or ethnic groups more than
others. Geneticist Rick Kittles, PhD, focuses his research on
why black men are more susceptible to prostate cancer than
white men. In addition, the Center for Interdisciplinary Health
Disparities Research, supported in part by a national SPORE
(Specialized Program of Research Excellence) grant and led by
researchers Olufunmilayo Olopade, MD, Gini Fleming, MD, and
Mayellin Giger, MD, will determine, among other things,
why black women are more likely to suffer from an aggressive
and more deadly type of breast cancer than white women.

The University also has become a leader in educating medical
students about health care disparities. In fall 2006, Monica
Vela, MD, assistant professor of medicine, led an optional,
week-long orientation course on that topic. Two-thirds of the
first-year medical students and 30 faculty members participated
in lectures and visits to local clinics.

“It served as an ignition or fuel for them wanting to learn more,”
Vela said. Students gained a new view of health care and an
introduction to the special needs of some communities. Within
the past year, Vela has seen an influx of the number of
students who attended health disparities conferences or who
reported that the Medical Center sponsored more events related
to disparities. There also has been more participation in student-
driven free clinics and community rides. This past fall, the health
care disparities course was required for incoming students.

The Medical Center reaches out to the community in many ways,
in addition to clinical initiatives and research. For the past
five years, scores of faculty and staff have gathered each May
to participate in service projects in surrounding neighborhoods.
This year, a record 200 people came to the Day of Service
and Reflection, during which they painted fences, planted
gardens, cleaned beaches and bonded with community
members, co-workers, family and friends.

Any year isn’t complete without the South Side’s Bud Billiken
parade, a decades-long tradition each fall during which children
parade through the city streets. Hundreds of hospital employees
and their friends and family turn out annually to participate
in the event.

Other employees reach out to high school or middle school
students through science fair coaching or judging, job shadowing
and mentoring. Nubia Chavez, a community relations officer
for the Medical Center, said the mentoring programs are a way
for hospital staff and community members to learn more
about each other. The mentoring program, which brings six to
eight local high school students to the Medical Center to learn
about clinical and non-clinical hospital work, helps create a
pipeline to the health care industry. Students learn that they can
be lawyers, marketing consultants or other types of hospital
administrators—not just doctors, nurses or other clinicians.
WITH SO MANY BRIGHT, FOCUSED STUDENTS AT THE PRITZKER SCHOOL OF MEDICINE AND IN THE BIOLOGICAL SCIENCES DIVISION, EVOLUTION IS INEVITABLE. EACH CLASS BRINGS A NEW SET OF EXPERIENCES AND KNOWLEDGE, AND STUDENTS ARE HELPING TRANSFORM THE RESEARCH IN THESE CORRIDORS. SINCE HOLLY HUMPHREY, MD, BECAME DEAN FOR MEDICAL EDUCATION IN 2003, APPLICATIONS TO THE MEDICAL SCHOOL HAVE INCREASED 69 PERCENT, COMPARED WITH AN 8 PERCENT INCREASE FOR MEDICAL SCHOOLS NATIONALLY. WHILE THE TOTAL NUMBER OF APPLICANTS HAS BEEN ON THE RISE, SO HAS THE PERCENTAGE OF UNDERREPRESENTED MINORITIES, WHICH HAS INCREASED TO ABOUT 23 PERCENT, FROM 14 PERCENT JUST A FEW YEARS AGO. BOTH INCREASES HAVE RESULTED IN A HIGH-PERFORMING AND DIVERSE CLASS OF STUDENTS.

In the past year, Pritzker students have received research funding from the Howard Hughes Medical Institute, the Fogarty International Center for Advanced Study in the Health Sciences and the Fulbright Scholar Program, and have been awarded two Alpha Omega Alpha Student Research Fellowships. Another three students have been named Albert Schweitzer Fellows. The new PhD program in biophysics began this fall with four students who will work toward joint degrees from the Biological Sciences and the Physical Sciences divisions. The program requires each student to team up with two labs and two mentors, and will provide a path for graduate students to study interdisciplinary science. In addition, students in the program will be “interface scholars”—part of the academic and research community with opportunities to attend special seminars and to travel—of HHMI, thanks to a grant of $1 million to start the program and its continuing support of the University. Another student, PhD candidate Rudy Faust, is the first Chicago student to be part of HHMI’s Janelia Farm Research Cooperative in Ashburn, Va. Faust is studying neuroscience at the $500 million research campus, which is partnered with the University of Chicago and Cambridge University. As HHMI’s first freestanding campus, Janelia Farm provides a setting in which small research groups can explore fundamental biomedical questions. The program grants a PhD in biology and features flexible training and the opportunity to research in a collaborative, interdisciplinary environment.

Several BSD graduate students and Pritzker medical students have been lead authors on published papers. For example, evolutionary biology graduate student Matt Friedman’s discoveries on the coelacanth fossil appeared in Evolution & Development, and fourth-year medical student Rachel Sherman, whose finding that doctors believe placebos can have a therapeutic effect, was detailed in the Journal of General Internal Medicine.

In the past year, Pritzker students have received research funding from the Howard Hughes Medical Institute, the Fogarty International Center for Advanced Study in the Health Sciences and the Fulbright Scholar Program, and have been awarded two Alpha Omega Alpha Student Research Fellowships. Another three students have been named Albert Schweitzer Fellows. The new PhD program in biophysics began this fall with four students who will work toward joint degrees from the Biological Sciences and the Physical Sciences divisions. The program requires each student to team up with two labs and two mentors, and will provide a path for graduate students to study interdisciplinary science. In addition, students in the program will be “interface scholars”—part of the academic and research community with opportunities to attend special seminars and to travel—of HHMI, thanks to a grant of $1 million to start the program and its continuing support of the University. Another student, PhD candidate Rudy Faust, is the first Chicago student to be part of HHMI’s Janelia Farm Research Cooperative in Ashburn, Va. Faust is studying neuroscience at the $500 million research campus, which is partnered with the University of Chicago and Cambridge University. As HHMI’s first freestanding campus, Janelia Farm provides a setting in which small research groups can explore fundamental biomedical questions. The program grants a PhD in biology and features flexible training and the opportunity to research in a collaborative, interdisciplinary environment.

Several BSD graduate students and Pritzker medical students have been lead authors on published papers. For example, evolutionary biology graduate student Matt Friedman’s discoveries on the coelacanth fossil appeared in Evolution & Development, and fourth-year medical student Rachel Sherman, whose finding that doctors believe placebos can have a therapeutic effect, was detailed in the Journal of General Internal Medicine.

The University of Chicago and Cambridge University are the only sources of access for graduate students interested in HHMI’s new biomedical research campus in Virginia, the Janelia Farm Research Cooperative.
Pritzker also has begun recognizing, and supporting with grants, outstanding faculty members through the Academy of Distinguished Medical Educators. This spring marked the second time such teachers were recognized for their work in medical education.

In addition to that recognition, the BSD has retooled the tenure track, opening its doors for more faculty members to strive for that professional accomplishment. Faculty on all three BSD tracks—research scholars, clinical scholars and clinician-educators—are eligible for tenure; previously, only research scholars were on the tenure track. The new system was developed after a committee recommended the changes in 2004.

The three tracks apply to different types of faculty work. Research scholars, the traditional tenure track, spend the bulk of their time conducting scholarship that is not directly related to clinical care. Clinical scholars, by contrast, work as both physicians and scholars, and often study human subjects and disease. The third track, for clinician-educators, is for faculty members active in clinical work, as well as teaching or administration.

Some learning focuses on finding and training students before they arrive here—either as high school students or as undergraduates. Two new programs are giving those younger students a chance to get involved with research or education at the University of Chicago.

The Chicago Academic Medicine Program offers underrepresented minority undergraduate students the chance to get a taste of what medical school is like. And the Pritzker School of Medicine Education in Research program gives college juniors and seniors the opportunity to take part in an eight-week research experience on campus. These programs developed from existing ones that the Medical School continues to offer: the Young Scientist Training Program and Training Early Achievers for Careers in Health Research, both of which aim to help students explore the field of medicine.

Doctors of Patient Care

This fall, the Department of Medicine added one more section to its roster: Hospital Medicine. The new section, headed by David Meltzer, MD, PhD, specializes in inpatient care. The “hospitalist” concept, about 10 years old, has gained traction in recent years, and Chicago has been hiring such physicians since its inception.

General medicine doctors improve hospital patient care the more they work in it, Meltzer said, but they are also more likely to burn out if they devote too much of their time to hospital care. The academic hospitalist program combines hospital care with research, quality improvement and medical education to help physicians establish sustainable careers that allow them to gain substantial inpatient clinical experience without burning themselves out. Meltzer and his colleagues also developed the Hospitalist Scholars Program to train practicing hospitalists in research, education and quality improvement so they have the tools needed to succeed.

The first students to complete the hospitalist program have opted to stay with the University of Chicago after graduation, rejecting job offers from Johns Hopkins and Northwestern, to name a few. The combination of research, education and clinical practice enticed them to stay.

Additionally, a $4 million grant from the Agency on Health Care Research and Quality for research on hospital medicine, pharmacogenetics and social networks for physicians will help support research activities in this section.

Hospitalists who work at the Medical Center practice both here and at Mercy Hospital, where some of Chicago’s emergency room patients choose to register, often finding shorter wait times for common ailments. A Medical Center attending is stationed daily at Mercy, helping to provide exceptional health care with neighboring partners of the University of Chicago.

With a tradition of interdisciplinary scholarship, the University of Chicago is committed to intellectual discovery that challenges students of exceptional promise to become leaders in science and medicine.
If the past year has seen significant changes at the University of Chicago, the years to come will produce many more. Antiseptics did not arrive on the medical scene until 1865; antibiotics took another 63 years to reach clinical practice. Today, research in genetics makes possible leaps forward that used to take lifetimes. The speed at which technology and scientific research are moving is blistering. The Medical Center and the Division of Biological Sciences are well prepared to welcome—and to embrace—change. An interdisciplinary spirit, top-flight facilities and, most of all, skilled, dedicated and caring people make such change possible. Perhaps change isn’t the only constant in science and medicine. At the University of Chicago Medical Center, there is also a willingness to adapt to it, to learn from it and to use it to improve people’s lives.

"The process of scientific discovery is, in effect, a continual flight from wonder.”
—Albert Einstein
Financial Highlights

At a time of challenge and great opportunity for academic medicine, we are proud of the commitment, progress and achievements made by the University of Chicago Medical Center and the Biological Sciences Division, both for its patient community and to science.

Last year marked a bold, new beginning for the Medical Center as we consolidated all of the University’s patient care activities under a single governance and management structure. Our historical commitment to serve the needs of those in need drives a powerful focus on strategy: leveraging our new structure to optimize our distinction rather than our size, to enhance our programmatic and financial strength rather than simple growth.

This strategy has proven to be strong, driving Medical Center operating income up substantially, to $85 million in fiscal year 2007. A number of factors are responsible for this increase in income. First, although overall patient activity in the hospitals and clinics increased by only about 1 percent, net revenues rose by 10 percent, reflecting a shift toward complex care for patients drawn to the Medical Center from the entire region. New insurance contracts and continued improvement in the revenue cycle also contributed. Additionally, two years of income from the Illinois Medicaid provider tax program was received in 2007, which included $18 million owed from 2006 but delayed due to pending federal government approval. By comparison, operating costs increased by less than 3 percent due to more effective deployment of staff.

Investments also performed well, with investment income of $55 million and unrealized gains of $49 million. A $35 million reduction in liabilities for general reserves, as well as other accounting adjustments to reflect more accurately the value of assets, contributed to the increase in net assets. Altogether net assets increased to $911 million by year end. The Medical Center continued its annual support of $15 million to the Biological Sciences Division for the Academic Renewal Fund, which invests in the basic biological and clinical sciences that underpin the Medical Center’s market position “At the Forefront of Medicine.”

The budget of the Biological Sciences Division increased by 7 percent to $580 million, representing continued investment in new facilities, technology and programs that deliver on our missions and are among the finest in the nation.


University of Chicago Medical Center Statement of Revenues and Expenses
For the years ended June 30, 2007 and 2006 (in millions of dollars)

<table>
<thead>
<tr>
<th>Year</th>
<th>2007</th>
<th>2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating revenues</td>
<td>$1,122</td>
<td>$953</td>
</tr>
<tr>
<td>Compensation, supplies, and other</td>
<td>$855</td>
<td>$855</td>
</tr>
<tr>
<td>Provision for doubtful accounts</td>
<td>$56</td>
<td>$44</td>
</tr>
<tr>
<td>Depreciation and amortization</td>
<td>$64</td>
<td>$61</td>
</tr>
<tr>
<td>Medical Provider Tax</td>
<td>$42</td>
<td>0</td>
</tr>
<tr>
<td>Operating expenses</td>
<td>$1,077</td>
<td>$942</td>
</tr>
<tr>
<td>Operating income</td>
<td>$45</td>
<td>13</td>
</tr>
<tr>
<td>Investment income and unrestricted gifts, net</td>
<td>$55</td>
<td>$59</td>
</tr>
<tr>
<td>Other, net</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Excess of revenues over expenses</td>
<td>$141</td>
<td>72</td>
</tr>
</tbody>
</table>

Balance Sheet: For June 30, 2007 and 2006 (in millions of dollars)

<table>
<thead>
<tr>
<th>Year</th>
<th>2007</th>
<th>2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current assets</td>
<td>$250</td>
<td>$186</td>
</tr>
<tr>
<td>Investments</td>
<td>$732</td>
<td>$612</td>
</tr>
<tr>
<td>Property, plant and equipment, net</td>
<td>$533</td>
<td>$497</td>
</tr>
<tr>
<td>Other assets</td>
<td>39</td>
<td>26</td>
</tr>
<tr>
<td>Total assets</td>
<td>$1,953</td>
<td>$1,321</td>
</tr>
<tr>
<td>Current liabilities</td>
<td>$196</td>
<td>$189</td>
</tr>
<tr>
<td>Long-term debt, less current maturities</td>
<td>$945</td>
<td>$364</td>
</tr>
<tr>
<td>Other liabilities</td>
<td>$91</td>
<td>$95</td>
</tr>
<tr>
<td>Total liabilities</td>
<td>$1,142</td>
<td>$545</td>
</tr>
<tr>
<td>Net assets</td>
<td>$811</td>
<td>$776</td>
</tr>
<tr>
<td>Total liabilities and net assets</td>
<td>$1,953</td>
<td>$1,321</td>
</tr>
</tbody>
</table>

Patient Activity: For the years ended June 30, 2007 and 2006

<table>
<thead>
<tr>
<th>Year</th>
<th>2007</th>
<th>2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>Admissions</td>
<td>22,777</td>
<td>22,923</td>
</tr>
<tr>
<td>Patient days</td>
<td>189,914</td>
<td>174,995</td>
</tr>
<tr>
<td>Length of stay</td>
<td>6.29</td>
<td>6.50</td>
</tr>
<tr>
<td>DCAM visits</td>
<td>403,355</td>
<td>394,720</td>
</tr>
<tr>
<td>ER visits</td>
<td>95,992</td>
<td>79,534</td>
</tr>
</tbody>
</table>

Division of Biological Sciences Statement of Revenues and Expenses
For the years ended June 30, 2007 and 2006 (in millions of dollars)

<table>
<thead>
<tr>
<th>Year</th>
<th>2007</th>
<th>2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenues</td>
<td>$911</td>
<td>$860</td>
</tr>
<tr>
<td>Tuition</td>
<td>31</td>
<td>29</td>
</tr>
<tr>
<td>Grants and contracts</td>
<td>220</td>
<td>210</td>
</tr>
<tr>
<td>Endowment and gifts</td>
<td>59</td>
<td>59</td>
</tr>
<tr>
<td>Patient care</td>
<td>183</td>
<td>176</td>
</tr>
<tr>
<td>UASC transfers for academic renewal</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>Other income</td>
<td>60</td>
<td>54</td>
</tr>
<tr>
<td>Total revenues</td>
<td>$976</td>
<td>$872</td>
</tr>
<tr>
<td>Expenses</td>
<td>1,331</td>
<td>1,200</td>
</tr>
<tr>
<td>Faculty and other academic compensation</td>
<td>234</td>
<td>218</td>
</tr>
<tr>
<td>Grants and contracts</td>
<td>176</td>
<td>167</td>
</tr>
<tr>
<td>Financial aid</td>
<td>29</td>
<td>27</td>
</tr>
<tr>
<td>Facilities and other expenses</td>
<td>191</td>
<td>197</td>
</tr>
<tr>
<td>Total expenses</td>
<td>$1,331</td>
<td>1,200</td>
</tr>
<tr>
<td>Surplus generated (applied)</td>
<td>-$4</td>
<td>-1</td>
</tr>
</tbody>
</table>

Balance Sheet: For June 30, 2007 and 2006 (in millions of dollars)

<table>
<thead>
<tr>
<th>Year</th>
<th>2007</th>
<th>2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash and cash equivalents</td>
<td>$30</td>
<td>$117</td>
</tr>
<tr>
<td>Notes and accounts receivable</td>
<td>58</td>
<td>52</td>
</tr>
<tr>
<td>Investments at market value</td>
<td>922</td>
<td>760</td>
</tr>
<tr>
<td>Land, buildings and equipment, net</td>
<td>933</td>
<td>365</td>
</tr>
<tr>
<td>Total assets</td>
<td>$1,885</td>
<td>$1,321</td>
</tr>
<tr>
<td>Current liabilities</td>
<td>33</td>
<td>33</td>
</tr>
<tr>
<td>Notes and bonds payable</td>
<td>229</td>
<td>196</td>
</tr>
<tr>
<td>Net assets</td>
<td>1,031</td>
<td>1,103</td>
</tr>
<tr>
<td>Total liabilities and net assets</td>
<td>$1,885</td>
<td>$1,321</td>
</tr>
</tbody>
</table>
Executive Committee

James Meders, UCMC Executive Office, Chair
Jeffrey Altbom, Anesthesia and Critical Care
Richard Baron, Radiology
Alpert Bender, Immunology
Joerg Bergelson, Ecology and Evolution
Eric Bayer, Cell Physiology
Douglas Bishop, Genetics
Erich Caccavo, Psychiatry
Bernard Cagney, Family Medicine
Martin Felder, Academic Affairs
Richard Felsen, Molecular Genetics and Cell Biology
Lorenzo Fumoli, UCMC Executive Office
Joe Garcia, Medicine
Mayesha Giger, Medical Physics
T. Conrad Gilliam, Human Genetics
Haney Golenbock, UCMC Executive Office
Christopher Gomez, Neurology
Arthur Haney, Obstetrics and Gynecology
Geoffrey Greene, Cancer Biology
Christopher Gomez, Neurology
Harvey Golomb, UCMC Executive Office
T. Conrad Gilliam, Human Genetics
Richard Fehon, Molecular Genetics and Cell Biology
Joy Bergelson, Ecology and Evolution
Bardie Ewigman, Family Medicine
Emil Coccaro, Psychiatry
Douglas Bishop, Genetics
Joy Bergelson, Ecology and Evolution
Richard Baron, Radiology
Jeffery Apfelbaum, Anesthesia and Critical Care
James Madara, UCMC Executive Office,
E. Lawrence Furnstahl, UCMC Executive Office

Clinical Chairs Committee

Jeffrey Altbom, Anesthesia and Critical Care
Richard Baron, Radiology
Erfi Caccavo, Psychiatry
Bernard Cagney, Family Medicine
Joe Garcia, Medicine
Christopher Gomer, Neurology
Anthony Harow, Obstetrics and Gynecology
David Hefner, UCMC Executive Office
Holly Humphrey, UCMC Executive Office
Vinay Kumar, UCMC Executive Office and Pathology
Jeffrey Matthew, Surgery
William Wieler, Ophthalmology and Visual Science
Michael Schreiber, Pediatrics
Ralph Weiss, Radiation and Cellular Oncology
Carolyn Wilson, UCMC Executive Office

Research Advisory Committee

Vinay Kumar, Pathology, Chair
Joe Garcia, Medicine
T. Conrad Gilliam, Human Genetics
Christopher Gomer, Neurology
Jeffrey Matthew, Surgery
Jan-Marino Ramirez, Organismal Biology and Anatomy
Martha Rosner, Ben May Department for Cancer Research
Michele Seidl, UCMC Executive Office (ex officio)
Kenneth Shangian, UCMC Executive Office (ex officio)
Neil Shubin, Organismal and Evolutionary Biology

Education Committee

Holly Humphrey, Chair
José Quintesas
Nancy Schwartz
Ani Schwind (ex officio)
Kenneth Shangian (ex officio)
Neil Shubin

Basic Science Chairs Committee

Joy Bergelson, Ecology and Evolution
Richard Fisher, Molecular Genetics and Cell Biology
T. Conrad Gilliam, Human Genetics
Anthony Kosakoff, Biochemistry and Molecular Biology
Vinay Kumar, UCMC Executive Office and Pathology
Jan-Marino Ramirez, Organismal Biology and Anatomy
Martha Rosner, Ben May Department for Cancer Research
Otf Schwerk, Microbiology
Eric Schwartz, Neurobiology, Pharmacology and Physiology
Nancy Schwartz, Graduate Affairs and Kennedy Center
Ann Schwerk, UCMC Executive Office
Michele Seidl, UCMC Executive Office
Kenneth Shangian, UCMC Executive Office
S. Murray Sherman, Neurobiology
Neil Shubin, Organismal and Evolutionary Biology
Julian Solway, Translational Research
Walter Stadler, Clinical Research
Ronald Thisted, Health Studies
J. Richard Thistlethwaite, Medical Staff Office
Philip Strickland, Computational Neuroscience
Ralph Weiss, Radiation and Celller Oncology
Ron Weiss, Clinical Research Center

SSO Visiting Committee

M. Roy Schwartz, Co-Chair
Douglas R. Green, Co-Chair
Christopher Atal
Diane Patricia Alwood
Douglas S. Baxter
Matthew Buckdaan
J. David Cohen
Marvin Cohen
Wimloo Conroy
Kim Drososkas
Christopher S. Ecklund
James S. Freed
L. Patrick Gage
Ellen R. Gardner
Robert G. Harris
Ronald Harnish
Holly Harrington Jacobs
David Katz
Abhijit Hapan
David Katz

Janice Katz
Elliot Koff
Gwen Krapp
Victoria Mitchell Rahn
H. Jonathan Kulesza
K. Kenneth Krum
Mitchell Lederman
John D. Mark
Mary Ann MacLean
Roland V. McPherson
Roosemae Mitchell
Thomas L. Mitchell
Steven Nakovitch
Timothea R. Clark
Charles Palmer
Charles Polsky
Thomas A. Raytord III
Theodore R. Roberts
Paul G. Rogers

Tobin Rooney Alden
Paul S. Russell
Catherine Ryan
David R. Schwartz
Carrie Segal
John B. Snyder
James A. Star
James Stephen
John Sobotka
Paul Talalay
Lauren Talalay
Daniel C. Tosteson
Scott Wald
Elizabeth White
David Whitney
Joel T. Zajchuck
Rose Zajchuck
Laurence Zung