The College of Management on Nov. 6 announced an anonymous commitment of $25 million, $20 million of which is a 1-to-1 challenge grant designed to inspire charitable gifts and commitments from other donors to the College’s endowment.

The remaining $5 million will provide funds expendable at the discretion of the College of Management’s dean, Steve Salbu. The goal of the challenge grant is to provide a financial foundation that will allow the College to more than double its current endowment within five years. This growth in endowment will provide dramatically increased private support for the College’s core funding priorities, including endowed faculty chairs and professorships, undergraduate student scholarships, and graduate student fellowships.

“We are in direct competition with the nation’s best business schools,” says Salbu. “In order to compete effectively, we must have the resources to attract and retain the finest faculty at all career stages because world-class faculty members are what drive the College’s national and international reputation. The same holds true with our students. It is imperative that we endow substantial numbers of undergraduate scholarships and graduate fellowships. Our goal is to lead the top business schools in attracting and supporting the very best student talent.”

The College of Management’s reputation has grown tremendously in recent years, as evidenced by increasingly higher positions in annual rankings of America’s best business schools. U.S. News & World Report ranks the College’s MBA program at No. 22 nationally (No. 7 among public universities), while the undergraduate program ranks at No. 31. BusinessWeek ranks the MBA program No. 3 in its “Most Improved MBA Program” category and ranks the entire College at No. 7 in the “Most Innovative Management Curriculum” category.

To participate in the challenge, donors must make a qualifying gift or multi-year commitment to be fulfilled within five years. Those gifts and pledge payments will be matched dollar-for-dollar by the anonymous donor. Fundraising for the challenge is expected to conclude no later than June 30, 2012, though pledge payments may extend up to five years from the date of a participating donor’s commitment.

“This gift, we have an opportunity to move Georgia Tech’s College of Management to the very top tier of the world’s preeminent business schools of management and technology,” President Bud Peterson said.
Research

Medical partnership

Tech teams with Emory, Children’s Healthcare on kidney replacement devices

DON FERNANDEZ
COMMUNICATIONS & MARKETING

When children need kidney dialysis because of disease or congenital defects, doctors are forced to adapt adult-size dialysis equipment. No FDA-approved kidney replacement devices exist that are specifically designed for children.

To address this problem, physicians and researchers from Emory University, Children’s Healthcare of Atlanta and Tech have teamed up to develop a kidney replacement device capable of treating children. Over the past five years, the three institutions have further solidified a cohesive relationship aimed at medical discovery, quality-care improvement and health care innovation.

The team has been awarded a challenge grant of $1 million from the National Institutes of Health (NIH) to refine a prototype device. The grant is part of the American Recovery and Reinvestment Act (ARRA) funding. Challenge grants are part of a new NIH program to stimulate rapid advances in focused disease areas.

Matthew Paden, assistant professor of pediatrics (critical care) at Emory University School of Medicine and a physician at Children’s Healthcare of Atlanta, is the grant’s principal investigator. Ajit P. Yoganathan, Regents’ Professor of biomedical engineering in the Wallace H. Coulter Department of Biomedical Engineering at Georgia Tech and Emory University, is the grant’s co-investigator.

“This is a project where we are taking technology from the laboratory bench to the bassinet,” Yoganathan said. “First, we have to build a machine capable of reliably performing these tasks without damaging blood cells in the process.”

In the United States, it is estimated that at least 5,000 children per year, or 1 percent of the 500,000 children admitted to intensive care units, require some form of renal replacement therapy. Children may need kidney replacement therapy because of severe infections that lead to the kidney-damaging inflammatory condition called sepsis, or because of congenital defects, which can only be permanently remedied by a kidney transplant.

The adaptations doctors are forced to perform make adult kidney replacement devices inaccurate and potentially dangerous when used with kids,” Paden said. “We have invented a new continuous renal replacement therapy device that is designed specifically with kids in mind. It can be used accurately on a six-pound child, all the way up to a football lineman.”

Paden says adult dialysis equipment can have a tendency to withdraw too much fluid from a pediatric patient, leading to dehydration and loss of blood pressure. Other possible problems resulting from inaccurate dialysis equipment include clotting or internal bleeding. Part of the problem is that the volume of blood required to fill up the tubes leading to and from the apparatus is too large, Paden says. As the child gets smaller, the proportion of blood outside the body gets larger.

Existing dialysis equipment for adults takes up space comparable to a refrigerator, while Paden says the team’s goal is to have a pediatric device the size of a shoebox.

The inventors include Lakshmi Prasad Dasi, former research engineer at Tech and now assistant professor of mechanical engineering at Colorado State University; James Fentonberry, pediatrician-in-chief and medical director of critical care for Children’s Healthcare of Atlanta, and clinical associate professor of pediatrics (critical care) at Emory School of Medicine, as well as Paden and Yoganathan.

The team’s plan is to test their prototype in the laboratory and prepare for live experiments over the next two years, with the goal of being ready for clinical trials in five years.

The team’s prototype device is also designed to work in tandem with equipment that replaces the function of the heart and lungs for severely ill patients. Extracorporeal membrane oxygenation (ECMO) equipment is commonly used in neonatal intensive care units for newborns whose lungs can’t work properly. Children requiring ECMO often have fluid overload and swelling. The demand for ECMO has been rising because of H1N1 influenza, which in severe cases leads to respiratory failure.

Emory, Tech and Children’s Healthcare of Atlanta are in the process of patenting the kidney replacement device. As the technology is developed further, it could be licensed to an existing company or a new start-up company.

For more information

www.bme.gatech.edu
Take your shot
H1N1 vaccinations under way at Tech

ROBERT NESMITH
COMMUNICATIONS & MARKETING

After receiving its initial shipment of the H1N1 vaccine two weeks ago, Tech began delivering injections last week to students, faculty and staff 18 years old and up. Students listed in targeted priority groups according to the U.S. Centers for Disease Control and Prevention received the first vaccines at Stamps Health Services Nov. 10.

The vaccine was available to all students, faculty and staff 18 years old and older beginning Nov. 11. From 9 a.m. to 3 p.m., Stamps Health Center personnel administered injections in the Student Center. Health Services Director Jon Baker says the vaccine is made from inactive (non-living) virus samples, and only one shot is required.

"Because of the type of vaccine we were given, we are only able to provide it to those 18 and older," said Baker. He also stressed that there is no required waiting period between the seasonal flu shot and the H1N1 vaccine. "We still encourage those who have not received the seasonal flu shot to do so."

Two additional H1N1 flu shot clinics are scheduled at the Student Center for this week. The first will be Nov. 17, from 9 a.m. to 3 p.m. A second is scheduled for Nov. 18, from 9 a.m. to 3 p.m., in room 501.

Because of initial registrations for the clinics, resources for walk-up patients will be severely limited. Visit www.healthy.gatech.edu for more information and https://www.myappointment.healthy.gatech.edu from a campus computer to schedule an appointment.
Several members of the Tech community have established a support group for both survivors of and those going through all types and stages of cancer.

The group was established 11 years ago by Susan Bowman, academic program manager at the School of Materials Science and Engineering, and two others. The year prior, Bowman had been diagnosed with and had survived breast cancer. “Those two loss on campus were my resource while I had cancer,” Bowman said, referring to cancer survivors who have since retired from Georgia Tech.

“When I came back, we established a support group to celebrate survival and for more information,” Alexander said. Alexander adds that one reason the group started was to provide families with information regarding children with autism and related developmental disorders.

“Families are able to receive help and treatment for their child from the Marcus Autism Center after two years in the Early Intervention Program,” Bowman said. “John is expected to be verbally, and was walking and running and playing with other children. Jorge is expected to be mainstreamed with his typical peers for kindergarten next fall. When their younger son, Leo, was also diagnosed with autistic symptoms, he was immediately enrolled in the Marcus Autism Center. He has now been mainstreamed in a typical preschool. By enrolling their sons into the center’s services early, Susan and her husband now have confidence that they will both have bright futures.”

Full-time enrollment in the Marcus Autism Center’s Early Intervention Program is 30 hours per week of treatment, and costs more than $115,000 per year.

While group members participate in fundraising for people participating in the Breast Cancer 3-Day and other events, Bowman adds that several—like herself—are involved in outside community groups.

“We’re very happy to talk to anyone on campus and let them know there is life after cancer,” Alexander said. The group is also open to caregivers and the families of those supporting cancer patients and survivors.

Contact Bowman at susan.bowman@mse.gatech.edu or Alexander at barbara.alexander@gtc.gatech.edu.

According to Barbara Alexander and Susan Bowman, cancer support group members meet usually once a month for lunch to talk about what’s new in their lives after surviving the disease.

Since insurance typically refuses to pay any portion of this amount, parents are left to apply for scholarships that are funded in part by charitable contributions to the Marcus Autism Center. Ashe plans to return to Tech and earn her degree. “Thanks to the help our sons received at the Marcus Autism Center and the progress they have made, I will be able to return to my studies sooner than expected,” she said. “I am excited about setting such a good example for my children, but am even more excited about watching them continue to be the odds and have bright, happy futures.”

2009-2010 Charitable Campaign continues through Nov. 30. Log into TechWorks to contribute through one-time donation or via paycheck deduction.

www.charitable.gatech.edu