Chancellor Mark A. Nordenberg has announced the winners of the 2010 Chancellor’s Distinguished Teaching and Distinguished Public Service Awards.

The Chancellor’s Distinguished Teaching Award will be given to the following five Pitt faculty members:

**Carl Bodenschatz**, a professor in the School of Arts and Sciences’ Department of Statistics and director of Pitt’s Undergraduate Statistics Program; 
Robert J. Gilbert, a professor of business administration in the Joseph M. Katz Graduate School of Business and College of Business Administration; 
Anthony C. Infanti, a professor in the School of Medicine; 
Shalini Puri, director of the Undergraduate Major in Statistics Program; and 
Bill J. Yates, a professor of English.

The 2010 Chancellor’s Distinguished Public Service Awards, which honor faculty for their contributions beyond the classroom, will be presented to the following five Pitt faculty members:

Linda R. Frank, a professor in the Graduate School of Public Health’s Department of Infectious Diseases and Microbiology and director of the Master of Public Health Program, Community and Behavioral Interventions for Infectious Diseases; 
Lawrence A. Frolik, a professor in the School of Law.

Each awardee will receive a $2,000 cash prize and a $3,000 grant for the support of his or her teaching or public service activities. The awardees will be recognized during Pitt’s 34th annual Honors Convocation on Friday, Feb. 26. Their names also will be inscribed on plaques in the William Pitt Union.

Chancellor’s Distinguished Teaching Awards

Bodenschatz was honored for his abilities to teach and lead, both inside and outside of the classroom. He has taught statistics at Pitt for almost 10 years, and prior to joining the University, he taught in the Department of Mathematical Sciences in the U.S. Air Force Academy.

Nordenberg, in his letter informing Bodenschatz of his Distinguished Teaching Award, commended him for engaging students by pointing “real-world” statistical problems. The chancellor also praised him for taking time to mentor students, advising them on issues ranging from professionalism and service to dedication and personal responsibility. “The impact of your efforts is reflected in the sentiments of the 3,562 students whom you have taught during your 10 years of teaching, many of whom consider you to be the best instructor they have had,” wrote Nordenberg.

The chancellor also noted in his letter that the number of statistics undergraduate majors has tripled since Bodenschatz became director of the Undergraduate Statistics Program.

Gilbert was recognized for his passion for teaching and his innovative approach in the classroom. Nordenberg praised Gilbert for his course development innovations, which, the chancellor said, have drawn national attention to Pitt’s undergraduate business program. “Your Projects in Marketing class has afforded students the opportunity to develop a marketing campaign for world-class firms such as Honda, Nissan, Recording Industry Association of America, and Golf Financial,” wrote Nordenberg.

Gilbert has consistently received high ratings on student evaluations in teaching questionnaires. In addition, he has been recognized by his peers as the College of Business Administration Teacher of the Year for four out of the past six years. “Your outstanding record of teaching accomplishments adds to the distinction of the University of Pittsburgh,” Nordenberg said.

Infanti joined Pitt’s faculty in 2000 after leaving his private legal practice in New York City. His primary area of expertise is taxation, and the majority of his courses at Pitt have focused on the tax arena, including federal income tax, as well as corporate, international, and estate and gift taxes.

Nordenberg, in his letter notifying Infanti about the award, said Infanti’s selection recognized his “exceptional commitment” to preparing his students for the practice of law. “Your dedication is also evident in the work that you do beyond the formal curriculum, including coaching student teams in tax moot court competitions and serving as chief faculty editor of the student-run journal, the Pittsburgh Tax Review,” the chancellor wrote.

In his letter notifying Puri of her Distinguished Teaching Award, Nordenberg wrote that the honor “recognizes your impact on the teaching mission of the Department of English in expanding the horizons of your students through novel interdisciplinary and cross-programmatic methods.”

“Your expertise has been used to educate docents at the Carnegie and your classroom teaching has been inspiring, challenging, and consistently successful, as evidenced by the high marks on student evaluation of teaching that you have received,” the chancellor added.

In his letter notifying Yates of his award, Nordenberg wrote, “This honor recognizes your dedication to undergraduate research, your sustained commitment as a mentor to your students, and your progressive teaching style.”

Nordenberg noted that Yates, as a faculty member in the School of Medicine whose primary responsibility is running a successful laboratory, is not required to teach. However, Yates chose to do so by seeking a secondary appointment in the School of Arts and Sciences’ Department of Neuroscience. Yates works with an average of seven undergraduate students a term in his lab; he has coauthored journal articles with 34 undergraduate students and awarded one of his students the privilege and responsibility of lead authorship. “The University is proud to reward your many contributions to excellence in teaching with this award,” Nordenberg wrote.

Chancellor’s Distinguished Public Service Awards

In a letter congratulating Frank for her award, Nordenberg wrote that “the selection committee was particularly impressed by your public service contributions that have increased general knowledge and awareness of HIV/AIDS, diminished the stigma associated with the disease, and reduced disparities with regard to patient access among minorities and other underrepresented populations.”

The University of Pittsburgh’s School of Social Work and the Center on Race and Social Problems will host “Race in America”—designed to be the most solution-focused conference on race ever held—the University’s Pittsburg campus June 3-6.

Seven key areas will be explored during “Race in America”: economics, education, criminal justice, race relations, health, mental health, and families, youth, and the elderly. There will be two keynote speeches and a panel discussion, open to the public, as well as 20 sessions for conference participants. Forty of the nation’s most prominent experts on race will give presentations in the conference sessions.

Continued on page 4
Pitt to Hold Spring 2010 Career Fair for Students

The University of Pittsburgh Office of Student Employment and Placement Assistance (SEPA) will host a Spring 2010 Career Fair from 10 a.m. to 3 p.m. Feb. 10 and 11 in the William Pitt Union. More than 150 employers are expected during the two-day period.

“The employers attending the fair are offering excellent positions for our students,” said Cheryl S. Finlay, SEPA director. “This is an excellent opportunity for our students to network with potential employers.”

Pitt, Global Links Collecting Wheelchairs for Haiti

Amputations and other devastating injuries resulting from Haiti’s Jan. 12 earthquake have created an enormous need for mobility-assist devices, and the University of Pittsburgh and Global Links are teaming up to collect crutches, canes, walkers, and wheelchairs to aid the victims.

Mobility-assist devices can be dropped off on Wednesday and Thursday, Feb. 24 and 25, 9 a.m.-7 p.m. at the Fifth Avenue entrance to the Graduate School of Public Health’s (GSPH) Parran Hall.

GSPH faculty, staff, and student volunteers will aid in the collection campaign, titled “Have a Heart for Haiti: Put Your Unused Crutches, Canes, Walkers and Wheelchairs to Work Today!” The items will be shipped to Haiti by Global Links, a Pittsburgh-based aid organization.

By Morgan Kelly

A captain and pilot in the U.S. Army Air Forces’ Tuskegee Airmen fighter group will join the University of Pittsburgh in honoring the educational accomplishments and legacy of the renowned African American World War II aviators.

Titled “Tuskegee Airmen: A Model for Excellence,” the Feb. 9 event begins at noon in Room 1175 Benedum Hall. It is sponsored by Pitt’s Swanson School of Engineering, School of Education, Office of Public Affairs, and Office of Student Affairs in recognition of Black History Month.

Guest speaker Roscoe C. Brown commanded the 100th Fighter Squadron of the all-Black 332nd Fighter Group during World War II, earning the Distinguished Flying Cross and Air Medal with eight Oak Leaf Clusters, denoting multiple decorations.

Brown is credited with being the first pilot of the 15th Air Force—a massive Army Air Forces combat group operating in the Mediterranean—to shoot down a German jet fighter, and he has been honored by the Intrepid Sea-Air-Space Museum in New York City for his outstanding leadership as squadron commander.

Born in Washington, D.C., in 1922, Brown joined the Army Air Forces in 1943 after graduating from Springfield College in Massachusetts. Returning from Europe in 1946, he enrolled at New York University and earned his master’s and Ph.D. degrees in physical education in 1949 and 1951, respectively.

Brown has focused his professional life on resolving the policy and social problems facing urban schools through better school management and parental involvement. He currently directs the City University of New York’s Center for Urban Education Policy, which studies and analyzes these issues.

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The Mysteries of Aging

Renã Robinson, Pitt assistant professor of chemistry, targets proteins in her research to determine why we age

By Morgan Kelly

Why do people age? Fittingly, Renã Robinson’s interest in aging began around 12 with that simple question. Her query has since matured, looking beyond “Why?” to ask “How?” Robinson, an assistant professor in the University of Pittsburgh School of Arts and Sciences’ Department of Chemistry, investigates the mechanics of aging at the protein level, studying how the body’s most basic components influence and respond to our physical deterioration.

“As a child, I had a lot of questions about the inherent nature of aging and why it changes us,” Robinson said. “I couldn’t solve that at 12 or 13, of course, but the basic questions are still with me.”

Robinson arrived at Pitt in Fall term 2009 following a postdoctoral fellowship at the University of Kentucky. In 2002, while working toward her 2007 PhD degree in analytical chemistry at Indiana University, Robinson did research in the lab of chemistry professor David Clemmer, who was named one of Popular Science Magazine’s Brilliant 10 for his work in proteomics.

It was under Clemmer that Robinson adopted her current focus on proteins and aging. She had graduated from the University of Louisville in 2001 with plans to apply her bachelor’s degree in chemistry—with a concentration in business—to designing cosmetics. Her fascination with aging and disease had evolved from her first basic questions to helping people forestall it, at least its physical manifestations.

“When I was working on the project at Indiana, I asked more philosophical questions on aging as I got more interested in the immune system,” Robinson said. “Proteins caught my attention, and I was inspired by this complex connection to aging and disease. Now I’m inspired by working on a problem that is so critical and of such potential benefit.”

Changes in the expression levels of proteins could be part of the answer to why humans age. Proteins are molecular multitaskers and can exist within various networks that carry out major functions in the body, such as enabling communication between cells. But like any large system, a protein network is susceptible to a malfunction of its individual components. A sudden change in the function or expression level of one protein can affect another protein, then another, and soon an entire system may break down, Robinson said. As people age, she continued, certain proteins tend to behave differently and, to date, research still cannot completely explain why.

“In my laboratory, we study aging by measuring protein levels and looking for proteins that change,” Robinson said. “A possible reason that aging occurs could be due to oxidative stress caused by a buildup of free radicals in the system over time, or there could be an innate, preprogrammed signal that causes the protein to change with aging. If the protein changes, we are trying to figure out to what end.”

Specifically, Robinson studies the connection of proteins to immunosenescence, the immune system breakdown that is associated with age-related disorders such as Alzheimer’s and Parkinson’s disease, heart problems, infections, and possibly cancer. She hopes to understand how the early onset of changes in the immune system alters molecular systems and influences the development of age-related diseases, as well as whether certain changes in protein function forecast these conditions.

Her work involves extracting proteins from tissue, breaking them down into smaller components called peptides, and then tracking the peptides back to the protein to determine the sequence information because unlocking the sequence reveals the protein’s identification and some clues about its role in the overall system. To do this, Robinson brings an analytical technique new to Pitt known as ion mobility spectrometry (IMS) that is coupled with mass spectrometry (MS). Robinson and her lab team will construct a hybrid IMS-MS instrument in Eberly Hall that separates ions based on molecular shape and charge, and then sorts and detects them by mass.

Robinson’s expertise in MS and the instrument she’s constructing will enhance the department’s research capability, said chemistry professor and department chair David Waldeck.

“Renã brings expertise in mass spectrometry research, which is a core need to developing our research profile in analytical chemistry, and her interest in the biochemistry of aging in model systems contributes to our growing profile in biological chemistry,” Waldeck said.

“The instrument she is developing is unique on campus. Only through such technological developments will we be able to ask and answer important questions about biological systems, such as the biochemistry of aging. Most closely related to her MS instrument are the Proteomics Core Lab in the Pitt medical school run by [Professor of Chemistry] Billy Day and our department’s MS support facility for synthetic chemists. Researchers on campus who work in the area of proteomics would find collaborations with Renã and her group valuable.”

Robinson’s work had already been recognized prior to her arrival at Pitt. In 2008, while in Kentucky, Robinson received a two-year, $85,000 Science Initiative Award from the United Negro College Fund and Merck to investigate oxidative stress in a mouse model of immunosenescence following antioxidant treatment.

And while working in Clemmer’s lab at Indiana University, Robinson had developed various proteomics methods to study aging in fruit flies, work that led to the identification of more than 1,600 proteins and revealed that metabolic and defense-response proteins are heavily impacted in aging, she said. Clemmer credited Robinson and his other graduate students for their role in his work.

Now, Robinson hopes her laboratory can motivate students to refine and deeply explore their scientific interests just as she was inspired in Clemmer’s lab.

“I came to Pitt because of the chemistry department’s excellent resources and the exciting research taking place all over campus,” Robinson said. “I have the opportunity to mentor young scientists who want to address complex problems. I felt this was a place where my research will thrive.”
“The Road to Freedom: From Alabama to Obama” at 7 p.m. June 3 at Soldiers & Sailors Memorial Hall and Museum.

Julianne Malveaux, economist and president of Bennett College for Women, who will give a free public address at 7 p.m. June 4 at The Twentieth Century Club, 4201 Bigelow Blvd., Oakland.

Alex Castellanos, partner at National Media, Inc., and a frequent guest commentator on CNN, who will moderate a free public panel discussion titled “Post-racial America—Does It and Should It Exist?” at 7 p.m. June 5 at The Twentieth Century Club; and

Benjamin Jealous, president and CEO of the NAACP, who will be one of the panelists in that discussion.

Following the conference, a report and action plan for each of the seven areas of focus will be produced.

“Times of challenge provide the opportunity to create change,” says Barry London, director of the UPMC Health Allied Research Education (SHARE), the health of children and families, and it disseminates knowledge through a lecture series, conferences, summer institutes, courses, and academic publications.

Research carried out by CRSP scholars has included Pittsburgh's Racial Demographics: Differences and Disparities, the most comprehensive study ever done on quality-of-life issues for Pittsburgh's Black, White, Asian, and Hispanic residents; Raising the Stake, a report that suggested Allegheny County’s human services network is not prepared to adequately respond to the social ills surrounding casino gambling; and Allegheny County Jail Collaborative Evaluation Research, a study that revealed that providing services to Allegheny County Jail inmates while they are incarcerated and after their release dramatically reduces the chance of their returning to jail.

In 2002, Pitt's School of Social Work established the Center on Race and Social Problems (CRSP)—the first race-research center to be housed in a school of social work. In its six-foci: economic disparities; educational disparities; inter-racial group relations; mental health; youth, families, and the elderly; and criminal justice. CRSP research by organizing research advisory panels, funding pilot studies, and assisting with funding applications. CRSP also mentors scholars through postdoctoral fellowships and guidance by senior faculty, and it disseminates knowledge through a lecture series, conferences, summer institutes, courses, and academic publications.

In 2004, CRSP received a grant from the Ford Foundation to develop a five-year strategic plan to establish two additional centers on race and social problems. CRSP was successful in securing the funds and received a five-year commitment from the Ford Foundation to develop the additional centers. CRSP scholars has included Pittsburgh's Racial Demographics: Differences and Disparities, the most comprehensive study ever done on quality-of-life issues for Pittsburgh's Black, White, Asian, and Hispanic residents; Raising the Stake, a report that suggested Allegheny County’s human services network is not prepared to adequately respond to the social ills surrounding casino gambling; and Allegheny County Jail Collaborative Evaluation Research, a study that revealed that providing services to Allegheny County Jail inmates while they are incarcerated and after their release dramatically reduces the chance of their returning to jail.

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On Feb. 1, the University of Pittsburgh celebrated the 58-year illustrious history of *The Pittsburgh Courier*, which became the most influential Black newspaper in the nation, with a peak circulation of 400,000. Pitt Chancellor Mark A. Nordenberg and Vice Chancellor for Public Affairs Robert Hill hosted a world-premiere screening of a new documentary, *Newspaper of Record: The Pittsburgh Courier, 1907-1965*, by filmmaker and Pitt alumnus Kenneth Love. The by-invitation event, held in The Twentieth Century Club, served as Pitt’s 2010 K. Leroy Irvis Black History Month Program for 2010 and was attended by about 600 Pitt faculty, staff, students, alumni, and community members, including Pitt African American Alumni Council President Linda Wharton Boyd.
Early, Promising Results of Therapy for Premature Infants Are Not Sustained, Study Finds

By Marc Lukasiak

Inhaled nitric oxide (iNO), a therapy used in the treatment of premature newborns with respiratory failure that had shown promising results in short-term studies, does not significantly improve long-term outcomes, according to a national study led by critical care researchers at the University of Pittsburgh School of Medicine and Children’s Hospital of Pittsburgh of UPMC.

Previous studies of inhaled nitric oxide in premature babies with respiratory failure suggested improvements in early outcomes, but this study of nearly 800 infants found no significant improvement in survival rates at 1 year of age and no change in longer-term respiratory or neurological function.

“We were surprised by these findings, because previous studies had suggested short-term benefits of iNO in the treatment of respiratory failure,” said first author R. Scott Watson, an assistant professor of critical care medicine and pediatrics, University of Pittsburgh School of Medicine, and an intensivist in the Division of Critical Care Medicine at Children’s Hospital. “Further study will determine if a different dose, longer duration of therapy, and/or use in a different subgroup of premature babies would be effective,” he added.

Results of the study are published in the November issue of Pediatrics, the official journal of the American Academy of Pediatrics. Researchers conducted long-term follow-up of premature newborns from 16 centers in the United States who were born at 34 weeks or earlier, weighed between 600 and 1,250 grams, and were enrolled in a study testing whether iNO could prevent chronic lung disease. Babies received five parts per million of iNO or a placebo within the first two days of birth and continuing for 21 days (or until the patient was taken off a ventilator). Of the 590 babies with complete survival data, 77 percent survived to 1 year of age (79 percent of those receiving iNO and 75 percent of those receiving placebo).

At 1 year of age, less than 6 percent of study participants were still receiving supplemental oxygen, but most had continued neurologic impairment. Less than 38 percent of survivors were unpaired, and nearly 35 percent had severe neurologic impairment. In all, nearly 80 percent of patients from the study had died, were on oxygen, or had neurologic impairment, and there were no significant differences between those who had received iNO and those who had received placebo.

“This was an important study, because iNO has been proven an effective therapy for the treatment of respiratory failure in late-term and term infants,” Watson said. “However, it may not be effective for smaller babies born at 34 weeks or younger. In addition, the discrepancy between the short-term and longer-term findings suggests that the conventional way of studying treatment for clinically ill infants and children—by looking at outcomes that develop in the hospital—is not enough to understand whether the treatments really work. We need to routinely study longer-term outcomes that are important to how children grow and develop over time.”

Watson is also a researcher in the Clinical Research, Investigation & Systems Modeling of Acute Illness Laboratory in the Department of Critical Care Medicine. The study was funded by the National Institutes of Health and Ikarra.

Science & Technology

ICU Survivors’ Caregivers Often Suffer From Depression, Pitt Researchers Find

By Anita Srikameswaran

Intensive care unit (ICU) patients are not the only ones likely to be severely depressed in the aftermath of hospitalization. Family and friends who care for them often suffer emotional and social hardship, too, according to a prospective study from the University of Pittsburgh School of Medicine that is the first to monitor patients and caregivers during a one-year period for predictors of depression and lifestyle disruption.

The findings, published this month in Critical Care Medicine, indicate that the informal caregivers of ICU survivors endure even more stress than those caring for Alzheimer’s disease patients, noted senior author Michael R. Pinsky, professor and vice chair for academic affairs, Department of Critical Care Medicine at Pitt.

“Caregiver depression is the collateral damage of these stressful ICU admissions,” he noted. “This research reveals that loved ones of critically ill patients have profound and unmet needs for assistance even after hospital discharge. The emotional and economic burden is enormous, and these issues must be addressed.”

Part of a larger project examining ICU outcomes, this study focused on the survivors of critical illness requiring breathing assistance with a ventilator for at least 48 hours as well as their informal caregivers, meaning family and friends. Caregivers were evaluated for depression symptoms two, six, and 12 months after mechanical ventilation was initiated in the patient. At the two-month mark, more than 40 percent of the patients had died.

Of the 48 caregivers who were interviewed at all three time points, the majority were female, and nearly half were wives of the patients. A predictor of depression symptoms at both two and 12 months was looking after a male patient. At 12 months, patient tracheostomy, in which a hole is made through the neck directly into the airway to assist breathing, also was a predictor of caregiver symptoms. If patients had at least a high school education, caregivers were more likely to report lifestyle disruption at the two-month mark. Tracheostomy, functional dependency, and male patient gender were predictive of lifestyle disruption at 12 months.

“Our previous studies indicate that caregivers often change their lives to care for recovering patients, including quitting work, taking lower-paying jobs, or leaving college in order to spend more time at home,” Pinsky said. “These are highly stressful choices, and it is imperative that we develop interventions to help families cope with the burden of critical illness even after they have left the hospital.”

Studies are now under way to assess approaches designed to mitigate these problems for both patients and caregivers.

Coauthors of the Chest paper include David C. Van Pelt, a Critical Care Medicine Fellow at Pitt; Richard Schulz, professor of psychiatry and director of Pitt’s University Center for Social and Urban Research; Lakshmitha Chelluri, a professor of critical care medicine, all of them in the University of Pittsburgh School of Medicine.

The study was funded through grants from the National Institute on Aging; the National Institute on Nursing Research; the National Institute of Mental Health; the National Center on Minority Health and Health Disparities; the National Heart, Lung, and Blood Institute; and the National Science Foundation.


Concerts


Exhibitions


Film

Biosempowers (Prashant Kadani, 2006), Bollywood and Indian Film Series, 7 p.m. Feb. 12. Frick Fine Arts Auditorium, Pitt Arts and Sciences Graduate Dean’s Office, Film Studies Program, Asian Studies Center, Indo-Pacific Area Council, 412-624-5578.

Herbert (Humam Mukhopadhyay, 2006), Bollywood and Indian Film Series, 7 p.m. Feb. 13. Frick Fine Arts Auditorium, Pitt Arts and Sciences Graduate Dean’s Office, Film Studies Program, Asian Studies Center, Indo-Pacific Area Council, 412-624-5578.

Lectures/Workshops

Barry Lopez, author, 7:30 p.m. Feb. 8. Carnegie Music Hall, 4400 Forbes Ave., Pittsburgh, 7 p.m. Feb. 9. Room 1175 Benedum Hall, Swanson School of Engineering, School of Education, Office of Public Affairs, RSVP requested for lunch, colodrwin@pitt.edu, 412-624-9842 (see page 2).

“Tuskegee Airmen: A Model for Excellence,” Roscoe C. Brown Jr., former Army Air Force captain of Tuskegee Airmen, noon to 1:30 p.m. Feb. 9, Room 1175 Benedum Hall, Swanson School of Engineering, School of Education, Office of Public Affairs, RSVP requested for lunch, colodrwin@pitt.edu, 412-624-9842 (see page 2).


“Theatre/Opera/Dance


By Anita Srikameswaran

Researchers at the University of Pittsburgh and their collaborators have been awarded a $5.6 million federal contract to pursue the continued development of an implanted ventricular-assist heart pump for infants and small children with congenital or acquired heart disease. The project aims to provide much-needed access to the sophisticated technologies that have saved the lives of older heart-failure patients.

Harvey Borovetz, Distinguished Professor and chair in the Department of Bioengineering and a deputy director of the Pitt-UPMC McGowan Institute for Regenerative Medicine, is the principal investigator of one of four projects that comprise the Pumps for Kids, Infants and Neonates (PumpKIN) Preclinical Program, a $23.6 million effort sponsored by the National Institutes of Health’s National Heart, Lung, and Blood Institute (NHLBI). He and his colleagues at Pitt, Children’s Hospital of Pittsburgh of UPMC, Carnegie Mellon University, Goleta, California-based LaunchPoint Technologies, and Salt Lake City-based WorldHeart Inc., began designing and building their device, called PediaFlow™, more than five years ago.

“We now have the opportunity to put PediaFlow through the necessary development and testing needed to proceed to clinical trials,” Borovetz explained. “The aim is to begin human studies in three to four years.”

According to the NHLBI, nearly 1,800 American infants die annually because of congenital heart defects. Another 350 develop severe cardiomyopathy leading to heart failure. Each year, approximately 60 children younger than age 5 waiting on the heart transplant list may die before a donor organ becomes available.

PediaFlow, which is made of a titanium alloy and is about the size of an AA battery, incorporates innovative mag-lev technology. Blood is drawn through it by means of a high-speed rotor that essentially floats within its housing owing to magnetic levitating forces. The rotor geometry, which is designed using state-of-the-art computer models and analyses, pulls oxygenated blood from the left ventricle through the device, returning the blood to the aorta and patient circulation. The flow rate of the PediaFlow can be varied between 0.5 to 1.5 liters per minute, suitable for the very smallest infants to toddlers.

“We believe the PediaFlow will be capable of replacing the heart function of our smallest patients,” said Peter Wearden, a cardiothoracic surgeon at Children’s Hospital who leads the clinical work of the project. “Left ventricular assist devices (LVADs) have been very successful in supporting older children and adults as a bridge to eventual heart transplantation, or, in some cases, as a temporary measure that allows the heart to rest and recover. But there currently are no FDA-approved LVADs for babies and toddlers.”

Extracorporeal membrane oxygenation, or ECMO, currently is the only form of support for these smallest of children, but it requires that patients be fully anesthetized, and can only be used for a few weeks before severe complications develop. This creates a “race against time” while we and the family wait for an appropriate donor organ to become available,” Wearden noted. “To meet the NHLBI’s requirements, PediaFlow must support patients for up to six months, and our preclinical research has already shown that it works flawlessly for at least 70 days. We are very excited to have these additional resources to help bring this technology to these children.”