

## ■ **Baylor Scott & White Health and Tenet to partner on five North Texas hospitals**

Baylor Scott & White Health and Tenet Healthcare Corporation announced a definitive agreement to partner on providing care through five North Texas hospitals. The partnership will focus on delivering integrated, value-based care to communities in Rockwall, Collin, and Dallas counties.

Through this new partnership, the two organizations will jointly own Centennial Medical Center, Doctors Hospital at White Rock Lake, Lake Pointe Medical Center, and Texas Regional Medical Center at Sunnyvale—currently owned and operated by a subsidiary of Tenet—and Baylor Medical Center at Garland—currently owned and operated by Baylor Scott & White Health. Baylor Scott & White Health will hold a majority ownership interest in the five hospitals, and all five will operate under the Baylor Scott & White Health brand. The transaction is subject to regulatory review and customary closing conditions.

“This is an exciting step as we partner with a like-minded organization to create a strong network that will improve the health of individuals, families, and communities across eastern and northeastern Dallas,” says Gary Brock, president and chief operating officer of Baylor Scott & White Health, North Texas. “This partnership demonstrates our commitment to advancing population health in North Texas.”

The partnership will be governed by a jointly appointed board of managers. In addition, each hospital will have a governing board and independent medical staffs and medical staff leadership responsible for certain medical staff and clinical matters. Tenet will continue to manage the operations of Centennial Medical Center, Doctors Hospital at White Rock Lake, Lake Pointe Medical Center, and Texas Regional Medical Center at Sunnyvale on behalf of the partnership. Baylor Scott & White Health will continue to manage Baylor Medical Center at Garland. The leadership teams for each hospital will remain in place, and there should be little to no change for employees at the five hospitals. In addition, each hospital will maintain an independent medical staff, and physicians will retain their current hospital privileges.

Separately, Tenet's North Texas accountable care organization recently entered into

an affiliation agreement with the Baylor Scott & White Quality Alliance (BSWQA). For members of the BSWQA, a leading accountable care organization in Texas, this agreement increases convenient access to coordinated and integrated care by adding four hospitals, six outpatient centers, and more than 170 physicians to the network.

## ■ **Baylor Scott & White Quality Alliance and UnitedHealthcare collaborate to improve patient care in North Texas**

BSWQA and UnitedHealthcare are collaborating to improve care coordination and enhance health services for more than 52,000 North Texas residents enrolled in UnitedHealthcare's employer-sponsored health plans. BSWQA is an accountable care organization established in 2011 as part of Baylor Scott & White Health's strategy to improve health care delivery. BSWQA's network of more than 3800 primary and specialty care physicians and 46 hospitals and post-acute care facilities will be available to people enrolled in UnitedHealthcare employer-sponsored health plans. BSWQA will leverage population health management, including care coordination, disease management, preventive health services, a health information exchange, and data analytics, to deliver a higher standard of quality care at lower costs.

The two organizations will help shift Texas' health care system to one that rewards quality and value instead of the volume of procedures performed. BSWQA is one of 250 new accountable care programs UnitedHealthcare has committed to in 2015 as it engages in deeper, more collaborative relationships with physicians and hospitals across the country.

UnitedHealthcare will complement BSWQA's established population health infrastructure with technology and actionable patient data, enabling physicians to take specific measures to improve quality and lower costs. Actionable data can include patient profiles, specific Healthcare Effectiveness Data and Information Set (HEDIS) gaps, and real-time information about emergency room and inpatient admissions. A team of care coordinators will support community-based care coordination, such as helping with transition plans after an individual is discharged from the hospital, scheduling follow-up appointments, and closing care gaps.

Collaborating with health plan partners such as UnitedHealthcare enables BSWQA physicians to support a value-based health care model in which they receive payment incentives for achieving total cost savings by meeting certain evidence-based measures, such as disease management, primary care screenings, and patient safety.

## ■ **Baylor Health Care System telestroke program increases use of clot-busting drug**

Before Baylor Health Care System (BHCS) began its hub-and-spoke model of stroke care with telemedicine in 2013, Baylor Medical Center at Irving had treated only one stroke victim with tissue plasminogen activator (rtPA). In the program's first 26 months, 56 of 58 eligible patients received the clot-busting drug that minimizes the damage caused by a stroke if it is administered within 3 to 4.5 hours after symptoms begin.

Baylor University Medical Center at Dallas (BUMC) is the system's hub, and Baylor Irving is one of the seven community hospital spokes, with more hospitals planning to come aboard in the near future. The system, often called telestroke, allows neurohospitalists on the medical staff at BUMC to evaluate patients remotely and make recommendations to emergency medicine doctors at community hospitals. The doctors use iPads and laptop computers to communicate. The physicians located at BUMC use a portable robot to view and evaluate stroke patients at the community hospitals.

Typically, if an emergency medicine doctor suspects a patient has had a stroke, the BUMC telestroke team is notified. The team, which is always available, includes a program manager, clinical coordinator, vascular neurologists, neurosurgeons, and radiologists. The team recommends the most appropriate care after the evaluation.

The telemedicine program has allowed Baylor Irving to be certified as a primary stroke center by The Joint Commission, a certification that acknowledges facilities “that make exceptional efforts to foster better outcomes for stroke care.” Four participating hospitals—Baylor Medical Center at Garland, Baylor Regional Medical Center at Plano, Baylor Regional Medical Center at Grapevine,

## RECENT GRANTS

- **Development of microRNA biomarkers for noninvasive detection of colorectal cancer**

Principal investigator: Ajay Goel, PhD  
Sponsor: National Cancer Institute  
Funding: \$360,402  
Award period: 7/1/2015–6/30/2016

- **Familial and early onset colorectal cancer**

Principal investigator: Ajay Goel, PhD, and C. Richard Boland, MD  
Sponsor: National Cancer Institute  
Funding: \$372,400  
Award period: 8/1/2015–7/31/2016

- **Models for optimal liver transplant outcomes**

Principal investigator: Sumeet Asrani, MD  
Sponsor: Board of Trustees of Leland Stanford Jr. University/National Institute of Diabetes and Digestive and Kidney Diseases  
Funding: \$67,141  
Award period: 7/1/2014–6/30/2015

- **Use of integrated personal omics profiling to identify biomarkers for autoimmune disease**

Principal investigator: Brandi Cantarel, PhD

Sponsor: The Discovery Foundation  
Funding: \$60,000

Award period: 11/24/2014–11/23/2015

- **Spatial organization of the transcriptome in pustular psoriasis**

Principal investigator: Gerlinde Obermoser, MD

Sponsor: National Psoriasis Foundation  
Funding: \$75,000

Award period: 6/1/2015–5/31/2016

- **Next-generation sequencing-based approaches for the development of epigenetic biomarkers for predicting therapeutic outcome in patients with colorectal cancer**

Principal investigator: Ajay Goel, PhD  
Sponsor: Cancer Prevention and Research Institute of Texas  
Funding: \$886,982

Award period: 8/1/2014–8/30/2017

- **Short-course therapy for multidrug-resistant tuberculosis based on pharmacokinetic/pharmacodynamic answers for biological variability**

Principal investigator: Tawanda Gumbo, MD

Sponsor: National Institute of Allergy and Infectious Diseases

Funding: \$736,025

Award period: 11/15/2014–7/31/2015

- **DC-ASGPR as a novel target for controlling graft-versus-host disease and allograft rejection**

Principal investigator: Sangkon Oh, PhD  
Sponsor: National Institute of Allergy and Infectious Diseases

Funding: \$392,000

Award period: 1/1/2015–3/31/2016

- **Glycemia reduction approaches in diabetes: a comparative effectiveness study**

Principal investigator: Priscilla Hollander, MD, PhD

Sponsor: George Washington University/National Institute of Diabetes and Digestive and Kidney Diseases

Funding: \$216,609

Award period: 8/1/2014–7/31/2015

and Baylor All Saints Medical Center at Fort Worth—also have this certification. Other spoke hospitals include The Heart Hospital Baylor Denton and Baylor Medical Centers in Waxahachie and Carrollton.

Nationally, about 15% to 40% of patients with symptoms of an acute stroke arrive at hospitals in time to receive rtPA; however, the treatment rate is low. Only about 6.7% of ischemic stroke patients receive the therapy at certified US primary stroke centers, and about 2% are treated at noncertified US hospitals. The treatment rate for hospitals participating in the BHCS hub-and-spoke system is more than 12%.

Dion Graybeal, MD, architect of and medical director for BHCS's hub-and-spoke stroke program, estimated that BUMC stroke teams will consult on about 800 cases in community hospitals this year. "We've seen an increase in consultations from all of our regional medical centers. Also, we don't just log on and log off only where there are cases to be evaluated. We're constantly monitoring quality processes and working toward performance improvement," he said.

### ■ **Baylor University Medical Center performs first POEM procedures in Texas**

A surgeon on the medical staff at BUMC recently performed two peroral endoscopic myotomies (POEM) as part of a clinical trial, marking the first time that this minimally invasive technique has been done in Texas. The two procedures involved patients with achalasia, a rare disorder that prevents proper digestion. One of the patients underwent the procedure as an alternative to the Heller myotomy; the other patient had completed the Heller myotomy by a

chest approach in 2010 but later reexperienced swallowing difficulties.

The POEM procedure has grown quickly in popularity worldwide over the past 6 years. As an incision-free alternative to surgery, the POEM technique represents a larger trend in endoscopic surgery. As Steven Leeds, MD, an esophageal surgeon on the medical staff of BUMC's Department of Minimally Invasive Surgery, stated, "Surgical endoscopy is paving the way for many new procedures, and the POEM procedure is only the tip of the iceberg."

## UPCOMING CME PROGRAMS

The A. Webb Roberts Center for Continuing Education of Baylor Scott & White Health is offering the following programs:

**Chest Cancer Conference**, July 18, 2015, at Baylor Sammons Cancer Center  
**Hematologic Malignancies 2015**, October 3, 2015, at Baylor Sammons Cancer Center  
**42nd Annual Williamsburg Conference on Heart Disease**, December 6–8, 2015, at Williamsburg Conference Center, Williamsburg, Virginia

For more information, call 214.820.2317 or visit [www.cmebaylor.org](http://www.cmebaylor.org).

## PHILANTHROPY NOTES

### ■ \$2 million Rees-Jones Foundation grant to support Canine Companions for Independence

The Rees-Jones Foundation has made a generous \$2 million grant in support of the Canine Companions for Independence® at Baylor Scott & White Health–Kinkeade Campus. In honor of this gift, the building that houses functions in support of the dogs will be named the Jan Rees-Jones Canine Center. The center will house a veterinary clinic and radiology lab equipped for minor procedures and observation of each dog in residence. The center will also be equipped with a food prep kitchen, grooming spa, and laundry facility in addition to office space for the kennel staff.

In 2014, Baylor Scott & White Health announced its partnership with Canine Companions for Independence, the nation's premiere assistance dog training program, to provide a Canine Companions training site in the heart of North Texas. Slated to open in August 2015, it will be the first Canine Companions training center in Texas and the first to be connected with a major health care system.

At the Kinkeade Campus, three types of assistance dogs will be trained to master more than 40 specialized commands. Service dogs assist adults with physical disabilities by performing everyday functions like turning on lights, picking up dropped keys, or opening a door; skilled companions enhance independence for children and adults with cognitive and developmental disabilities; and facility dogs work with a professional in a visitation, education, criminal justice, or health care setting. The average cost to breed and train each assistance dog is \$50,000, and assistance dogs are provided free of charge to individuals.

To provide this service to the community, the Foundation is seeking community support to cover capital and operating costs for the construction and maintenance of the Kinkeade Campus. To date, more than \$3.5 million has been raised in support of this program.

### ■ Joan Lunden to speak at 16th annual Celebrating Women luncheon

Joan Lunden, breast cancer survivor and former host of *Good Morning America*, will be the featured speaker at the 16th annual BHCS Foundation Celebrating Women luncheon on Thursday, October 15, at the Hilton Anatole Hotel in Dallas. Joan Lunden is an award-winning journalist, bestselling author, health and wellness advocate, motivational speaker, successful entrepreneur, and a mom of seven children. As the longest-running host ever on early morning TV, Joan greeted viewers every morning on *Good Morning America* for nearly 20 years. In June 2014, Joan was diagnosed with triple-negative breast cancer, which required chemotherapy, surgery, and radiation. Since then, she has shared her journey with the world, becoming a prominent voice in the breast cancer community. An eternal optimist, Joan decided to take her diagnosis and turn it into an opportunity to help demystify cancer treatment.

Since the first Celebrating Women luncheon in 2000, more than \$24 million has been raised to support BHCS's fight against breast cancer. Every 4 hours, someone in Dallas–Fort Worth is diagnosed with breast cancer. Donations to Celebrating Women have supported advanced diagnostic equipment, innovative clinical research, and most importantly, safe, quality, compassionate care for Baylor's patients and

families. Approximately 1200 passionate men and women attend the Celebrating Women luncheon each year in a show of support for Baylor's efforts to fight the disease.

### ■ \$100,000 grant to allow physicians to perform innovative surgeries in utero

The leaders at the Fetal Care Center at BUMC have a clear vision: to become the first center in North Texas to provide perinatal correction of spina bifida and to develop new treatments for other complicated birth defects. Thanks to a recent \$100,000 grant from the RGK Foundation, the Fetal Care Center is well on its way to realizing this vision.

Currently, North Texas families must travel far from home to places such as Houston, San Francisco, or Philadelphia to receive this type of care for their unborn child. The first step to offer this care at BUMC is getting an advanced ultrasound system. The RGK Foundation grant will do just that, by funding the purchase of a Toshiba APLIO 300 V3 Ultrasound Imaging System. This will be located in the hospital's Maternal Fetal Care Unit.

The increase in capabilities will allow the Fetal Care Center to diagnose and treat a wider range of high-risk obstetric patients. In the near future, the center will be able to care for mothers whose unborn babies have spina bifida and other medically complicated birth defects. Generous donor support will allow the Fetal Care Center to provide more innovative diagnostic testing, new fetal interventional procedures, more fetal surgeries, and expanded pre- and postcare for moms and their babies in Dallas.

*For information on how you can support these or other initiatives at Baylor, please contact the Foundation at 214.820.3136.*

The POEM procedure takes a camera-equipped tube, called an endoscope, through the mouth into the esophagus. From there, a small hole is made in the lining of the esophagus and the endoscope travels along the muscle layer passing the lower sphincter. There, the layer of muscle causing the obstruction is cut to allow passage of food. The small hole in the esophageal

lining is then repaired and the endoscope is removed.

"The procedure is shorter in duration and requires minimal instrumentation," Dr. Leeds said. "And since the POEM procedure does not require access through the abdomen or chest, there is no risk for injuring intra-abdominal organs, especially in patients with previous surgeries." The minimally invasive technique

generally affords patients reduced pain, faster recovery, and equivalent ability to swallow compared with the traditional Heller myotomy.

### ■ Baylor Research Institute study reveals that uterine cooling can reduce C-section blood loss

A never-before-seen childbirth technique could help a woman's body heal itself through

## ACCOLADES

**David J. Ballard, MD, PhD**, chief quality officer at Baylor Scott & White and president of the STEEP Global Institute, was named one of the 2015 “Experts Leading the Field of Patient Safety” by Becker’s Hospital Review.

The American College of Physicians selected **W. Mark Armstrong, MD, MACP**, for the Ralph O. Claypoole Sr. Memorial Award for Devotion of a Career in Internal Medicine to the Care of Patients. This award is given to proven role models who have demonstrated excellence in and devotion to the clinical care of patients. Dr. Armstrong is chief of the general internal medicine division at BUMC.

The American Society of Transplantation has awarded **Jacqueline O’Leary, MD**, its Clinical Science Investigator Award. Dr. O’Leary is medical director of the Liver and Transplant Unit at the Baylor Annette C. and Harold C. Simmons Transplant Institute. The annual award is given to only one US clinical investigator who has made a substantial contribution to the field of transplantation medicine.

**C. Richard Boland, MD**, chief of gastroenterology at BUMC, received two awards for his achievements in gastroenterology research. In May 2015, the American Gastroenterology Association presented Dr. Boland the William Beaumont Prize in Gastroenterology. This award, given out every 3 years, recognizes those with an “outstanding contribution of major importance for the field of gastroenterology.” In October 2015, the Collaborative Group of the Americas on Inherited Colorectal Cancer will present Dr. Boland a Lifetime Achievement Award.

**Marvin J. Stone, MD**, past chief of oncology at BUMC, received the Lifetime Achievement Award from the American Osler Society during its annual meeting in April 2015.

temperature changes, according to a pilot study from Baylor Research Institute (BRI). Led by a team of physicians and nurses from BUMC, the study explored “uterine cooling,” an experimental method that showed significant results in early testing. The theory is based on biological fact: Cold temperatures make some smooth

muscles contract. The research suggests that the uterus is among that group.

The study, cocreated by Jack Stecher, MD, an anesthesiologist on the medical staff at BUMC, and Jamie Crowson, CRNA, investigated the use of cold temperatures to fight uterine atony, a condition that prevents the uterus from self-contracting. It can often lead to postpartum hemorrhage, which is the leading cause of maternal death in the world, accounting for 38 instances every 100,000 births. The two researchers engaged Janice Mitchell, MD, a physician on the medical staff at BUMC, to serve as the study’s principal investigator.

Organizers divided the study’s participants into two groups of 100 women, all of them receiving cesarean sections. While uterine hemorrhage is common in both natural and surgical childbirth, the researchers studied cesarean section patients because the uterus is exposed during the procedure, which allowed the team to test its cooling method more easily. Women in the control group had standard surgeries, which protect the exposed uterus with sponges soaked in a saline solution at 99°F. Women in the test group had their uteruses covered with sponges soaked in the same solution, but they were cooled to 30°F. The women who underwent the cooling technique bled an average of 32% less than women in the control group. Given those dramatic differences, the results could imply big changes in obstetric practice.

“It’s unique because it’s a nonthreatening, nonpharmaceutical method that’s simple and that people can conceptualize,” Dr. Mitchell said. “We hope to apply it on a much larger scale to see whether it decreases the need for emergency hysterectomies, blood transfusions, and even more.”

While this study was isolated to cesarean section patients, the findings suggest uses for uterine cooling beyond surgery, including during intrauterine balloon procedures after vaginal delivery. “Vaginal births comprise nearly two-thirds of all deliveries, and those patients are still at risk for uterine atony and bleeding,” said Crowson, a nurse anesthetist at BUMC. “In these cases, intrauterine balloon devices inflated with saline are sometimes placed to slow and stop bleeding.” Chilling those balloons could represent an opportunity to apply these findings to vaginal hemorrhage circumstances, he added.

A future BRI study, now in enrollment, could determine if below-freezing temperatures also

work on women who require a cesarean section after spending hours in labor without success. This is the so-called “tired uterus” effect. “We want to analyze those patients who have had a dysfunctional labor experience to see if the cold is as effective on a uterus that has been working all day as opposed to one that hasn’t gone through an all-day labor,” Dr. Stecher said.

If future investigations corroborate this pilot study’s findings, it could shift the way babies are delivered, potentially helping the 3% to 6% of women who suffer from postpartum hemorrhage.

## ■ Using big data to help the tiniest patients

An increasing number of babies across the country are born addicted to opioids and require intensive care, according to a study analyzing MEDNAX Clinical Data Warehouse statistics from 299 neonatal intensive care units (NICUs) around the United States. The study results are reported in a paper authored by a Baylor researcher and published by the *New England Journal of Medicine*. The illness, called neonatal abstinence syndrome (NAS), is a drug withdrawal syndrome that most commonly occurs after *in utero* exposure to opioids. It can lead to seizures, difficulty feeding, respiratory complications, and low birthweight in affected infants.

The study, titled “Increasing Incidence of the Neonatal Abstinence Syndrome in U.S. Neonatal ICUs,” directly addressed the NICU care of these infants and found that NAS is responsible for a substantial and growing portion of resources dedicated to critically ill neonates in NICUs nationwide.

Dr. Veeral N. Tolia, a neonatologist on staff at BUMC, led a team of researchers from US hospitals that determined that between 2004 and 2013 the rate of NICU admissions nationwide for NAS increased almost fourfold, from 7 to 27 cases per 1000 infants. The research also found that the length of hospitalization increased by more than 40%, from 13 to 19 days. The total percentage of NICU days attributed to NAS increased by more than 500%, with eight centers reporting one in five of all NICU days devoted to care of these infants in 2013.

The team also found that a substantial number of these infants presented after maternal exposure to prescription opioid pain relievers, a class of medication that the Food and Drug Administration (FDA) recently has chosen to regulate more tightly. The study found that among

these NICU patients, treatment with medication was common, occurring in 87% of the infants from 2012 to 2013. This is also problematic because of the scarce research about the best way to care for these infants. None of the commonly used medications are FDA approved for treating NAS, and there is substantial variability in how these infants are treated.

### ■ 30 years of innovation: organ transplant program celebrates three decades, thousands of lives saved

What started as a heroic effort to save a 5-year-old girl has turned into one of the largest and most renowned transplant centers in the country. The Baylor Annette C. and Harold C. Simmons Transplant Institute, a leader in solid organ transplantation in the US, has successfully transplanted more than 7300 organs over the last 30 years and continues to push the boundaries of innovation.

“We plan to maintain our status as a recognized world leader in both transplant science and patient care,” said Göran Klintmalm, MD, PhD, chairman of the transplant institute since its inception. “We will do this not only by focusing on innovations in transplantation surgery, but also by researching alternative treatments.”

Dr. Klintmalm has literally coauthored the textbook on liver transplantation, the surgery that began the transplant institute 30 years ago. Through the urging of then-First Lady Nancy Reagan, the medical community took notice of a little girl from Indiana named Amie Garrison, who was in desperate need of a liver transplant. The only resource at that time for the surgery, in Pittsburgh, Pennsylvania, could not take the case. The surgeon known as the father of solid organ transplantation, Thomas Starzl, MD, PhD, asked a pioneering team of physicians at BUMC to take the case. Within hours of BUMC president and CEO Boone Powell Jr. agreeing to the operation, teams from Pennsylvania, Indiana, and Canada—where a pediatric donor liver was located—mobilized to perform the time-sensitive surgery.

Baylor Annette C. and Harold C. Simmons Transplant Institute, which includes both BUMC and Baylor All Saints Medical Center at Fort Worth, is one of the largest multispecialty transplant centers in the country. Through the dedication of the transplant medical staff, Baylor has been “first” in a number of areas and is credited with milestones:

- First and only adult living liver donor program in North Texas

- First islet cell transplant in North Texas
- First certified ventricular assist device program in the US
- First matched unrelated donor bone marrow transplant in Texas
- First adult liver transplant in the Southwest
- World’s first extracorporeal perfusion (bridge to transplant) using a genetically engineered pig liver, allowing the patient to survive and successfully undergo liver transplantation
- First heart/lung/heart “domino” procedure in North Texas, in which a patient with terminal emphysema receives a single heart and two lungs, while another patient with cardiomyopathy receives the good heart from the patient with emphysema
- First paired kidney donor transplant in North Texas

### ■ Baylor Scott & White Health–affiliated Hope Clinic moves into new facility, receives top national recognition

Hope Clinic in Garland has a lot to celebrate these days. The 501(c)(3) nonprofit, faith-based organization has been providing medical care and resources for Garland’s medically indigent since 2002, operating out of small, overcrowded quarters. In 2011, Hope Clinic entered into an agreement to collaborate with HealthTexas Provider Network, a Baylor Scott & White Health affiliate, in connection with the operation of the clinic where services are provided to patients. The clinic was recently moved into a newly renovated location that more than doubles patient-care space. Adding to the excitement, the clinic received the National Committee for Quality Assurance Level 3 recognition as a patient-centered medical home—the organization’s top certification.

From primary care to chronic disease management and prescription assistance programs, from behavioral health care to spiritual care, the clinic assists those most in need. Last year, prescription assistance totaled \$500,000. Under a new arrangement with North Texas Food Bank, clinic patients with dietary restrictions are able to obtain food boxes designed for those with diabetes and heart disease.

“Hope Clinic is all about giving back,” said Jenny Williams, executive director of Hope Clinic. “The patients served deserve this commitment to quality. Providing charitable medical care is not about enabling people. Poverty opens up a multitude of needs. We give patients the

necessary tools and resources, equipping them to move forward in life.”

### ■ Two Baylor Scott & White Health hospitals among top 100 for quality

BUMC and Baylor All Saints Medical Center at Fort Worth were among the top 100 large US hospitals based on 40 measures of quality sought by the Affordable Care Act (ACA), according to a Kentucky-based organization that focuses on patient safety, quality, and efficiency of care. The SafeCare Group, a software company, conducted the analysis that used ACA’s metrics aimed at reducing hospital readmissions, curtailing hospital-acquired conditions, and achieving value-based care. The Baylor Scott & White Hospitals received the 100 SafeCare Hospitals distinction in the over-400 beds category. The organization said that 400,000 deaths and 5.1 million preventable complications would be reduced annually if all US hospitals matched the performance of the top 100.

### ■ Baylor researcher’s hollow fiber system tuberculosis model approved by European FDA equivalent

The European Medicines Agency (EMA), the equivalent of the FDA, has approved the use of the hollow fiber system for the development of drugs to treat and prevent tuberculosis. The hollow fiber system model of TB was developed about 12 years ago by Tawanda Gumbo, MD, investigator at BRI and the director of the Center for Infectious Diseases Research and Experimental Therapeutics at Baylor Institute for Immunology Research. This model, sometimes called the “glass mouse,” is used to select and evaluate possible drugs and treatment regimens before they are tested in clinical trials. The system aids researchers in determining which drugs to combine and at what doses to effectively fight multidrug-resistant *Mycobacterium tuberculosis*, the causative agent of TB.

“This is a significant advance over many drug development models. The ‘glass mouse’ hollow fiber model has now been found to have a forecasting accuracy of within 94% of the clinical values that have been observed later in tuberculosis clinical trials,” Dr. Gumbo said.

The approval allows for the hollow fiber system to be used in the development of TB drugs. Dr. Gumbo’s group is working to expand its uses to other clinical conditions. They are also collaborating with other BRI investigators in projects that will utilize the hollow fiber system.