

SOM *news*

Point of PRIDE



The University of Maryland Medical Center is the first and only hospital in Maryland, and only the third hospital in the United States, to perform a single-incision laparoscopic kidney removal surgery through the belly button of a living kidney donor.



DEAN'S MESSAGE

This year's recent University of Maryland School of Medicine's (UMSOM) Gala, titled "Vital Signs, Vital Victories," exemplified the innovation and dedication of our extraordinary physicians and physician-scientists. In particular, the Gala showcased tremendous breakthroughs in children's medicine — including a one-year old girl with advanced heart failure who received a successful heart transplant performed by **Sunjay Kaushal, MD, PhD**, and his team, including **Carissa Baker-Smith, MD, MS, MPH**, **Miriam Laufer, MD**, and **Laura Finkelstein, MD**. Another segment highlighted a little boy who received epidural blood patch surgery for a spinal headache, performed by **Jack Gladstein, MD**, along with colleagues from the Division of Pediatric Anesthesiology, **Anne Savarese, MD**, and **Stephanie Kahntroff, MD**. All were courageous and heartwarming stories that clearly showed how we are transforming patient care through innovation and dedication.

The Gala followed a week in which the UMSOM made another historic breakthrough — the first ever transport of a human organ by drone to a transplant patient. This innovative achievement by **Joseph Scalea, MD**, and his colleagues from the UM Clark School of Engineering, was covered by major news media around the world, including *NBC Nightly News*, *CNN*, *The New York Times*, *The Today Show*, *USA Today*, *Associated Press*, *Washington Post*, and hundreds of others. In the end, this tremendous accomplishment resulted in UMSOM physicians saving the life of a patient who desperately needed a new kidney.

This dedication to patient care also is the driving force behind the further elevation of our transplant program, with the Departments of Surgery and Medicine coming together to establish a new organizational structure, new leadership, and a new comprehensive program in transplantation that will build on our longstanding leadership in this field.

Finally, our innovation and dedication extend to our engagement in the community. In many ways, this engagement serves as the thread that connects our core

What's on My Mind...



...is how we are transforming patient care and community engagement through innovation and dedication.

mission areas of medical education, research, and patient care. We are firsthand witnesses in our city to some of the nation's most pressing health challenges, notably the human immunodeficiency virus (HIV). According to the Maryland Department of Health, Baltimore City, along with Prince George's County, had the highest rates of new HIV diagnoses in 2017. The State of Maryland has the fifth highest rate of HIV cases in the nation. Since the co-discovery of HIV over three decades ago by our own UMSOM physician-scientist **Robert C. Gallo, MD**, we have come a very long way in our efforts to address this epidemic, including the establishment of the JACQUES Initiative. With HIV Vaccine Awareness Day in May, it is important to underscore that this is a collaborative effort with the Baltimore community, where we can focus together on personalized educational and supportive solutions to end HIV and hepatitis C viral infections in Baltimore.

Let us work together to increase and sustain our efforts in confronting Baltimore's leading health issues, while supporting the important work being conducted by our colleagues, peers, and partners to address them.

In the relentless pursuit of excellence, I am
Sincerely yours,



E. Albert Reece, MD, PhD, MBA
Executive Vice President for Medical Affairs, UM Baltimore
John Z. and Akiko K. Bowers Distinguished Professor and
Dean, University of Maryland School of Medicine

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SOMnews has expanded! In addition to our features in Clinical Care, Research, Education, and Community Outreach, we have included a special section on the Culture Transformation Initiative.

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Gala 2019
VITAL SIGNS
VITAL VICTORIES

READ FULL STORY on page 8



Elevating to the next level of Excellence

UMSOM'S TRANSPLANT PROGRAM TAKES MAJOR STEP FORWARD

BUILDING ON LONG HISTORY OF LEADERSHIP & INNOVATION

National Search Launched to Recruit New Director of Comprehensive Program in Transplantation

Since 1968, living organ transplant teams at the University of Maryland School of Medicine (UMSOM) have been making history — and by doing so, saving countless lives.

In particular, transplantation at UMSOM — including the Transplant Division in the Department of Surgery, as well as the cardiac, pulmonary, nephrology and hepatology divisions within the Department of Medicine — has gained an international reputation as one of the top transplant centers in the country. In doing so, **UMSOM has achieved an enviable series of medical “firsts” while performing over 500 transplant procedures a year**, including liver, kidney, pancreas, heart, lung, and composite tissue.

Transplant medical **firsts**:

- **First in Maryland** to perform a single-lung transplant, a combined heart and liver transplant, and a total artificial heart-to-heart transplant;
- **First in Maryland** and only the third in the United States to perform a single-port, natural orifice kidney removal surgery through the navel for a living kidney donor;

- **First in the United States** to have performed 1,000 minimally invasive kidney removals from living kidney donors;
- Maintain **the largest and most successful adult living-donor liver transplant program in Maryland** and the second in the nation;
- Ranked by CareChex as **#1 in patient safety in the liver transplant program** (second consecutive year) and **#2** for patient safety in the kidney transplant program;
- Performed **the most comprehensive face transplant to date**, based on ten years of research;
- **First in the United States** to transplant lungs treated with an experimental repair process before transplantation;
- Pioneered the **first living organ delivery by airborne drone**.

Building on this 51-year track record of innovative excellence, **UMSOM now is taking the next step forward by creating a Comprehensive Program in Transplantation.** The program will provide a multi-disciplinary approach to patient care, utilizing the strengths of both the Department of Surgery and the Department of Medicine, as well as integrating other health disciplines.



The new Program in Transplantation will focus on excellence in collaboration, patient care, and outcomes.



“With an integrated program that streamlines all relevant processes, we will further strengthen our high-quality patient-centered experience.”

— Dr. Jablonover

Dr. Jablonover sees the creation of the program as a natural evolution within the shared mission of UMSOM and UMMC.

“In addition, the proposed structure of the Program will be more agile, allowing it to adapt and innovate in the increasingly complex clinical and regulatory environment,” says Jablonover.

A key component of the new organizational structure is the creation of transplant section heads in the Department of Medicine in the areas of Cardiology, Nephrology, Hepatology, and Pulmonary (see sidebar). In addition, the Department of Medicine has recruited new transplant faculty in both the divisions of Nephrology and Hepatology.

“Transplant Medicine is a marquee program in the Department of Medicine,” said Stephen Davis, MBBS, FRCP, FACE, MACP, the Theodore E. Woodward Professor of Medicine and Chairman of the Department of Medicine and Director of the Center for Diabetes and Endocrinology and the General Clinical Research Center at the UMSOM. *“It represents the essential tripartite mission of the School of Medicine: clinical excellence, education and discovery. It also demonstrates our wonderful partnership with our surgical and pediatric colleagues,”* added Dr. Davis, who is also Director of the Institute for Clinical and Translational Research and Vice President of Clinical Translational Science at the University of Maryland, Baltimore.



We are so proud of our transplant program and are excited to work together to elevate transplant medicine to an even higher level.”

— Dr. Davis

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According to **Anthony Lehman, MD, MSPH**, UMSOM’s Senior Associate Dean for Clinical Affairs, the enhanced structure builds on UMSOM’s historic strengths in transplantation, and elevates it to ensure the highest level of patient safety and quality.

“Transplant patients are inherently complex and require extensive care from a large multi-disciplinary team of providers, including physicians, nurses, social workers, registered dietitians, physical therapists, and pharmacists,” Dr. Lehman said.



“By bringing together these disciplines under a single program umbrella, we can better streamline management, enhance communication, and eliminate silos and barriers.”

— Dr. Lehman

Collaborative, Multi-Disciplinary Approach

As part of the transition in leadership, the new comprehensive Program in Transplantation will be managed initially by a Transplant Council, led by Dr. Lehman and **Michael Jablonover, MD, MBA, FAC**, Senior Vice President and Chief Medical Officer at the University of Maryland Medical Center (UMMC), while a national search is launched to recruit a new Director for the Program in Transplantation. In addition, an Executive Committee will provide management oversight to the program, along with a Management Group which will provide day-to-day operational management (see sidebar on page 5).

COMPREHENSIVE PROGRAM IN TRANSPLANTATION



Opened in 2018 at 16 S. Eutaw Street, the new University of Maryland Transplant Center is a state-of-the-art facility providing patients with comprehensive access to multidisciplinary specialists and services all in one convenient, centralized location. The Center includes an Educational Center where geographically remote patients in Maryland and across the country can consult with physicians and surgeons; an onsite Pathology Lab where patients can have samples drawn during their visit; and a Medication Room where medications can be prepared and administered to patients during pre- and post-transplant meetings.



Program Integration with UMMC

Like other programs at UMSOM, including the Programs in Oncology, Program in Trauma and Program in Sports Medicine, the Program in Transplantation will involve a highly integrated and multidisciplinary set of clinicians, researchers, and supporting staff from UMMC and from UMSOM's Departments of Surgery and Medicine, but also from the Departments of Anesthesiology, Pediatrics, Psychiatry, and Physical Therapy & Rehabilitation Science, as well as the Program in Trauma and the Institute of Human Virology. The Program will tap additional expertise from the University's Schools of Nursing, Social Work, Pharmacy, and others.

"The new Program in Transplantation will elevate the ability of transplant to function as an integrated, multi-disciplinary group aligned along a common mission of providing the highest quality access to organ transplants with the most positive outcomes in the region," says Rolf N. Barth, MD, Professor of Surgery and Division Head of Transplantation. "The establishment of this Program is essential — it is the future of transplant."

The Program will be expected from the start to maintain a quality rating on the United Network of Organ Sharing's (UNOS) Scientific Registry of Transplant Recipients (SRTR) website. ***"In this Program, quality will always take precedence over volume,"*** says Dr. Lehman. ***"With an integrated program that improves outcomes through clinical alignment and joint accountability, we will further raise the bar on achieving a high-quality patient-centered experience."***

Presently serving as the Program's Acting Operations Director, Senior Nurse Practitioner **Thomas J. Trobiano, CRNP, FNP-C** believes that this collaborative integration of talent is essential to building a successful patient-centered practice, especially in terms of nursing.

"Our nursing staff plays a pivotal role in guiding our transplant patients through the complex medical process leading up to and following a transplant procedure," he says. ***"Post-transplant, the involvement of our nurses remains vital in serving as a liaison between the patient and other support services. In short, they are the first line of support on the patient's behalf."***

In addition, in Pediatric Cardiology, **Sunjay Kaushal, PhD, MD**, Professor of Surgery, and **Geoffrey Rosenthal, MD, PhD**, Professor of Pediatrics, are leading the way in treating children with complex heart conditions. Dr. Kaushal and his team recently performed a rare double lung-heart transplant on a 12-year old girl.

Ramping Up Research and Training

As with the other UMSOM programs, research will be a major component of the new Program in Transplantation.

"Our current transplant research covers the waterfront from basic and translational to fully clinical, involving prospective randomized studies with patients as well as drugs, devices, biomarkers, and lab tests," says **Jonathan Bromberg, MD, PhD**, Professor of Surgery and Vice Chair for Research, Department of Surgery.

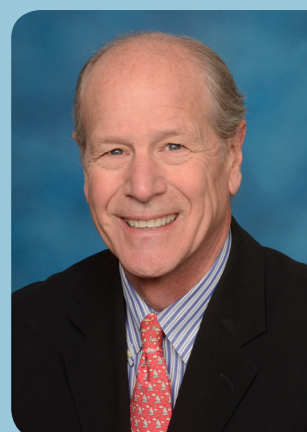


"We have a lot of translational and clinical research going on, much more than other centers in the area."

— Dr. Bromberg

As examples, Dr. Bromberg cites the novel work in pancreas and islet cell transplantation by **Joseph Scalea, MD**, Assistant Professor of Surgery, and the creation of a wearable artificial lung prototype by **Bartley Griffith, MD**, Thomas E. and Alice Marie Hales Distinguished Professor in Transplant Surgery and Director of the Cardiac and Lung Transplant Programs. Add to that UMSOM's first center for cardiac xenotransplantation in the U.S. — and only the second such center in the world — and the new pioneering drone program for live organ transport, and it's clear that, in Dr. Bromberg's words, ***"Our research is everywhere."***

He points out that the new Program's research initiatives ***"will be highly integrated into what we do in clinical care as well as in what we do in teaching and training for medical students, residents, fellows, and even junior faculty."***



"The altruism of our transplant surgeons, both in the abdominal organ program and in the cardio-thoracic program, is stunning. We are always training the next generation of leaders here."

— Dr. Griffith

For **David Bruno, MD**, Assistant Professor of Surgery and Program Director of the Transplant Surgery Fellowship, that is welcome news.



“The high level of activity around transplant at UMSOM provides many more training opportunities and hands-on practice for our fellows.”

— Dr. Bruno

Dr. Bromberg agrees. *“Having an active research program creates a superior environment for training and education, as our medical community is being exposed to all sorts of new ideas, techniques, and information on a daily basis, resulting in a much broader and deeper educational experience,”* he says. *“We become a magnet to attract new trainees — medical students, residents, and fellows — as well as new faculty and staff.”*

Overall, Dr. Bromberg is highly optimistic about the impact of research in propelling the new Program in Transplantation. *“The breadth and the depth of our transplant research efforts in a broad range of areas, involving multiple types of organs and a large number of departments and divisions, will continue to build momentum for the new program,”* he says. 🏢

UMSOM PROGRAM IN TRANSPLANTATION LEADERSHIP

EXECUTIVE COMMITTEE OF THE UMSOM TRANSPLANT COUNCIL

E. Albert Reece, MD, PhD, MBA
Executive Vice President for Medical Affairs, UM Baltimore
John Z. and Akiko K. Bowers Distinguished Professor
Dean, University of Maryland School of Medicine

Mohan Suntha, MD, MBA
President and Chief Executive Officer
University of Maryland Medical Center, University and Midtown Campuses

Michael Jablonover, MD, MBA, FACP
Senior Vice President and Chief Medical Officer,
University of Maryland Medical Center

Anthony F. Lehman, M.D., M.S.P.H.
Senior Associate Dean for Clinical Affairs

Stephen N. Davis, MBBS
Theodore E. Woodward Professor of Medicine and Chairman of the Department of Medicine and Director of the Center for Diabetes and Endocrinology at the University of Maryland School of Medicine

Rajabrata Sarkar, MD, PhD
Barbara Baur Dunlap Professor in Surgery
Division Head, Vascular Surgery; Vice Chair for Clinical Operations for the Department of Surgery; Interim Chair for Department of Surgery

Bartley P. Griffith, MD
Thomas E. and Alice Marie Hales Distinguished Professor in Transplant Surgery
Director of the Cardiac and Lung Transplant Programs

Rolf N. Barth, MD
Professor of Surgery
Division Head of Transplantation

Kirti Shetty, MBBS
Professor of Medicine
Director, Section of Hepatology - Division of Gastroenterology & Hepatology

Thomas J. Trobiano, CRNP, FNP-C
Senior Nurse Practitioner, UMMC

MANAGEMENT COMMITTEE OF THE UMSOM TRANSPLANT COUNCIL

Michael Jablonover, MD, MBA, FACP
Senior Vice President and Chief Medical Officer, University of Maryland Medical Center (serving as Interim Committee Co-Director)

Anthony F. Lehman, MD, MSPH
Senior Associate Dean for Clinical Affairs (serving as Interim Committee Co-Director)

Thomas J. Trobiano, CRNP, FNP-C
Senior Nurse Practitioner, UMMC (serving as Acting Operations Director)

Rolf N. Barth, MD
Professor of Surgery
Division Head of Transplantation

Kirti Shetty, MBBS
Professor of Medicine
Director, Section of Hepatology - Division of Gastroenterology & Hepatology

SECTION CHIEFS — PROGRAM IN TRANSPLANTATION

Cardiology:
Erika D. Feller, MD
Assistant Professor of Medicine

Hepatology:
Kirti Shetty, MBBS
Professor of Medicine

Nephrology:
Abdolreza Haririan, MD, MPH
Associate Professor of Medicine

Pulmonary:
Aldo T. Iacono, MD
Professor of Medicine, Hamish S. and Christine C. Osborne Distinguished Professorship in Advanced Pulmonary Care, Medical Director of the Lung Healing Program at the Shock Trauma Center

PATIENT SUCCESS STORY

“Then a miracle happened...” (twice)

Robert Hughes and his father, Robert Hughes, Jr., have always had a very close relationship. “My father and I are so much alike,” he says. “We are both charismatic and always trying to make people laugh.” But when Robert was ten in December 2011, his father was diagnosed with autoimmune hepatitis and was told that his liver was failing. Despite a grim prognosis from doctors at their local medical center, the family held on to the hope that a donor liver could be found in time.

“Then a miracle happened,” recalls Robert. “My mother got a call from the coordinator at the University of Maryland Medical Center that they had a donor liver for my father, and he needed to get there immediately.” The transplant procedure was completed successfully by transplant surgeon **Rolf Barth, MD**, and Robert Hughes, Jr. soon was able to return home.

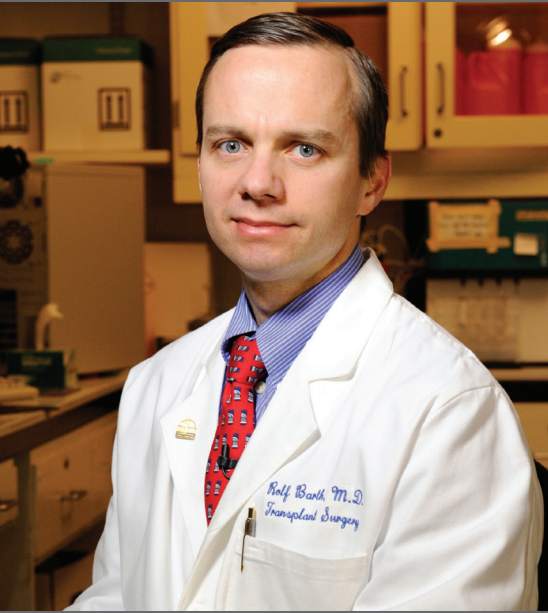
However, seven years later, complications arose. As son Robert recounts, “Unfortunately one of the side effects of the anti-rejection medications my father is on is toxicity to the kidneys. His kidneys had taken such a beating when his liver was failing that they never recovered. It was certain that in the future he would need a kidney transplant.”

Turning once again to the UMMC transplant program, the Hughes family learned of the Living Donor Kidney Donation Program. Son Robert volunteered immediately to be a donor, with tests confirming he would be a perfect match. “I wanted to give my kidney to my Dad so he could see all of the things that haven’t happened yet,” he says, “his children getting married, having grandchildren, and more happy years with my mother.”

The transplant surgery, again performed by Dr. Barth, was a success for both father and son. After three years, Robert’s father remains in good health. “For my life and the life of my family, organ donation has given my father more time with us, and we are all so grateful for that,” he says.



Son Robert Hughes (L) and his father, Robert Hughes, Jr. (R), prior to the living kidney transplant.



Dr. Barth successfully performed both liver and living donor kidney transplant procedures for father Robert Hughes, Jr.



For additional information about our program or to request an evaluation or an appointment, please call 410-328-5408.



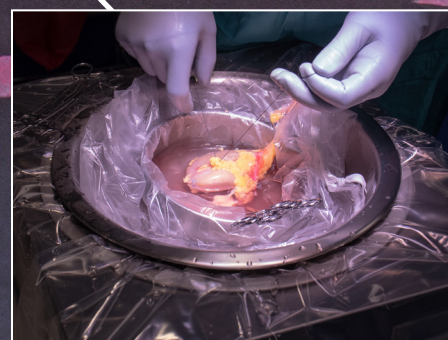
2019: The First Organ Flight

Unmanned Aircraft to Successfully Deliver Kidney for Transplant

In a groundbreaking advance for human medicine and transplantation, an unmanned aircraft delivered a donor kidney to surgeons for successful transplantation in a patient with kidney failure. This landmark inaugural flight was achieved by transplant physicians and researchers from the University of Maryland School of Medicine (UMSOM) and the University of Maryland Medical Center (UMMC) in Baltimore, along with aviation and engineering experts at the Unmanned Aircraft Systems (UAS) Test Site, part of the A. James Clark School of Engineering at the University of Maryland, College Park. Other contributors include The Living Legacy Foundation of Maryland (The LLF), a non-profit organ procurement organization.



"As a result of the outstanding collaboration among surgeons, the Federal Aviation Administration (FAA), engineers, organ procurement specialists, pilots, nurses, and ultimately, the patient, we were able to make a pioneering breakthrough in transplantation," says **Joseph Scalea, MD**, Assistant Professor of Surgery at UMSOM, who is the project leader and one of the surgeons who performed the transplant at UMMC.



This transport system may speed up organ delivery times, expand access to more organs, enhance safety, and ultimately improve patient outcomes.

"This major advance in human medicine and transplantation exemplifies two key components of our mission: innovation and collaboration," says **E. Albert Reece, MD, PhD, MBA**, Executive Vice President for Medical Affairs, UM Baltimore, and the John Z. and Akiko K. Bowers Distinguished Professor and Dean, University of Maryland School of Medicine. *"Innovation is at the heart of our focus on accelerating the pace and scope of discovery, where research can rapidly transform medicine. At the same time, collaboration is the key to our success in providing discovery-based medicine — both in conducting research and in delivering the highest quality patient care."*

The patient, a 44-year-old woman from Baltimore who had been on dialysis since 2011, was discharged from UMMC just days after the surgery, which took place in late April.

"For more than 25 years, the University of Maryland Medical Center has provided cutting-edge care in organ transplantation," says **Mohan Suntha, MD, MBA**, The Marlene & Stewart Greenebaum Professor in Radiation Oncology and President and CEO of the

University of Maryland Medical Center. *"Our transplant program cares for patients who come from our local community, the state, and the nation, many of whom have been turned away at other hospitals, because we have the skill, talent, and knowledge to advance even the most complex transplant cases, often times not just improving but saving lives."*

Navigating Transportation Logistics

Transportation logistics often prove to be the most complicated link of the organ transplant process, typically involving expensive chartered flights, or relying on the variability of commercial flight schedules, which occasionally results in delays that destroy the organ's viability, according to Dr. Scalea. *"There remains a woeful disparity between the number of recipients on the organ transplant waiting list and the total number of transplantable organs. This new technology has the potential to help widen the donor organ pool and access to transplantation,"* Dr. Scalea says. *"Delivering an organ from a donor to a patient is a sacred duty with many moving parts. It is critical that we find ways of doing this better."*

According to 2018 data from the United Network for Organ Sharing (UNOS), which manages the organ transplant system in the United States, nearly 114,000 people were on waiting lists for an organ transplant; 36,500 transplants were performed; and nearly 30,000 organs came from deceased donors.



New York Times feature photo by UMSOM photographer Mark Teske

Despite these successes, about 1.5 percent of deceased donor organ shipments did not reach their intended destinations, while nearly four percent of shipments experienced an unanticipated delay of two or more hours.

“When we started this project, I quickly realized there were a number of unmet needs in organ transport,” says Dr. Scalea. “For example, there is currently no way to track an organ’s location and health while in transit. Even in this modern era, human organs are unmonitored during flight. I found this to be unacceptable. Real-time organ monitoring is mission-critical to this experience.”

The project required the construction of a custom unmanned aircraft designed specifically to transport an organ. The aircraft, which was developed by UAS test site engineers, needed to meet the rigid medical, technical, and regulatory demands of carrying an unaccompanied deceased donor organ for human transplant.

Beating the Clock

Beating the organ transplant clock is a key responsibility of organ procurement organizations throughout the U.S., including The Living Legacy Foundation of Maryland. *“We are very time sensitive. We need to be able to work with helicopter services, charter flight services, and ground transportation to make sure to get our teams to a donor case and make the gifted organ available to a recipient,”* says Charlie Alexander, MBA, MS, Chief Executive Officer of the LLF.

“The University of Maryland organ transport project is incredibly important,” Mr. Alexander says, noting the work is at the proof-of-concept stage. *“If we can prove that this works, then we can look at much greater distances of unmanned organ transport. This would minimize the need for multiple pilots and flight time and address safety issues we have in our field.”*

The researchers agreed that amid all the challenges of organ transplantation, improving the logistics of delivering organs is a critical area where innovation can speed up delivery. *“As a result of the outstanding collaboration among surgeons, the Federal Aviation Administration (FAA), engineers, organ procurement specialists, pilots, nurses and, ultimately, the patient, we were able to make a pioneering breakthrough in transplantation,”* says Dr. Scalea.

“This history-making flight not only represents a breakthrough from a technological point of view, but provides an exemplary demonstration of how engineering expertise and ingenuity ultimately serve human needs — in this case, the need to improve the reliability and efficiency of organ delivery to hospitals conducting transplant surgery,” says **Darryll J. Pines, PhD**, Dean of the A. James Clark School of Engineering and the Nariman Farvardin Professor of Aerospace Engineering. 🏛️



Cancer Vaccine Development

SUPPORTED BY CIBR CORE SERVICES

The University of Maryland School of Medicine's (UMSOM) **Center for Innovative Biomedical Resources (CIBR)** serves as a center of excellence for state-of-the-art technologies, high-tech instrumentation, and expertise that supports biomedical research, clinical practice, and health care in the state of Maryland and the region. This regular feature of *SOMNews* highlights UMSOM faculty who are seeing significant results from using CIBR Cores.

A major challenge in using a patient's own cells as a therapy for cancer is that those cells must be handled through special processes called "GMP" (Good Manufacturing Practice). A GMP lab is required to ensure that the production of any medicine meets the Federal Drug Administration (FDA) requirements for consistency and quality. **Aaron P. Rapoport, MD**, the Gary Jobson Professor in Medical Oncology, Professor of Medicine, and the Director of the Blood and Marrow Transplant Program at the UM Marlene and Stewart Greenebaum Comprehensive Cancer Center, needed such a facility for his Phase II clinical trial that is testing a type of cell-based therapy for multiple myeloma.

The therapy being tested requires isolating both tumor cells (myeloma cells) and immune cells (dendritic cells) from the patient. These two types of cells are then cultured in a GMP lab under conditions that cause them to fuse together, forming dendritic cell-myeloma cell (DC/MM) fusions. The DC/MM cells are then injected back into the patient with the goal that the patient's immune system will see these cells as foreign, leading it to attack myeloma cells. This kind of an anti-tumor immune response is similar to the response to a vaccine; thus, the DC/MM therapy is called DC/MM fusion vaccine or simply a myeloma vaccine. These are completely personalized therapies, because the cells used to make the DC/MM fusion vaccine come from the patient and are perfectly tailored to match the patient's tumor.

"Not only was it a challenge to have a GMP lab to produce this cell-based vaccine, but it was also a challenge making the DC/MM fused cells for the vaccine," Dr. Rapoport notes.

Making this type of cell-based vaccine had never been done in any location other than at Beth Israel Deaconess Hospital in Boston, Mass., where the vaccine was initially developed. In order for the UMSOM to effectively participate in this multi-site clinical trial, the project needed strong support and coordination from multiple facilities, core labs, and the clinical research division.

This project involved the following CIBR Core services:

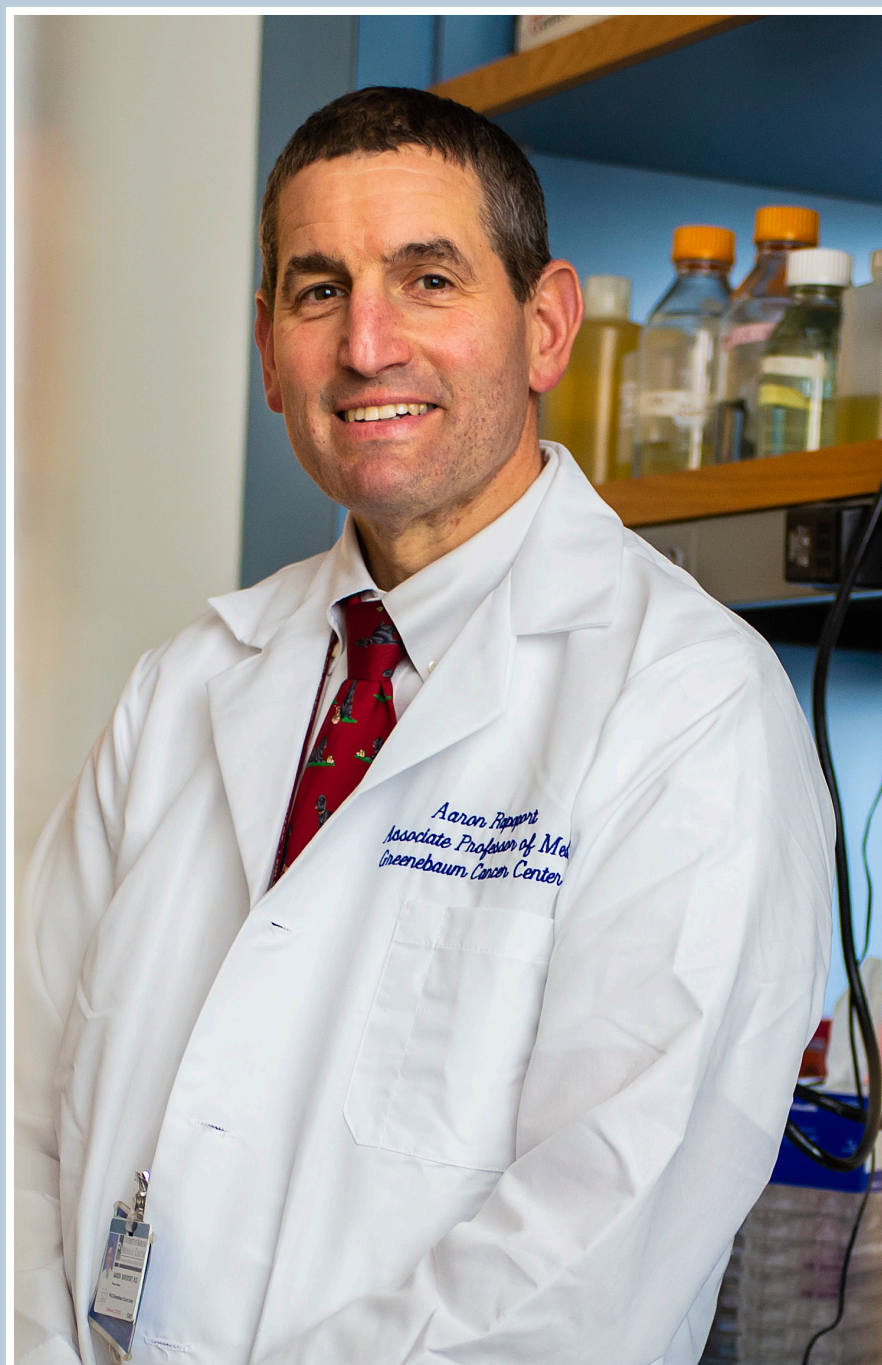
- **Translational Shared Service (TLSS)**

Offering pre-clinical and clinical experimental support to UMSOM researchers and physicians, including cell culture assays, mouse models, and patient sample isolation

- **Pathology Biorepository Shared Service (PBSS)**

Providing pathology, histology, and histotechnology services to assist with procurement, analyses, and clinicopathologic correlations of human tissue specimens.

According to Dr. Rapoport, the core lab staff were essential to producing the personalized vaccines used in the research and to developing the stringent manufacturing and quality environment to support the clinical trial. Staff members include **Rena Lapidus, PhD**, Associate Professor of Medicine; **Olga Ioffe, MD**, Professor of Pathology; **Brandon Carter-Cooper, MS**; **Ashley Cellini, PA (ASCP)**; **Kim Hankey, PhD**, Associate Professor of Radiation Oncology and Cell Processing Facility Director; **Nancy Hardy, MD FACP**, Associate Professor of Medicine and Collection/Processing Facility Medical Director; and Quality Manager **Clarissa Saba**.



There are over **25 Cores** available to support UMSOM faculty research, and most are accessible through CIBR's online iLab portal.

Researchers are encouraged to visit **medschool.umaryland.edu/cibr** and to contact CIBR Administration or Core directors for more information about how the Cores can support and strengthen their research.

CIBR

STRUCTURAL BIOLOGY
CLINICAL RESOURCES
NUCLEIC ACID & GENOMICS
ANIMAL MODEL RESOURCES
IMAGING TECHNOLOGIES
DRUG DEVELOPMENT RESOURCES
CYTOMETRIC & BIOASSAY
BIOINFORMATICS & STATISTICS

BUILDING PARTNERSHIPS


Reading Program for Baltimore City Students

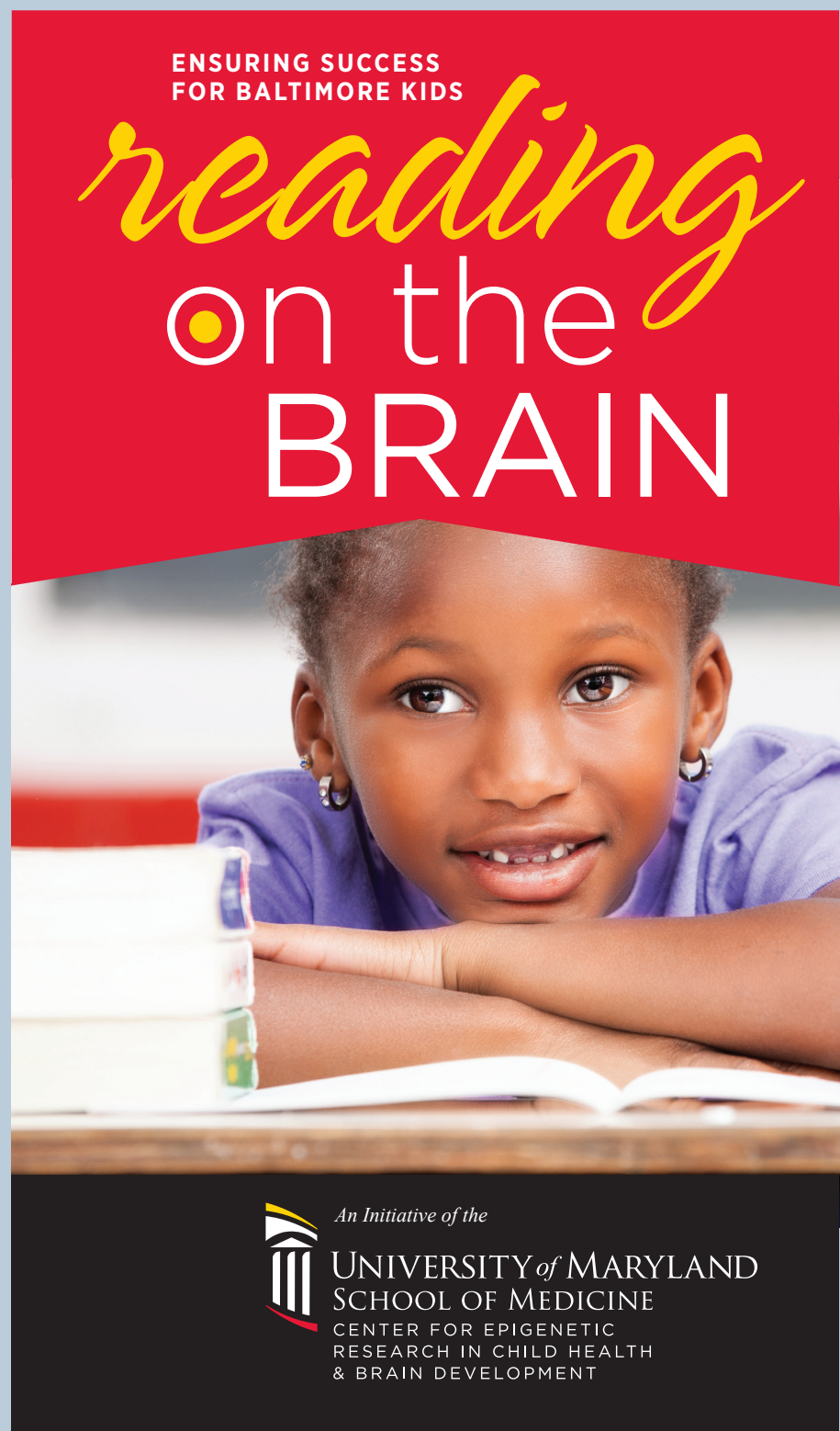
TEACHES STUDENTS ABOUT THE BRAIN-BUILDING POWER OF READING

Baltimore City Mayor Jack Young joined 4th and 5th grade students at Callaway Elementary School to help paint a mural about the brain. It was all part of Reading on the Brain, a University of Maryland School of Medicine (UMSOM) program to teach young students about the importance of reading and how reading can stimulate brain development and inspire future success. **Tracy Bale, PhD**, Professor of Pharmacology, is leading the pilot program, which also emphasizes science and helps children to understand how the brain works.

Reading on the Brain is held twice a month at Callaway Elementary. Building on the Baltimore City School's literacy campaign, the program promotes the benefits of reading as a means of positive brain stimulation. Studies using fMRI have demonstrated that reading stimulates mental imagery, language processing, and brain activity important in mental health and stress relief. Reading also helps the brain by building vocabulary, promoting better sleep, enhancing relationships, and improving test scores.

Acclaimed Baltimore artist Jay Wolf Schlossberg-Cohen is leading the interactive mural painting workshops, which deliver an important educational message about how reading improves brain development.

"This is really about making a difference with our kids. The idea is to have a project that will help spread the word to children and families, and we are doing it through art," says the artist. The mural will be 1,800 square feet and will be hung at the school later in the year. Professor Bale is also the Director of the UMSOM Center for the Epigenetic Research in Child Health and Brain Development (CERCH). The Center's mission is to facilitate translational research and community engagement important in child health and brain development, by focusing on the long-term consequences of stress and the environment on the developing brain. 



< Baltimore City Mayor Jack Young joined 4th & 5th graders at Callaway Elementary School to help paint a mural about the brain.



For more information, visit cerch.umaryland.edu

2019 UMSOM Gala Celebrates Victories in Medicine

VITAL SIGNS, VITAL VICTORIES was the theme for the 2019 Gala, which set the tone for an evening of celebration of the accomplishments of our esteemed physicians, biomedical researchers, and allied health professionals.

"The victories we focus on tonight are unlike those from usual scenarios," said Dean E. Albert Reece. "Each day our faculty, staff, trainees, and students are driven by the relentless pursuit for victory over disease, emerging infections, and injury."

This year's Gala co-chairs were Scott Rifkin, MD, CEO and Co-founder of Mid-Atlantic Health Care, LLS, and his wife Frances Rifkin, RN. *"I have personally benefited from the vital victories for which the School of Medicine is widely known," said Dr. Rifkin, who shared a compelling story about his life-saving surgery that altered the trajectory of his life. "When a cardiologist told a young mother that her three-year old child would certainly die, she brought that child to a thoracic surgeon. The child had experimental surgery and lived to be a physician, a father of three, and a grandfather. I was that child, R Adams Cowley was that surgeon, and that great medical school was the University of Maryland School of Medicine."*


Michael Cryor, President of the Cryor Group, and Chair of UMSOM's Board of Visitors, also spoke on the benefits of collaboration and emphasized the unique role and responsibility of the institution. *"What has brought us together — from places near, far, and wide — is our commitment to making people well,"* he said. *"Our prospects become stronger when we combine talents, capabilities, resources, and resolve — which adds up to something truly transformative."*

Private philanthropy continues to be critical to the growth of the School of Medicine. Dean Reece highlighted the impact donors have had on advancing the work of the School and in the recruitment of students. **Katy Eslami**, a fourth-year medical student and President of the graduating class, shared the invaluable opportunity created



Katy Eslami

for her by receiving scholarship support. *"While growing up, for as long as I remember, my parents spoke of a desire to move to America for a better future,"* she said. *"If it wasn't for the generosity of people like you, I would not be standing here. I would not have been able to support myself through college, and certainly not through medical school."* Katy is set to graduate later this May and will begin her residency training in Pediatrics at the University of Maryland Medical Center.

The Gala coincided with Alumni Weekend at the School of Medicine, giving graduates an opportunity to attend the Gala as part of their reunion activities. After dinner, guests enjoyed a great performance by the 23-piece performing ensemble Mood Swings, led by Jack Vaeth, Class of 1992. 



Watch the videos at medschool.umaryland.edu/news/2019/Vital-Signs-Vital-Victories.html

SOM In Memoriam



Michael E. Busch

MARYLAND HOUSE SPEAKER,
DIED ON APRIL 7, 2019

"Speaker Busch has been a longstanding friend and great supporter of the School of Medicine. We will miss his sincerity, his wisdom, his kindness, and his tireless commitment to the healthcare needs of the citizens of Maryland. On behalf of the entire School of Medicine, and especially our faculty physicians and surgeons, I would like to send our sincerest condolences to the family, friends, and constituents of Speaker Busch. It was truly a privilege and an honor to know him and to work with him." – Dean Reece

SAVE the DATE **Wednesday, October 30**
2019 STATE of the SCHOOL ADDRESS

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