Alumna
Rhea Seddon
Inducted into
the Astronaut
Hall of Fame
Page 42
In previous issues of Medicine magazine, we have told you of our research endeavors aimed at the health challenges confronting our local community, examined our plans to reduce the stroke epidemic in the Mid-South, and spoken of our efforts to enhance our educational programs to best equip our students for the health care environment in which they are likely to practice. The common thread that runs through each story is our commitment to improving the health care environment of Tennessee and the surrounding region.

This issue is no exception.

More than one in seven Americans age 12 and older have a substance problem, involving tobacco, alcohol or other drugs. And substance abuse isn’t the only form of addiction. Gambling, sexual addiction, and eating disorders – these, too, can lead to physical, emotional and financial consequences that are staggering.

And so, we are waging a war on addiction on several fronts. See how the College of Medicine is utilizing the four principles of the UTHSC mission – education, research, clinical care, and public service – to combat the power of addiction in our community (page 29).

You’ll hear from some UTHSC veterans. Learn how Dr. Robert Klessig will be working to reduce preventable health-related problems, including those related to smoking, as he leads the Center for Population Sciences in the Department of Preventive Medicine (page 34).

You’ll meet some of your new recruits. Read how Dr. Daniel Sumrok will lead a new Center of Excellence in Addiction Science to improve clinical care, training across disciplines to better prepare medical practitioners to identify and treat substance use and process addictions (page 32). See how Dr. Altha Stewart will direct a new Center for Health in Justice-Involved Youth, a joint effort between UTHSC and government to reduce the number of children in the juvenile justice system by addressing the mental health issues that so often land them there (page 36). Learn from Dr. Clint Snyder how we are adapting our educational methods to better train our graduates for the changing face of addiction treatment (page 30).

This issue features a story on the opening of the new West Cancer Center, where UTHSC physicians, researchers and staff play a major role in revolutionizing cancer care in the Mid-South (page 24). And we are especially honored to tell you about alumnus Rhea Seddon, who was inducted into the United States Astronaut Hall of Fame (page 43). Dr. Seddon will be the keynote speaker at the College of Medicine convocation this year.

We’re also proud to update you on the research our outstanding faculty members are pursuing to better understand and treat diseases including streptococcal diseases, glaucoma, pre eclampsia, high blood pressure and diabetes (news, page 4).

Your UTHSC College of Medicine is aggressively moving toward achieving a national profile through its efforts to focus in an impactful way to meet the needs of Memphis and the Mid-South. As we progress, we need and appreciate the interest, involvement and support from you, our treasured alumni. Thank you for all you do to help us shape health and health care locally, nationally and globally.

David M. Stern, MD
Robert Kaplan Executive Dean
UTHSC College of Medicine
$999,486 Grant: Ocular Trauma Research

Significant eye injuries are common in the military personnel who served in Iraq and Afghanistan, and Dr. Edward Chaum, MD, PhD, Though Foundation Professor of Retinal Diseases at the UTHSC Hamilton Eye Institute, has been enlisted to study the effects of ocular trauma. A $999,486 grant from the U.S. Army Medical Research Acquisition Activity will be used to support a project titled, “Nutlin Analogues for the Prevention and Treatment of Proliferative Vitreoretinopathy in Ocular Trauma.”

The project will explore the use of a new class of drugs for the treatment of ocular injuries, in particular those that prevent the scarring caused by traumatic injury, which often leads to blindness. The candidate drug molecules being tested are variants of a known drug currently in clinical trials for the treatment of cancer.

In partnership with Focal Point Pharmaceuticals, a Memphis startup company, the goal of Dr. Chaum and his research team is to prove the effectiveness of these drugs in ocular trauma and other eye diseases, and to develop them commercially for military and civilian clinical use. “I have had the privilege of working in partnership with the Department of Defense and the Telemedicine and Advanced Technology Research Center at Fort Detrick, Maryland, for the past 10 years to translate the work that they were doing and asked me to help them direct the development of that platform for applications in clinical and biological research,” Dr. Chaum said. “And so together, we took that platform concept and applied it to the problem of macular degeneration, and are now using that technology to better understand how and why the disease progresses.”

The research will be conducted in laboratories at UTHSC and at ORNL.

$2.4 Million Grant: Age-Related Macular Degeneration

Dr. Chaum has a successful history of collaborating with scientists at Oak Ridge National Laboratory (ORNL) to battle diseases of the eye. So when he was approached about working together to apply technology being developed at ORNL to his ophthalmologic research, he jumped at the opportunity.

Dr. Chaum and his ORNL collaborator, Pat Collier, PhD, a research scientist, have been awarded a $2.4 million grant from the National Eye Institute of the National Institutes of Health to fund research into the cellular changes in the eye that cause age-related macular degeneration (AMD). Drs. Chaum and Collier are named as co-principal investigators on the project titled, “Nanoplatform and Modeling of the Subretinal and RPE Microenvironment in AMD.”

AMD causes deterioration of the macula, the portion of the retina that regulates sharp, central vision. “Macular degeneration is the most common cause of vision loss in patients over the age of 65,” Dr. Chaum said. “It’s an enormous importance public health problem.”

Dr. Collier and his colleague, Scott Ritterer, PhD, also a research scientist at ORNL, have been working on technology called a “nanoplatform” that allows researchers to examine gene expression in individual cells in very small volumes of fluid at a high resolution.

Pat reached out to me about a year ago and introduced me to some of the work that they were doing and asked me to help them direct the development of that platform for applications in clinical and biological research,” Dr. Chaum said. “And so together, we took that platform concept and applied it to the problem of macular degeneration, and are now using that technology to better understand how and why the disease progresses.”

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“A number of things happen as that cell type ages in the eye, and this platform allows scientists to examine gene expression and how those molecular responses lead to macular degeneration.”

“A better understanding of these factors may help to develop better treatments for macular degeneration, Dr. Chaum said. “It may help us to understand why the treatments we have work, but sometimes only work in a limited way;” he said. “And it may help us to understand better ways to prevent the development of the disease.”

“A grant totaling $1,076,823 from the National Eye Institute will allow Dr. Rajashekhar Gangaraju and his research team to continue investigating eye disease in relation to diabetes. Cells in Retinopathy.”

A grant of more than $1 million from the National Eye Institute will allow Dr. Rajashekhar Gangaraju and his research team to continue investigating eye disease in relation to diabetes. Cells in Retinopathy.

Dr. Rajashekhar Gangaraju, PhD, an assistant professor in the Hamilton Eye Institute, has long been interested in the causes and effects of diabetic retinopathy – his father and grandfather suffered from diabetes and resulting vision loss. As a result, Dr. Gangaraju, who came to UTHSC in 2014 from Glick Eye Institute at Indiana University School of Medicine, has focused his research on retinal vascular biology. A grant totaling $1,076,823 from the National Eye Institute, a subsidiary of the National Institutes of Health, originally given to him through his previous institution, is transferring to UTHSC to continue his research here. It will be used to support a project titled, “Vascular and Neuronal Repair with Adipose Stromal Cells in Retinopathy.”

“Everyone who develops diabetes may suffer from vision loss,” said Dr. Gangaraju. “The vision loss occurs because high blood sugar damages blood vessels causing leakage and bleeding. The blood vessels are no longer able to carry important nutrients to the retina in the eye. To compensate, more blood vessels are made, but they are fragile and also leak causing a cyclical environment and worsening damage.”

With the increasing prevalence of diabetes in the United States and throughout the world, vision loss from diabetes continues to rise. Vision-threatening retinopathy will affect 40 percent of individuals with diabetes and that percentage will increase as the population ages and more adults and children are diagnosed with diabetes. Nearly 19 million Americans have diabetes, and another 7 million are undiagnosed. Roughly 80 million are categorized as pre-diabetic or at risk of developing the disease.

Preliminary research in Dr. Gangaraju’s laboratory shows that stem cells isolated from fat cells can regenerate and repair the damaged cells in the eye and improve vision.

“The key to this discovery was based on observations in that these stem cells, also known as adipose stem cells that are located in fat tissue, are in very close contact with endothelial cells in small blood vessels and capillaries, and may serve as a natural resource for regenerating damaged blood vessels in the diabetic retina,” Dr. Gangaraju said. “We know the stem cells are migrating toward the blood vessels and are trying to arrest the leakage. We believe this will be a therapy helpful for early stage diabetics, or those who have begun to suffer the effects of diabetes and have early vision loss due to the leaking blood vessels.

“This work is a precursor to clinical trials involving patients. We believe the basic science mechanisms will translate to a bedside treatment for diabetic patients if we can reach them in the early stage of diabetes.”

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Vision Quest: Resisting the Pressures of Glaucoma

Glaucoma is a leading cause of irreversible blindness in the United States and globally. Currently, there is no cure for the disease, and once vision is lost, it cannot be regained. However, Robert W. Williams, PhD, chair of the Department of Genetics, Genomics and Informatics, has received a Research to Prevent Blindness (RPB) Stein Innovation Award totaling $300,000 for research into molecular activity in the retina that initiates glaucoma. His goal is to understand the first targets of the disease—the cells most susceptible to the disease—and help devise new prevention and therapy.

At the present time, treatment focuses on reducing pressure in the eye that can trigger glaucoma, rather than addressing the disease at a cellular level. Most often, by the time patients seek treatment, vision is already altered. Working with mouse models, Dr. Williams aims to identify the cells connecting the eye to the brain (retinal ganglion cells) that are most susceptible to high pressure in the eye that results in their death, and over time, in blindness. Once these cells are identified through cutting-edge, single-cell analysis, the next step would be to develop targeted treatments to make them more resistant to damage from pressure.

“The hope is that this will give us a way to rationally target interventions to help out those cells that are most likely to be damaged by intraocular pressure,” Dr. Williams said. “So that if a patient comes in and we learn enough about the patient to say you’re glaucoma prone because your mother and father had glaucoma, and your brother had it, and we looked at your DNA and you have high-risk genes, now we would know enough from our experimental work that we would be in a position to intervene. Intervention before actual damage to the eye could be as simple as an environmental, dietary or drug treatment,” he said.

“What we’d like to do is strengthen the ganglion cells to make them so strong that even if there is increased pressure in the eye, they don’t go into a tailspin,” Dr. Williams said. The UT-Oak Ridge National Laboratory Governor’s Chair in Computational Genomics, Dr. Williams was nominated by the UT Health Science Center Department of Ophthalmology for the prestigious award that will be delivered in two installments over a three-year period. The award provides funding to basic scientists actively engaged in research in collaboration with a department of ophthalmology with the goal of understanding the visual system and the diseases that affect its function. New technologies and cutting-edge research that apply to blindness, but are developed outside a department of ophthalmology, are supported through this award.

“Dr. Rob Williams is a brilliant scientist and a leader in genomics and bioinformatics,” said Barrett Haik, MD, FACS, Hamilton Professor of Ophthalmology and director of the Hamilton Eye Institute at UT Southwestern. “His research into the cellular and genomic processes involved in glaucomatous tissue damage has the potential to answer crucial questions that could revolutionize the way millions of glaucoma patients are treated. He is one of only four remarkable individuals to receive the Steis Innovation Award, the largest source of flexible funding available to bring new ideas into vision science.”

Dr. Williams said he is grateful to receive the award. “I have a long history in vision research,” he said. “I tend to do more genetics now in a broad context. But this grant brings me back to my core area of expertise.”

Robert W. Williams, PhD

SHINING A LIGHT

As the 2015 president, Medicine & Science for the American Diabetes Association (ADA), Samuel Dagogo-Jack, MD, director of the Division of Endocrinology in the College of Medicine, set out to “shine a light on” the organization’s work in diabetes research and education around the world.

Dr. Dagogo-Jack was the co-principal spokesperson for the organization, along with the president, Health Care & Education, on matters of science, care and education concerning the disease, which currently affects more than 370 million and is estimated to affect 592 million worldwide by 2035.

“Sadly, low- and middle-economy countries are projected to experience the steepest increases,” Dr. Dagogo-Jack wrote for the Diabetes Stops Here blog published by the ADA. The world looks to the ADA and sister organizations to define the tone and pace for research and care, he added.

“It will take novel international partnerships to make this happen among underserved communities in the United States and across the globe, but it must be a priority,” he wrote.

As President, Medicine & Science of the American Diabetes Association, Dr. Samuel Dagogo-Jack Worked to Emphasize the Organization’s Global Work in Research and Education

During his one-year term that expired Dec. 31, Dr. Dagogo-Jack was also a member of the board of directors of the ADA, the nation’s largest voluntary health organization leading the fight against diabetes. The association comprises more than 441,000 members, including people with diabetes, their families and caregivers; 16,500 health care professionals; and 800 staff members. Dr. Dagogo-Jack has volunteered with the association for more than 20 years, and has worked in various leadership capacities on the national and local levels. He has served on the ADA’s Legal Advocacy Council, the Scientific and Medical Advisory Group, and the journal Diabetes Care as associate editor. In the local community, he has been a tireless advocate for education, prevention and care for those at risk of diabetes and those with the disease.

He has been elected to the Association of American Physicians, an honorary medical society, and Alpha Omega Alpha Medical Honor Society. He is a Fellow of the American College of Physicians, a Fellow with Distinction of the American College of Endocrinology, and an active member of the Endocrine Society. In 2013, he was honored as the National Medical Association’s Internal Medicine Section Physician of the Year.

Research by Dr. Dagogo-Jack, the A.C. Mullins Endowed Professor in Translational Research at UT Southwestern, focuses on diabetes prevention and prediction in multiethnic populations. The work is supported by the National Institutes of Health and an award from the ADA.

Samuel Dagogo-Jack, MD

To read Dr. Dagogo-Jack’s full blog post, visit http://diabetestestofhonor.org/2015/01/21/dagogo-jack/.

The American Diabetes Association, celebrating its 75th anniversary, funds research to prevent, cure and manage diabetes; delivers services to hundreds of communities; and provides objective and credible information to improve the lives of all people affected by diabetes.

For more information, call the American Diabetes Association at 1-800-DIABETES (1-800-342-2383) or visit www.diabetes.org
Although gene mutations that cause early-onset Alzheimer’s disease have been identified, the vast majority of cases result from what is known as “sporadic,” or late-onset Alzheimer’s disease (LOAD), which has no known cause. Sarah Neuner’s research focuses on identifying currently unknown genes that influence a person’s likelihood of developing LOAD.

Dr. Francesca-Fang Liao, an associate professor in the Department of Pharmacology, College of Medicine at the University of Texas Health Science Center at San Antonio (UTHSC Department of Pharmacology, College of Medicine), has received a $418,000 grant from the National Institute on Aging, a subsidiary of the National Institutes of Health. The award will be used to support a project titled, “Identification of Genetic Modifiers of Neuronal Deficits and Memory Failure in Alzheimer’s Disease.”

Neuner, a graduate research assistant in the lab of Catherine Kaczorowski, PhD, in the Department of Anatomy and Neurobiology, has received a grant totaling $172,489 from the National Institute on Aging, a subsidiary of the National Institutes of Health. The award will be used to support a project titled, “Identification of Genetic Modifiers of Neuronal Deficits and Memory Failure in Alzheimer’s Disease.”

Identifying those genes that modify susceptibility to LOAD in human studies has proven challenging, in part due to large genomic variability in individuals. In contrast, animal studies suffer from the opposite problem – too little genetic diversity, as most traditional studies utilize one inbred Alzheimer’s disease (AD) mouse model. Therefore, Neuner and her collaborators have developed a new panel of AD mice that model some of the genetic complexity of human populations, which is thought to contribute to the “sporadic” nature of the disease. In this project, the research team will measure memory function as well as clinically relevant markers of AD in this panel throughout their life span in order to determine which strains are more or less prone to developing AD. Results from these tests will be used to pinpoint the region or regions in the genome that contain genes influencing the susceptibility and/or resistance of an individual strain to AD. Once these genes have been identified, gene therapy tools will be used. Research outcomes, combined with analysis of available human datasets, will allow researchers to prioritize candidates with the best potential to translate into treatments for use in human populations.

If successful, this research may uncover new therapeutic targets that can be used to delay, prevent, or cure Alzheimer’s disease in humans.

“I am extremely fortunate and thankful to have received a Ruth L. Kirschstein National Research Service Award from the National Institute on Aging, which will provide support for my doctoral training over the next four years,” said Neuner.

Graduate research assistant Sarah Neuner hopes to identify the genes that can lead to late-onset Alzheimer’s disease.
Dr. Lawrence Pfeffer Publishes Findings on Gene that Inhibits Tumor Growth in Brain Cancer

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awrence Pfeffer, PhD, Murhead Professor of Pathology and director of the UTHSC Center for Cancer Research, is the principal author of a paper published in The Journal of Biological Chemistry that describes a little-known gene that could hold a key to future treatment of glioma, a type of brain cancer.

Dr. Pfeffer and his research team identified the gene FBXO11, which acts as a tumor suppressor. "No one had shown clearly how FBXO11 functions, and we show that it is a tumor suppressor," he said.

The researchers found that suppression of FBXO11 promotes tumor formation. "High FBXO11 expression correlates with better patient survival and lower tumor grade consistent with its tumor suppressor activity," the paper said.

Dr. Pfeffer said finding out more about how this gene operates is a step toward targeted treatments to support it, and thereby improve the prognosis for those with glioma. "Maybe this is a way of targeting that tumor suppressor so it is expressed at higher levels, and maybe it will inhibit tumorgenesis," he said, referring to the formation of tumors. Gliomas comprise 80 percent of all malignant brain tumors.

Targeting Osteoarthritis with a Better Drug Delivery System

Osteoarthritis (OA) is an increasingly large burden on the American health care system. This debilitating condition affects 60 percent of Americans over the age of 60 – the fastest-growing demographic in the nation. Hongsik Cho, PhD, MBA, assistant professor in the Department of Orthopaedic Surgery, has received a $310,808 grant award from the William and Ella Owens Medical Research Foundation. The award will support a project titled, “Theranostic Nanosomes for Osteoarthritis.”

Although there have been substantial advancements in the treatment of inflammatory arthritis, treatments for OA have lagged and are currently primarily palliative until joints become totally dysfunctional and prosthetic replacement is needed. Early detection and treatment of this condition could delay the onset of disease and spare pain and cost.

The purpose of Dr. Cho’s research is to develop a drug delivery system using very small packets, called nanosomes, enclosing a drug and a fluorescent dye to repair damaged cartilage. The earliest injury of joint cartilage damage starts from the destruction of the cartilage extracellular matrix (ECM) and exposed type II collagen, one of the major components of knee cartilage. Dr. Cho’s nanosome technology targets damaged cartilage only, using a specific antibody that binds to exposed type II collagen.

“We believe that binding of nanoparticles containing therapeutic agents in a small animal model will target the release of this agent locally,” said Dr. Cho. “This will deliver high concentrations of the therapeutic agent locally where it is needed and prevent its general distribution. If successful, this targeted nanosome technology should aid in reducing general undesirable side effects.”

Dr. Monica Brown Enlists a Common Vitamin to Combat Scleroderma

Scleroderma is a disease characterized by hardening of the skin and organs due to collagen overproduction and a lack of enzymes to break collagen down. One of the reasons too much collagen is produced has to do with transforming growth factor-beta (TGF-β), a protein that is produced naturally by our immune system. It helps cells grow and develop into specialized cells. In scleroderma, TGF-β causes cells to make an excessive amount of collagen, which results in fibrosis.

“We are very excited and look forward to working along with the foundation to help further understand the cause of scleroderma and to find treatments for this devastating disease.”

Monica Brown, DO, and her team are researching the effects of a natural form of vitamin D on scleroderma. Dr. Brown, an assistant professor in the Department of Pediatrics, has received a $150,000 award from the Scleroderma Foundation. The award will support a project titled, “17, 20 (OH)2pD Mediates Antifibrotic Effects in Murine Models of Sclerosis.”

People who have this disease suffer with heart, lung and kidney problems, just to name a few. Because of the degree of fibrosis in this disease, medications have not been able to slow the disease’s progression, or to reverse the fibrosis once it has started. Dr. Brown and her research team are using a natural form of vitamin D (17, 20 (OH)2pD) to treat and prevent scleroderma. They have discovered that natural vitamin D is able to decrease collagen produced by the skin. It is also able to decrease the effect of TGF-β on collagen production. These findings could lead to successful disease treatment.

Dr. Valerie Arnold Inducted into the American College of Psychiatrists

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alerie K. Arnold, MD, FAPA, chief of Child and Adolescent Psychiatry in the College of Medicine, was inducted into the American College of Psychiatrists during its ceremony in Huntington Beach, California.

The American College of Psychiatrists comprises more than 750 psychiatrists who have demonstrated excellence in the field of psychiatry, and achieved national recognition in clinical practice, research, academic leadership, or teaching.

“I am thrilled to be inducted into the college this year and to have the hope of contributing toward quality training of current and future residents and fellows,” said Dr. Arnold. “My current involvement in fellow, resident and medical student education means so much to me, and I look forward to contributing through the college in an even broader way.”

A $130,808 grant award from the William and Ella Owens Medical Research Foundation will allow Dr. Hongsik Cho and his research team to develop a drug delivery system using very small packets, called nanosomes.

A $150,000 grant from the Scleroderma Foundation will allow Dr. Monica Brown and her research team to explore treatment options for the disease.
News

UTHSC Has Role in Landmark National Blood Pressure Study

When researchers released the findings of a national blood pressure study showing that aggressive intervention to lower systolic blood pressure in older adults below conventional standards reduces cardiovascular disease, stroke and death, it wasn’t news to Memphis landscape company owner Joe Pipkin.

A five-year participant in the Memphis site of the landmark Systolic Blood Pressure Intervention Trial (SPRINT), Pipkin says he feels great, thanks to the SPRINT study team members at UTHSC. They worked with him to reduce his systolic blood pressure from about 140 to under 120, through a carefully monitored regimen of medication. “It has been super great for me,” said Pipkin, 59. “My energy levels are good, my outlook has improved. I’m very happy about it.”

This month, the world learned about similar results for other participants in the study. Those results are expected to change the way blood pressure is treated globally in the future.

Details of the SPRINT study were released on November 9 at the American Heart Association (AHA) conference in Orlando, Florida, and published online in the journal Hypertension. They reported that more intensive management of high blood pressure, below the commonly recommended blood pressure target, markedly reduces rates of cardiovascular disease, and lowers risk of death in a group of adults 50 years and older with high blood pressure.

The intervention in this randomized clinical trial carefully adjusted the amount or type of blood pressure medication to achieve a target systolic blood pressure reading of less than 120, reducing rates of cardiovascular events, such as heart attack and heart failure, as well as stroke, by 25 percent, and the risk of death by 27 percent, compared to the traditional target systolic pressure of less than 140. Systolic blood pressure is the top number in a blood pressure reading.

With the National Heart, Lung, and Blood Institute (NHLBI), a unit of the National Institutes of Health (NIH), as its primary sponsor, the SPRINT study started in the fall of 2009, and included more than 9,300 participants age 50 and older who were recruited from about 100 medical centers and clinical practices throughout the United States and Puerto Rico.

In Memphis, the Department of Preventive Medicine at UTHSC was a large SPRINT study site, following 175 participants since the study launched. The Memphis Veterans Affairs Medical Center enrolled 80 participants.

UTHSC scientist Karen C. Johnson, MD, MPH, was principal investigator for the local SPRINT study site. Dr. Johnson, a professor in the Department of Preventive Medicine and College of Medicine Endowed Professor in Women’s Health, is also the national vice chair of the SPRINT Steering Committee and one of the authors of the report.

Originally, the SPRINT study was supposed to continue into the fall of 2016, but on September 11, 2015, the NHLBI announced it had stopped the study in order to quickly disseminate the preliminary results. The reasons for halting SPRINT were positive, and preliminary results were released early because they had the potential to help many with high blood pressure.

Since the SPRINT study population included women, racial and ethnic minorities, and the elderly, there is significant scientific support for the application of its findings across a broad population.

High blood pressure – hypertension – affects one in every three American adults, nearly 80.7 million people, according to the AHA. Hypertension is an important risk factor for heart disease and stroke, the first and third leading causes of death in the United States. It is also a contributing risk factor for chronic kidney disease and cognitive function decline.

Hypertension is a serious health burden among Memphis-area residents and Tennesseans. The Tennessee Department of Health states almost 34 percent of all adult Tennesseans were diagnosed with high blood pressure. Furthermore, African-Americans are more likely to develop high blood pressure.

“The results of the SPRINT study have far-reaching implications to help the Memphis and Mid-South community prevent disease and extend healthy life,” Dr. Johnson said. “The next steps will include quickly communicating the SPRINT results to help inform patient care and the future development of evidence-based clinical guidelines.”

The SPRINT study was also assessing the impact of intensive blood pressure reduction on the risk for Alzheimer’s disease and other forms of dementia, as well as examining kidney disease among the study participants. These results are not yet available.

Besides the NHLBI, SPRINT is co-sponsored by the NIH’s National Institute of Diabetes and Digestive and Kidney Diseases, the National Institute of Neurological Disorders and Stroke, and the National Institute on Aging.

Pipkin can’t recall exactly how he learned about the study. He had heard about the study from his wife, Ramona Pipkin, chairman’s assistant and administrative coordinator in the UTHSC Department of Surgery, may have mentioned it. In any case, he’s glad he participated. “I would have high blood pressure pretty regularly to the point my face got red and I literally felt like it was going to pop,” he said. “I was starting to feel sluggish and a bit down. I have been an athlete most of my life, and that was the key for me to find some kind of help.”

He now takes potassium and three medicines to manage his blood pressure. That took some getting used to, he said. But over time, his medication has been reduced, and he’s told that at some point he might not require medication at all.

“If your blood pressure is elevated, that’s certainly a dangerous thing,” he said. “Going through this program has been very helpful, not only monitoring my blood pressure, but getting it to a healthy level. The whole thing about it is, I feel good.”

Karen C. Johnson

SPRINT at a Glance

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120 or less Traditional systolic blood pressure target

Findings: Lower target reduced cardiovascular events and stroke

25% reduction

27% reduction

SPRINT Named a 2015 Fellow of the Gerontological Society of America

For more than 20 years, Linda Nichols, PhD, professor in the Department of Preventive Medicine, has worked to improve the lives of caregivers of older adults.

The Gerontological Society of America has recognized her efforts by naming her one of its 2015 Fellows. The recognition, the highest class of membership within the society, is an acknowledgement of outstanding continuing work in gerontology, including research, teaching, administration, public service, and participation in the organization.

The Gerontological Society of America is the nation’s oldest and largest organization devoted to research, teaching, and practice in the field of aging. “It makes me feel like I have done good work,” said Dr. Nichols, who is also co-director of the Caregiver Center at the Memphis VA Medical Center with Jennifer Martindale-Adams, EdD, associate professor in the UTHSC Department of Preventive Medicine. “That’s what it’s all about — doing good things and doing things that really matter for people.”

Fifty-eight fellows were selected and honored at the society’s annual scientific meeting in November in Orlando. Dr. Nichols was among those recognized for social research, policy, and practice.

Roughly 20 years ago, Dr. Nichols began working on early studies to identify problems of family caregivers of the elderly. She has continued the work, translating research findings into practical protocols to help family caregivers maintain and improve their health and live better lives by managing stress, solving financial issues and accessing logistical aid.

“We couldn’t exist as a society without family caregiving,” Dr. Nichols said. “The value of family caregiving is more than the amount of money we spend on formal home care and nursing home care.

“We expect caregivers to do so many things, yet they are also struggling,” she said. “They have their own issues, and caregiving can have huge physical and emotional consequences.”

Dr. Nichols, Dr. Martindale-Adams and Robert Burns, MD, professor in the UTHSC Department of Preventive Medicine, are now training others across the country to help caregivers cope. “I think we have raised the profile of caregiving,” she said. “We have given clinicians tools to work with caregivers.”

Last fall, Dr. Nichols received another career accolade. She was selected to serve on the Institute of Medicine Family Caregiving Committee, which makes national recommendations on policy regarding family caregivers of older adults.
**Understanding Anesthesia**

Anesthesia is a practice that helps eliminate pain for almost 20 million patients in the United States who undergo surgery every year, according to experts. However, the way the drugs eliminate pain is still unknown. Ralph Lydic, PhD, his collaborator Helen A. Baghdoyan, PhD, and their research team focus on understanding how the brain regulates the experience of pain through various states of consciousness and the role anesthesia plays in those states.

Dr. Lydic is the Robert H. Cole Professor of Neuroscience in the Graduate School of Medicine. He is also co-director of anesthesiology research and of the anesthesiology research laboratory at the University of Tennessee Medical Center, Knoxville (UTMCK). UTMCK is one of UTHSC's core teaching hospital partners. The UT Knoxville campus also benefits from Dr. Lydic's expertise as a professor in the Department of Psychology, College of Arts and Sciences. Drs. Lydic and Baghdoyan were recruited to UTHSC and transferred their $327,340 grant from the National Institutes of Health, to explore the cellular and molecular processes that regulate REM sleep and rebound.

**Regulating REM Sleep Rebound**

Rapid eye movement (REM) sleep, also known as dreaming sleep, is naturally regulated so that daily amounts are relatively consistent and losses are made up during the next period of sleep. This well-documented phenomenon is called REM sleep rebound.

Subimal Datta, PhD, a professor in the UTHSC Graduate School of Medicine in Knoxville, has received a grant totaling $1.4 million from the National Institute of Mental Health, a subsidiary of the National Institutes of Health, to explore the cellular and molecular processes that regulate REM sleep and rebound.

Studies have shown that the amount of REM sleep recovered following a period of REM sleep deprivation is directly proportional to the amount of REM sleep that has been lost. Additionally, during REM sleep deprivation there are progressively more frequent attempts at transitions into REM sleep, an indication of strong bodily need for REM sleep. These findings are consistent with the belief that stable regulatory processes control daily amounts of REM sleep.

Dr. Datta believes that the amount of REM sleep may be regulated by specific areas of the brain. His previous studies have shown that distinct cell groups in the brain initiate the multiple events of REM sleep. These cell groups are components of a widely distributed network rather than a single REM sleep "center."

However, no study to date has investigated the cellular and molecular mechanisms within the brain stem; and how these mechanisms operate under varying physiological and/or pathological conditions. This newly funded research is designed to clarify these REM sleep regulatory mechanisms.

**Homeostatic Regulation of REM Sleep**

Homeostatic regulation of REM sleep is critical for the development, maturation, and cognitive functions of the brain, and deficits in this regulation are associated with a number of neurological and psychiatric disorders including depression, anxiety disorders, stroke, addiction, Alzheimer’s, Huntington’s and Parkinson’s diseases. REM deficits also occur after stroke. Dr. Datta’s research titled, “Cellular and Molecular Mechanisms of REM Sleep,” will help clarify the pathophysiological processes that underlie the cognitive dysfunctions associated with these disorders.

Dr. Ralph Lydic

"Everyone who has surgery wants it, but we still don’t know how the drugs make us unconscious and eliminate the perception of pain.”

Dr. Ralph Lydic explained, “Everyone who has surgery wants it, but we still don’t know how the drugs make us unconscious and eliminate the perception of pain. Understanding exactly how the drugs work is an important step toward eliminating problems like itching, nausea and vomiting after surgery, and postoperative cognitive decline in some older patients."

Sleep and anesthesia are different states of consciousness but share some similar traits such as depressed breathing, poor control of body temperature, and the mental activity of dreaming. Discoveries by Dr. Lydic and Dr. Baghdoyan, a Beaman Professor in the Department of Psychology at the University of Tennessee, Knoxville, have led anesthesiologists around the world to use states of sleep as a tool for efforts to understand states of anesthesia. "Sleep influences many functions and illnesses," said Dr. Baghdoyan. "It impacts our exercise, nutrition, cardiovascular health, immune functions, emotions, learning, memory, and our overall sense of well-being. Sleep is one of the cornerstones of good health, yet if you talk with anyone who has spent a few nights in the hospital, they commonly report that they can't sleep through the night. There must be ways to improve sleep in the hospital, and to promote the concept of sleep health as an essential component of medicine.”

With the help of a $1.4 million NIH grant, Dr. Subimal Datta and his research team will be able to gain more insight into REM sleep and the recovery process associated with it.
Early Onset Preeclampsia: Playing for Time

A possible new treatment to improve the odds for women diagnosed with early onset preeclampsia and their babies is being studied by Dr. Garrett Lam at UTHSC’s College of Medicine in Chattanooga.

In 2008, Beth Frazer was almost 20 weeks into what she thought was a healthy first pregnancy when a routine doctor’s visit detected a problem that sent her to the hospital, cost the lives of the twins she carried and almost took her life.

Frazer was diagnosed with preeclampsia, a complication of pregnancy characterized by high blood pressure that can lead to organ failure, seizures, stroke or death of the mother and baby. Its cause is not known, and there is no cure. Treatment options are few, except in-hospital monitoring and early delivery, which can carry dire consequences for the baby.

Dr. Garret Lam, MD, FACOG, associate professor and chair of the Department of Obstetrics and Gynecology at the UTHSC College of Medicine in Chattanooga, is hoping a study he is helping to direct will change the outcome for women like Frazer in the future.

Dr. Lam is the principal investigator for the Tennessee site of the PRESERVE-1 Study, which is assessing whether administering an antithrombin (anti-clotting) drug called ATryn to women diagnosed with preeclampsia between 23 and 30 weeks of pregnancy will slow the progression of the disease. The goal is to see if the drug will significantly prolong gestation, thus improving fetal survival and long-term prospects.

Preeclampsia can occur at any point in pregnancy, most often in the later stages when babies are viable at delivery. When early onset preeclampsia – less than 32 weeks – necessitates premature delivery, babies may be too underdeveloped to survive.

The PRESERVE-1 Study is funded by EVO Biologics, Inc., the maker of ATryn, a man-made version of a naturally occurring protein in human blood that prevents clotting. ATryn has been approved by the FDA for prevention of blood clots in pregnant women and surgical patients unable to produce enough anti-clotting material on their own. Short-term use of antithrombin has been previously shown in two studies to prolong gestation. This is the first study looking at whether continuously infused antithrombin will have a positive effect on gestation.

The study aims to enroll 120 women with early onset preeclampsia at 20 sites across the country, including Baroneess Erfinger Medical Center in Chattanooga. An additional 10 sites are expected to be added in the future.

“Preeclampsia is the second-highest cause for maternal death worldwide,” Dr. Lam said. Though no cause has been identified, it is believed that abnormalities related to the placenta, either in formation or implantation, may set up an inflammatory reaction in the mother, triggering the syndrome. Women diagnosed with preeclampsia are known to have antithrombin levels that are lower than levels seen in women who are not pregnant. This study aims to restore a woman’s antithrombin levels to what is expected when not pregnant.

Women diagnosed with preeclampsia at 23 to 30 weeks of pregnancy are eligible for the study. Half of the women will receive intravenous placebo treatment (an inactive saline solution), and half will receive an infusion of ATryn every day. All participants will otherwise be treated the same with close clinical observation and management, potentially including medication to lower blood pressure.

“The idea is that a consistent flooding of the body with a low dose of this medication will short circuit the inflammation process, giving the baby more time to develop and hold off the disease progression,” Dr. Lam said. “Unfortunately, the disease process will keep building, and eventually we won’t be able to hold it off. At that point, we will have to deliver. The delay could be days, a week, or longer, but every day the mother can safely stay pregnant gives mother and baby better odds.”

Frazer, now the mother of two and a volunteer with the Preeclampsia Foundation, is happy to hear that the study may make pregnancy safer for women in the future. “People are finally giving preeclampsia its due,” she said. “It is one of the oldest conditions on record, and we have no known cause and no cure.”
Almost half of all U.S. hospitals face penalties under the Hospital Readmissions Reduction Program (HRRP), and penalties can be as high as three percent of a hospital’s Medicare revenues.

Dr. Teresa Waters, PhD, professor and chair of the Department of Preventive Medicine, has received a grant totaling $749,998 from the Agency for Healthcare Research and Quality, an agency within the Department of Health and Human Services, to study HRRP. The award will be used to support a project titled, “Hospital Responses to Medicare Readmission Penalties.”

“We have seen payment reforms emphasize bonuses for providing good care, rather than penalties for bad outcomes, so readmission penalties represent a departure from the usual approach,” Dr. Waters said. “Even if they have the intended overall effect on readmission rates, we need to know whether they have any troubling and unintended effects on subgroups of hospitals or patients.”

The study will focus on three main areas: what is the impact of the penalties on hospital operations, especially for those hospitals serving large low-income and/or minority populations, safety net hospitals, and financially troubled hospitals; are penalties associated with relative improvements in readmission rates for targeted conditions; and are there any “spillover” effects of the program on non-targeted conditions or non-Medicare patients?

The study will provide timely and clear information to policymakers, and any other insurance companies that decide to use readmission penalties, about whether and how the program should be changed.

Asit K. Pattnaik, PhD, professor in the School of Veterinary and Biomedical Sciences at the University of Nebraska-Lincoln, are co-authors of the book titled, “Biology and Pathogenesis of Rhabdo- and Filoviruses,” published by World Scientific. The book reviews the most recent findings on the replication of this group of human pathogens, including the biology of the rabies virus, as well as Marburg and Ebola viruses, and the response of host cells to infection.

The book represents an authoritative text that brings together the most recent advances on the cellular and molecular biology of Rhabdo- and Filoviruses, including mechanisms of pathogenesis, according to the publisher. It also looks at the most recent findings on the development of vaccines and antivirals to fight these and related viruses. Dr. Whitt said with increased surveillance and better health care resources to recognize and treat patients displaying signs of Ebola infection, the likelihood of a similar major outbreak in the future is greatly reduced, but not eliminated.

Liberia has now declared itself free from Ebola. While there have been no new reported human cases of Ebola virus infection, the pathogen is clearly endemic in this part of Africa, likely residing in certain bat populations and spreading to other mammalian species, including humans, when they come in contact with these bats or enter sites, such as caves, where the bats roost,” he said. “Concerns were unfounded that the recent outbreak of Ebola virus resulted from a mutated strain that more easily spread among humans, but the possibility that the virus could re-emerge in the future cannot be ruled out.”

Ariste Medical, a company founded by faculty members from UTHSC, is working to develop a drug-delivering mesh patch for use at the site of hermia repair to reduce the risk of infection.

Ariste Medical, founded in 2007 and located in Memphis, has received $4.6 million from an investor who wishes to remain anonymous to continue development of this innovative drug-delivering hernia mesh. The new investment will support product testing and regulatory filings for the mesh, as well as preparation for commercialization in the United States and Europe upon regulatory approval.

Ariste Medical was formed by UTHSC’s Timothy Fabian, MD, and Lisa Jennings, PhD, along with Brian Best, a leader in product development and commercialization. Dr. Fabian is the Harwell W. Wilson Alumni Professor at UTHSC. Dr. Jennings is a professor in the College of Medicine with joint appointments in the Departments of Biomedical Engineering, Microbiology, Immunology and Biochemistry; and Surgery. She is also the founder of OfQuest Labs, a specialty contract research organization performing testing for studies conducted in the United States, Canada and Europe.

At Ariste Medical, Drs. Fabian and Jennings are developing implantable devices that deliver drugs to reduce the risk of common surgical complications that increase morbidity. Ariste exclusively licensed this technology from the University of Tennessee Research Foundation.

The company has been located at the Memphis Bioworks Foundation since 2012. In 2013, Ariste received initial seed funding of $1.27 million to support the pursuit of multiple patents, open a research lab, and develop new products and technology targeting clinical complications where infection, scar tissue formation or clotting is an ongoing challenge associated with implantable surgical devices.

“Ariste Medical is the first device company to our knowledge that has the technology to provide a programmable residence and release of an agent or drugs that can preserve the integrity of implantable medical devices composed of various materials such as polypropylene, polyurethane, ePTFE (Telfon) and other implantable materials,” Dr. Jennings said. Several implants are composed of ePTFE, but until Ariste technology, there has not been a satisfactory solution to create a product with the desirable drug delivery properties, she explained.

“We think our products, once approved, will make significant impact in the device industry,” Dr. Jennings said.

Dr. Michael Whitt

Dr. Cameron Kaplan (left) and Dr. Tao Li (right)

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Virologist

Michael Whitt, PhD, Co-authors New Book about Ebola and Other Deadly Viruses

H ermia repair is one of the most common surgical procedures in the United States. But the “open repair” with mesh implantation often required at the site carries a high risk of infection. Ariste Medical, a company founded by faculty members from UTHSC, is working to develop a drug-delivering mesh patch for use at the site of hermia repair to reduce the risk of infection.

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“We think our products, once approved, will make significant impact in the device industry,” Dr. Jennings said.
Warding Off Sepsis

Sepsis is a serious medical condition caused by an overwhelming immune response to infection. Despite availability of antibiotics, the mortality and hospitalization of patients with severe sepsis has increased rapidly, causing approximately 200,000 deaths each year in the United States alone. Guoyun Chen, MD, PhD, and his research team are hoping to investigate further and explore treatment options.

An assistant professor in the Department of Pediatrics in the College of Medicine, Dr. Chen has received a grant totaling $332,250 from the National Institute of Allergy and Infectious Diseases, a subsidiary of the National Institutes of Health. The award will be used to support a project titled, “Glycoside Based Pattern Recognition in Therapy of and Resistance to Septic Shock.”

Dr. Chen and his research team will identify the sialidase response (enzymes that aid in the inflammatory process of sepsis) and develop therapeutic approaches that may lead to novel treatments for the use in patients with sepsis. Their efforts could potentially reduce morbidity and mortality.

Heavy Metals and Neonatal Brains

Small amounts of two heavy metals, lead and mercury, are naturally present in human blood. In adult transusions, these amounts are too small to cause concern. For extremely premature infants, however, the story is different. Frequent blood transfusions, which naturally contain lead and mercury, theoretically increase the risk of toxicity from these metals in the vulnerable, immature brain of a premature infant.

Mohamad Elabid, MD, associate professor in the UTHSC Department of Pediatrics, has received a $288,818 grant from The Gerber Foundation to investigate whether extremely premature babies can safely handle the amounts of lead and mercury acquired through blood transfusions. The award will support a project titled, “Pharmacokinetics of Lead, Mercury and Cadmium in Extremely Low Birth Weight Infants After Co-Transfusion with Packed Red Blood Cells.”

If successful, the research will show whether blood transfusions are a potentially significant source of heavy metals in this vulnerable population. It is expected that this will lead to new regulations on how blood transfusions are evaluated and cleared, similar to the way donor blood is tested for infectious diseases.

Preventing Tumors Caused by TSC

John Bissler, MD, and his research team study a disease in children and adults called tuberous sclerosis complex (TSC), which predisposes patients to an unusual type of renal tumors. The team aims to use a newly developed model to study whether anti-hypertension drugs already approved for use in children will prevent tumors and the disease.

Dr. Bissler, a professor in the Department of Pediatrics at UTHSC, has received a grant totaling $637,501 from the U.S. Army Medical Research Acquisition Activity to study renal tumor treatment options. The award will be used to support a project titled, “Prevention of TSC Renal Disease.”

Dr. Bissler is also chief of Pediatric Nephrology at Le Bonheur Children’s Hospital. He is a nationally known expert on tuberous sclerosis complex and directs the Tuberous Sclerosis Center of Excellence at Le Bonheur. His research is conducted at The Children’s Foundation Research Institute, a partnership of UTHSC, Le Bonheur and the Children’s Foundation of Memphis.

“We hope to identify a treatment that could prevent the renal abnormalities from developing,” said Dr. Bissler. “This is significantly more desirable than working toward treatments for tumors that are already large. Because patients are usually identified before renal tumors are seen, prevention treatments offer the greatest hope.”

Proteins, Pain and Blood Pressure

Research being performed by Julio Cordero-Morales, PhD, focuses on understanding the function of proteins involved in pain perception and blood pressure regulation. With new grant funding, Dr. Cordero-Morales and his research team can further explore the importance of the specific roles these proteins and their regulatory mechanisms in normal and diseased conditions.

Dr. Cordero-Morales, an assistant professor in the Department of Physiology at UTHSC, has received a grant totaling $231,000 from the American Heart Association. The award will be used to support a project titled, “Elucidating the Mechanism of TRPV4 Activation and its Role in Vascular Function.”

The significance of neuronal function in the brain is explored in a new book co-edited by William Armstrong, PhD, and Jeffrey Tasker, PhD, titled “The Neurophysiology of Neuroendocrine Neurons.” Dr. Armstrong, a professor in the Department of Anatomy and Neurobiology at UTHSC, also serves as director of the UTHSC Neuroscience Institute. Dr. Tasker is a professor of cell and molecular biology at Tulane University.

Brain cells (called neurons) communicate with one another by way of chemical and electrical signals. A small but special group, called neuroendocrine cells, also secretes hormones directly into the bloodstream to help regulate a wide variety of bodily functions, including blood pressure, fluid regulation, reproduction, birth and lactation. The electrical activity of neuroendocrine cells acts directly to the pattern and quantity of hormones they release. This book describes the rich history and current knowledge of the electrical properties of neuroendocrine cells, and how this activity is controlled.

This is the first volume in a new series titled “Masterclass in Neuroendocrinology,” a co-publication between Wiley Press and the International Neuroendocrine Federation. The series aims to illustrate highest standards and encourage the use of the latest technologies in basic and clinical research, and to inspire further exploration into the field of neuroendocrinology. The series editors are Dr. Armstrong and John A. Russell, PhD, of Edinburgh University in Scotland. Additional texts in this series will cover the neuroendocrine system’s role in stress, feeding, biological rhythms, and reproduction.

Paraoquat and the Brain

Paraoquat is a weed-killer used extensively in agriculture in the United States and other parts of the world. It is suspected to increase risk for developing Parkinson’s disease. Byron Jones, PhD, and his research team are using newly awarded funds to investigate individual toxicity to the chemical on certain areas of the brain.

Dr. Jones, a professor in the Department of Genetics, Genomics and Informatics, has received a grant totaling $2.3 million from the National Institutes of Health. The award will be used to support a project titled, “Neural Toxicity of Paraquat Is Related to Iron Regulation in the Mibrain.”

“If successful, the research will show whether blood transfusions are a potentially significant source of heavy metals in this vulnerable population. It is expected that this will lead to new regulations on how blood transfusions are evaluated and cleared, similar to the way donor blood is tested for infectious diseases.

Streptococcus Vaccine Developed by Dr. James Dale to Begin Clinical Trial

The Pan-Canadian Vaccine Enterprise Inc. (PREVENT), a national Centre of Excellence for Commercialization and Research (CECR) located at the University of Saskatchewan, and Vaxent in Memphis, have announced the initiation of a Phase 1 clinical trial of StreptAnova®, a vaccine designed to prevent Group A streptococcal (GAS) infections. The trial will be conducted at the Canadian Center for Vaccinology in Halifax, Nova Scotia.

Group A streptococcal diseases are more common in children than adults. GAS infections cause substantial morbidity and mortality, with illnesses ranging from uncomplicated streptococcal pharyngitis (strep throat) to invasive infections, toxic shock syndrome, necrotizing fasciitis (flesh-eating disease), inflammation of the kidney). Worldwide each year, there are 616 million cases of pharyngitis caused by GAS. An estimated 663,000 cases of severe infection and 470,000 cases of acute rheumatic fever result in 517,000 deaths annually. In the U.S., there are 1,950 deaths each year from invasive Group A streptococcal disease. Necrotizing fasciitis kills close to 30 percent of patients and streptococcal toxic shock syndrome has a mortality rate of 30-70 percent.

StreptAnova® was invented by James B. Dale, MD, at UTHSC, and is being commercialized jointly by PREVENT and Vaxent, a company founded by Dr. Dale. StreptAnova® is composed of four recombinant proteins containing protective peptides from 30 streptococcal serotypes that account for the vast majority of infections in North America and Europe.

The main objective of the Phase I clinical trial is to demonstrate that the novel vaccine is safe and well tolerated in humans. Forty-five healthy adults will receive three injections over six months, with a one-year follow-up to assess the immune response to the vaccine. In addition to safety, the clinical trial protocol calls for a measurement of the immune responses generated by those vaccinated to determine if they are similar to the natural immunity that protects one from disease.

“This is an exciting milestone in the development of StreptAnova®,” said Dr. Dale, Professor of Medicine at UTHSC and Chief Scientific Officer of Vaxent. “The safety and immunogenicity results from these studies will add to the growing body of clinical data from previous human studies of similar vaccines developed in our laboratories. With positive results, clinical development will move to examine the safety and immune response in adolescents and pre-school children, the ultimate target age for the vaccine.”

“We are very excited by this collaborative partnership with Vaxent to advance the development of this novel StreptAnova® multivalent vaccine,” said Dr. Andrew Potter, CEO of PREVENT and Director of VEDO-InterVac at the University of Saskatchewan. “It represents a significant milestone in PREVENT’s commercialization success working together with partners to accelerate the commercial development of innovative vaccine candidates.”

About PREVENT:
PREVENT accelerates the development of promising early-stage vaccine candidates to address existing or potential human health issues. PREVENT’s founding members include: the Vaccine and Infectious Disease Organization – International Vaccine Centre (VIDO-InterVac), the BC Centre for Disease Control (BC CDC), and the Canadian Center for Vaccinology (CCV) at Dalhousie University. By partnering with Canadian experts and shouldering the risk of early-stage vaccine development, PREVENT strengthens and advances Canada’s vaccine industry, promoting growth and improved global competitiveness.

About Vaxent:
Vaxent is an early stage vaccine development company located in Memphis, Tennessee, whose lead product in development is a subunit vaccine against Group A streptococcus (GAS), earlier versions of which have been tested in early stage human clinical trials with no adverse events. The company plans to use its core competency in protein vaccine technology to advance its lead product in clinical testing, as well as develop other new vaccines against infectious diseases.

UT Family Practice Recognized by National Committee for Quality Assurance

UT Family Practice has earned national recognition for patient-centered care from the National Committee for Quality Assurance (NCQA). The physician practice has received NCQA Patient-Centered Medical Home Recognition for using evidence-based, patient-centered processes that focus on highly coordinated care and long-term relationships between patients and providers.
New West Cancer Center Opens, Bringing ‘New Day’ in Comprehensive, Multidisciplinary Cancer Care to Mid-South

The East Campus location of West Cancer Center is “our chance to reinvent care for the high disease burden that cancer inflicts on our citizens,” David Stern, MD, the Robert Kaplan Executive Dean of the College of Medicine, said at the opening ceremony for the new facility on Nov. 17. The $65 million, 123,251-square-foot building is the product of an innovative collaboration between West Clinic, Methodist Healthcare and UTHSC to bring comprehensive cancer care, education and research to the region and beyond.

The partnership, which began in 2012, magnifies the strengths and expertise of each of the institutions to improve patient care, elevate training for the next generation of clinicians, and aid in recruiting research leaders from all over the country to Memphis.

“This is the beginning of a new day for cancer care in the Mid-South,” Gary Shorb, chief executive officer of Methodist Healthcare, told the elected officials, health care professionals, cancer survivors and community members attending the ribbon-cutting ceremony. “We have developed a great platform of trust, and it is through that platform we are going to transform cancer care."

The new center brings together multispecialty services— including medical, surgical, diagnostic and radiation oncology, genetics, pain management, nutrition, palliative care, clinical research and others—under one roof for the first time in Memphis. The collaborative environment is designed to make cancer care more accessible, organized and easier for patients, enabling them to stay in Memphis for treatment instead of traveling to institutions in other cities.

“Four years ago, we came together to give world-class cancer care to Memphis, the region and the nation,” said Lee Schwartzberg, MD, FACP, executive director of West Cancer Center. “We provide everything in this building.”

West Cancer Center Chief Executive Officer Erich Mounce said the state-of-the-art facility is expected to serve 35,224 patients in the next 12 months, deliver more than 18,000 radiation treatments and treat more than 10,000 with chemotherapy. “This is why we stand here today,” he said. “The numbers are staggering.”

UTHSC is privileged to be a founding partner in the West Cancer Center, Dr. Stern told the crowd. “It’s not only a grand opportunity, it’s a great responsibility. This requires bringing the best doctors in the United States together with the best technology to develop programs that offer expertise comparable to what one could find in Houston or New York City.”

Two UTHSC faculty members have received a significant grant to assist American Indian and Native Alaskan caregivers.

Family caregivers of those with dementia are at risk for depression, anxiety, sleep disturbance, increased illness and hospitalization, according to a strong body of evidence from studies funded by the National Institutes of Health. Professors Jennifer Martindale-Adams, EdD, and Linda Nichols, PhD, will work to help American Indian and Alaska Native family caregivers of people with dementia better manage the behavioral issues of their loved ones who are ill, and cope with the stress their care creates.

The three-year grant, totaling $371,263, is from the Rx Foundation to fund this work in partnership with the Tribal Public Health Nursing Program of the Indian Health Service (IHS) and the Native American Caregiver Support Program of the Administration on Aging (AoA), part of the U.S. Department of Health and Human Services Administration for Community Living. “Challenges for American Indian and Alaska Native caregivers are amplified by the relative lack of long-term services and supports, and by the rural and frontier setting of many Tribal communities,” said Dr. Martindale-Adams, principal investigator and an associate professor in the Department of Preventive Medicine at UTHSC.
Huntington’s Disease: Professor Anton Reiner Receives $617,388 Research Grant

Huntington’s disease is a hereditary, degenerative brain disease, often called Woody Guthrie’s disease, for his most well-known victim. The disease usually appears around 40 years of age, and ultimately results in destruction of the primary thinking and planning part of the brain, called the cerebral cortex, and also of a major motor control region of the brain, called the basal ganglia. A new $617,388 grant from the Cure for Huntington’s Disease Initiative Foundation will allow Anton Reiner, PhD, to study the disease.

A professor in the Department of Anatomy and Neurobiology in the College of Medicine, Dr. Reiner will use the grant titled, “Progression of Basal Ganglia Pathology in Q175 Huntington’s Disease Mice and Human Huntington’s Disease,” to gain more insight into and explore treatment options for the disease. The funds will be distributed over three years. Huntington’s disease (HD) causes profound emotional, cognitive, behavioral and motor disability, typically leading to death 20 years after disease onset. In America, there are about 30,000 HD patients and about 150,000 people at risk of developing the disease. Although the gene defect is known in HD, how this defect causes progressive brain degeneration is not known, and no effective treatments are currently available. It is hoped that the research will yield a deeper understanding of the brain regions and brain neuron types that degenerate in Huntington’s disease in humans. These studies will help explain the basis of early symptoms and help guide treatment choices at different stages of the disease.

The award also supports studies to determine how well the brain pathology in the Q175 mouse model of Huntington’s disease matches that in the human disease itself. Q175 mice have been genetically engineered to have the same mutant gene that causes Huntington’s disease in humans, and they are being considered by the Cure for Huntington’s Disease Initiative Foundation as the animal model of choice for initial screening of possible therapies. If successful, the funded studies will help determine if this model could serve as an effective surrogate for humans in early testing of therapeutic options.

“We are pleased by the recognition of our prior work on HD that this award reflects, and we are pleased by the opportunity to continue to make contributions to the understanding of this disease and the development of treatments for it,” said Dr. Reiner.

Outpatient Medication Management Program Developed by Dr. Jim Bailey at UTHSC Wins National Innovation Award

A clinical practice improvement module developed at UTHSC was one of 15 national winners in the inaugural Practice Innovation Challenge, sponsored by the American Medical Association (AMA) and the Medical Group Management Association (MGMA).

The UTHSC “SafeMed” module, which is designed to encourage safe and effective medication use in an outpatient setting, may be used in clinics around the country in the future through the AMAs STEPS Forward initiative, an online resource of educational modules to help physicians operate their practices more efficiently and economically while providing better care to patients.

Jim Bailey, MD, MPH, professor of Internal Medicine and Preventive Medicine in the College of Medicine, and director of the Center for Health System Improvement at UTHSC, and Bonnie Binkley, MA, research manager for the center, authored the practice improvement module officially called “SafeMed: Building a Medical Home-Based Care Transition Team.” It offers a step-by-step tool kit to help physicians extend primary care from hospital to home, reduce drug therapy problems, and prevent hospital readmissions.

Along with Dr. Bailey, Ilana Graetz, PhD, of the Department of Preventive Medicine at UTHSC, attended the MGMA meeting to represent the SafeMed team in accepting the award.

Methodist Le Bonheur Healthcare and UTHSC Receive $40 Million Gift

On November 19, Methodist Le Bonheur Healthcare (MLH) and UTHSC announced a $40 million gift. The anonymous gift will be used to transform the current Methodist University Hospital Transplant Institute (a partnership between MLH and UTHSC) from a leading transplant program to a world-class research program and a progressive, healing environment for patients and families alike.

“This generous gift will greatly impact the scope and level of care provided by our transplant program,” said Gary Shores, CEO of Methodist Le Bonheur Healthcare.

“Since 2006, we’ve been on a journey to achieve national excellence for our transplant efforts, and this gift will serve as a catalyst to not only transform our Transplant Institute, but all of Methodist Le Bonheur Healthcare.

“Our mission at Methodist Le Bonheur is to serve all areas of Memphis, regardless of a patient’s ability to pay, and philanthropic gifts such as this provide the bridge between what we can afford and what we can envision. We are honored to receive this gift — the largest ever in our nearly 100-year history.”

The gift will be used for a new, innovative, comprehensive transplant facility at Methodist UT Hospital that will provide state-of-the-art and easily accessible accommodations for all stages of the transplant process — from pre-transplant testing, to the transplant operation itself and lifelong post-transplant care.

The funds will also be used for pioneering research in conjunction with UTHSC. As one of the busiest transplant centers in the United States with one of the most diverse patient populations, expanded research will be critical in examining outcomes across racial and socio-economic groups, while further building upon our research mission and improving patient care and outcomes.

“This gift will further our vision of Memphis being a health care hub not only for the Southeast, but for the entire United States,” said James D. Eason, MD, UT, UTHSC, Professor of Surgery and Director of the Methodist University Hospital Transplant Institute. “The University of Tennessee has a long history with solid organ transplantation, successfully performing the first kidney transplant in Tennessee more than 40 years ago. Our vision is to expand upon that success, while further developing the research mission and improving the quality of life and the life expectancy of transplant patients. We will use this generous donation for groundbreaking research centered on further improving the outcomes for transplant patients and providing a world-class patient and family-centered care experience. This gift is a testament to the great work being done in Memphis.”

The Methodist University Hospital Transplant Institute has been recognized for its success with kidney, liver, kidney-pancreas and pancreas transplants, ranking among the top 10 liver transplant programs and top 15 overall transplant programs (by volume) in the nation. The Transplant Institute is known for its innovative steroid-free liver transplantation. The program offers hope to patients with conditions such as kidney failure and end-stage liver diseases. More than 6,000 transplants have been performed at the Institute, more than 1,000 liver transplants and 1,000 kidney transplants have been performed at Methodist UT Hospital and Le Bonheur Children’s Hospital under Dr. Eason’s leadership since 2006.
Mild traumatic brain injury is a common occurrence that can happen in many types of activities—from leisure sports to military combat. It can cause emotional and cognitive deficits, such as depression and fearfulness, which can last for a short period of time, but often last months and sometimes years. There currently is no cure, in part because what exactly happens to the brain after a traumatic event is poorly understood. However, this may soon change, thanks to a new study being conducted by Detlef Heck, PhD, and his research team.

An associate professor in the Department of Anatomy and Neurobiology, Dr. Heck has received a grant totaling $418,000 from the National Institute of Neurological Disorders and Stroke, a subsidiary of the National Institutes of Health, to study in greater detail which areas of the brain are affected and whether their inability to synchronize and communicate can explain the psychological consequences of traumatic brain injury.

The award will be used to support a project titled, “Effects of Traumatic Brain Injury on Temporal Dynamics of Brain Activity and Learning.”

The research will use a new approach to studying mild traumatic brain injury that Dr. Heck developed working with Anton Reiner, PhD, professor in the Department of Anatomy and Neurobiology; Yu Liu, PhD, assistant professor in the Department of Anatomy and Neurobiology; Scott Heldt, PhD, assistant professor in the Department of Anatomy and Neurobiology; and Bob Moore, PhD, professor in the Department of Pharmaceutical Sciences. It involves measuring how well different areas of the brain communicate with each other.

A $418,000 grant will allow Dr. Detlef Heck (center), pictured with Dr. Anton Reiner (left) and Dr. Bob Moore (right), to explore treatment options for mild traumatic brain injury.

Restoring the Rhythm of the Brain

The brain constantly generates rhythmic electrical activity that can be measured. The rhythms of two areas in the brain become synchronized when they work together on the same problem, such as learning or analyzing a fearful stimulus. Previous research conducted by Dr. Liu shows that after traumatic injury, certain areas may no longer be properly synchronized. In particular, it was noted that the loss of synchrony in a mouse model after mild traumatic brain injury was prominent in areas of the brain that regulate mood and affect, especially in mice showing depression and fearfulness.

The same approach has also been successful in an Alzheimer’s project the researchers are conducting.

Dr. Moore has developed a drug that acts on specific receptors (cannabinoid type 2) in the brain without having an effect on mood or cognition. He and Dr. Reiner have already shown that one of Dr. Moore’s drugs can prevent some aspects of brain damage and behavioral effects from traumatic brain injury in mice. In the newly funded studies, the research team will be able to determine if this drug can also bring brain synchronization back to normal after mild traumatic brain injury.

“This project is a great example of how interdisciplinary and interdepartmental collaborations can bring exciting new perspectives to biomedical science,” said Dr. Heck. “Working on this project is particularly rewarding, as it may contribute to the development of improved diagnostic tools and a potential treatment for mild traumatic brain disorder.”

Addiction can be an overwhelming force, and the statistics it produces are daunting and disheartening. A 2012 report from the National Center on Addiction and Substance Abuse at Columbia University (CASA/Columbia) reveals that addiction and risky use of tobacco, alcohol and other drugs account for the largest preventable and most costly health problems facing the country—responsible for more than 20 percent of deaths in the United States, causing or contributing to more than 70 other conditions requiring medical care, and accounting for one-third of all hospital inpatient costs. The report also states that while 16 percent of the U.S. population suffers from addiction, 90 percent of them get no treatment at all.

Substance addictions are huge problems, but behaviors can also become addictions. Eating, gambling, internet use and a myriad of other activities can all become compulsive. The roots of addiction can be physical, psychological, or a combination of factors.

The problem addiction presents is complex and expansive, and we need a multifaceted and unified response to meet the challenge. For this reason, the College of Medicine is bringing its entire arsenal to bear—the four pillars of the UT Health San Antonio’s mission.
In the United States, the leading cause of preventable illness and death is substance abuse, most notably tobacco and alcohol. Yet most medical professionals are not sufficiently trained to diagnose or treat addiction.

The CASAColumbia report states that physicians routinely screen for a wide range of health problems such as high blood pressure or high cholesterol, but hardly ever screen for substance abuse or signs of addiction. They end up treating a long list of conditions, source of the problem.

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Understanding addiction requires future physicians to fully grasp the complexity of this condition and comprehend that physical, psychological and social interventions are all necessary to treat this disorder.

As is reflective of the conditions of substance abuse, dependency and addiction, our formal curriculum centers around the biological, psychosocial and pharmacological components of dependence and addiction, says Clint Snyder, PhD, MBA, senior associate dean for Medical Education and professor and chair of the Department of Medical Education.

“Understanding addiction requires future physicians to fully grasp the complexity of this condition and comprehend that physical, psychological and social interventions are all necessary to treat this disorder.”

Dr. Snyder says the COM’s curriculum takes a broad-based approach to how dependence and addiction manifest themselves.

“A long with the most common substances of use and abuse, namely alcohol and tobacco, we also address illicit drugs, prescription medications, eating and sexual addiction,” he says. “While psychologically and socially these addiction conditions may have many commonalities, it is important for future clinicians to understand the unique biological and physiological impacts on the body and the brain through which these conditions impact the person.”

The College of Medicine’s curriculum takes a multifaceted approach to training. For example, when confronting tobacco dependence and addiction, the students learn about the pharmacological approaches to smoking cessation and nicotine replacement. They observe and learn management of patients in withdrawal.

But medical students will need to approach dependence and addiction from the psychological and social perspectives as well. For instance, they are trained in Motivational Interviewing, an approach that helps clinicians focus on how ready individual patients are to make a change in their behavior. At the same time, medical students are introduced to environmental, social and community forces that may contribute to dependency and addictive behaviors.

From Hospital to Home

With regard to treatment, dependency and addiction disorders have seen a significant change in the past 30 years. Now, patients are only hospitalized for inpatient treatment in the most challenging of clinical situations. In most cases, psychiatrists were involved in the care of these patients. Now, the overwhelming majority of patients are cared for in the outpatient setting.

“Increasingly, primary care physicians, and especially those in family medicine, are taking responsibility for the care, management and treatment of addiction, even in serious cases of opiate addiction,” says Dr. Snyder. As another sign of change, he points out that one of the most common medications for opiate addiction, Suboxone, is commonly distributed and monitored by family medicine physicians.

Dr. Snyder says that licensed physicians may now enroll in substance abuse fellowships in primary care disciplines of family medicine and internal medicine. “This advanced training has been a very positive trend, as patients can have their addiction issues addressed in the context of their overall holistic health, taking into account other chronic conditions, social circumstances and community stressors.”

It has become clear that a team effort will be necessary to deal with the problem of addiction and dependence. Treatment, screening and detection that have traditionally been delegated to psychiatry will need to be required of all physicians and specialties. Dr. Snyder says, “We at UTHSC aim to have all of our medical school graduates able to detect and screen for substance use and abuse, dependency and addiction in their patients. Each of these graduates should be able to direct these patients to interventions most useful to their own situations, whether implemented by themselves or another health care provider.”

A Holistic Approach

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Expanding Care for an Expansive Problem

Daniel Sumrok, MD, director of the Center for Addiction Science, recently visited the White House to share what UTHSC is doing in the area of addiction medicine. Thanks to the Affordable Care Act, psychiatric and substance use disorders have expanded coverage, which is helping the medical community create behavioral solutions. UT’s progress in the area of addiction clinical care was showcased in an effort to rally members of the medical community to focus more on managing addiction. “The good news is that more universities are getting involved,” says Dr. Sumrok. “Already we have 36 universities across the country on board— that’s 10 more than last month.”

Reaching this point took Dr. Sumrok more than a decade. His passion for the field of addiction stems from his experience at his family practice in McKenzie, Tennessee, where he discovered that many of his patients suffered from substance use disorders. “Each of the Top 10 causes of death in the United States, which account for 80 percent of all U.S. deaths, are driven by, or have significant links to, a substance use disorder,” explains Dr. Sumrok. “I felt I needed to be well versed on addiction so that I could better treat my patients.”

Although Dr. Sumrok was making an impact in his practice, he knew more could be done. He approached the UTHSC College of Medicine about starting an addiction program, which happened to be in synergy with the university’s desire to enhance its clinical footprint and create a valuable service for patients.

The UTHSC Center for Addiction Science

Dr. Sumrok teamed up with Paul Hill, MD, assistant professor for the UTHSC Department of Psychiatry, to create the framework for the Center for Addiction Science and started the process to form an addiction medicine fellowship. Dr. Hill believed the Center for Addiction Science was a move in the right direction. “Having nontraditional medical staff interface with addiction patients through clinical care offers a great opportunity for the people of Memphis,” says Dr. Hill. “We will be able to better manage substance use and process disorders and coordinate a patient’s movement from one level of care to another.”

By training across disciplines, more medical practitioners will know how to identify and treat substance use and process addictions. Cooperation between basic science and clinical science is unusual in medical universities, but participating departments at UTHSC already include family medicine, psychiatry, general internal medicine, emergency medicine, and anesthesia.

The addition clinical care program will focus on the assessment of substance use and process (for example gambling or sex) disorders, referral to the appropriate level of treatment, detoxification and abstinence, harm reduction treatments, treatment of co-occurring psychiatric disorders, and collaboration and consultation with referring physicians and other agencies.

The Center for Addiction Science is partnering with a number of entities, including Acadia Healthcare, one of the largest providers of mental health services in the country, and Foundations Recovery Network, to create and enhance centers of excellence that address unmet community needs. Currently, addiction clinics have been set up in collaboration with the Behavioral Health Group (BHG), Delta Medical Center, The Veterans Administration, and St. Francis Hospital. Positive results can already be seen. For example, at BHG, the treatment of addicted pregnant mothers has resulted in the birth of more healthy babies.

In the coming months, stand-alone clinics for addiction care will be set up, including an outpatient clinic and inpatient treatment along with intensive outpatient and partial hospital programs. In July 2016, the Center for Addiction Science will be part of the first wave across the country to admit its initial fellows. “We will start with two fellows who will have the option for a one-year primarily clinical fellowship in preparation for American Board of Addiction Medicine certification or a two-year fellowship with opportunities to earn a Master’s Degree and participate in clinical research,” says Dr. Sumrok.

“Through the fellowship, the residents will be able to see addiction treatment in real time,” adds Dr. Hill. “This program will create a ripple effect of expertise, which will expand our ability to treat patients at all levels.”

Pending

Next – The Research Front
Tobacco: Smoking Out Solutions

Robert C. Klesges, PhD, MS, is a key player in the national and global stage in the field of research on smoking and public health. As a UTHSC professor, Dr. Klesges has been researching tobacco control and smoking cessation issues since the 1980s, contributing to seven Surgeon General's Reports on Smoking and Health, the principal investigator on five National Institutes of Health (NIH) Studies and one Department of Defense expertise that have tremendous growth potential. He is outstanding in every part of preventive and health care medicine, and so he identified pockets of areas that have a major impact on community health in the Mid-South and beyond.

"Basically, the dean recognized that there are limited resources to be able to be research-excellent in every part of preventive and health care medicine, and so he identified pockets of expertise that have tremendous growth potential in not only research but NIH funding possibilities," Dr. Klesges says. The primary mission of NIH is to reduce health-related problems that are preventable, particularly ones that affect the population in the community we serve," Dr. Klesges says. "We focus on the three largest modifiable risk factors for cardiovascular disease and cancer, and these in order are tobacco and tobacco products, obesity, and substance abuse, more specifically alcohol and alcohol abuse."

Dr. Klesges says the center started about three years ago, and has grown with the addition of Assistant Professor Rebecca Krukowski, PhD, followed by Assistant Professors Karen Derefinko, PhD, MS, and Melissa Little, PhD, and Professor Zoran Bursac, PhD, MPH.

"Basically, we’re a little unusual in the center in that we are at 96 percent research, but we do have that 10 percent service and teaching obligation," Dr. Klesges says, adding that this model reflects NIH funding initiatives. "The way we like to do the teaching and service is outreach to help translate what we’re learning in our research grants to practice."

The center is partnering with Methodist Le Bonheur Healthcare and West Cancer Center to implement and evaluate smoking cessation programs with cancer patients and survivors. In collaboration with Benny Weisler, MD, MBA, FACS, chief of the Division of Thoracic Surgery at UTHSC, the center has helped launch a smoking cessation program at Methodist UT Hospital and the West Cancer Center for those at risk for lung cancer who undergo low-dose CT screening, which has been shown to reduce cancer mortality. Developing an effective smoking cessation program for this group could further reduce mortality rates, and is an example of translating the research model into clinical use.

The center has a portfolio of six NIH grants, according to Dr. Klesges. Among other areas of focus are developing an intervention for gestational weight gain, and a phone intervention to reduce the prevalence of problem drinking.

"I won’t be writing grants and improving health promotion for another 100 years or another 50 years, so my role is to bring in the next generation of researchers who can do the research so they can get the funding, and so they, in turn, can provide needed services," Dr. Klesges says.

Alcohol: Use vs. Misuse

Dean Stern has tapped another veteran researcher to lead a center focused on alcohol use, or more accurately, misuse.

Alex Dopico, MD, PhD, distinguished professor and chair of the Department of Pharmacology in the College of Medicine, is working to set up a Research Center for Alcohol Use Disorders. Bringing together key researchers from different departments, Dr. Dopico plans to focus not on the chronic condition of alcoholism, but on alcohol misuse, which more often accounts for the tragic results, from car accidents or teenage binge drinking, that end up in area emergency rooms.

Dr. Dopico began laying the groundwork for the center last spring by leading the 2015 Frank M. Norfleet Forum for the Advancement of Health, which focused on “Populations Particularly Vulnerable to Alcohol Use Disorders.”

The event brought together local and national experts to explore alcohol misuse across the age spectrum, from the genetic level, to fetal alcohol syndrome, to teenage drinking, to alcohol use in the aging population.

Dr. Dopico plans not only to seek NIH funding for research, but to appeal to the local community, where the consequences of alcohol misuse are most evident, to help fund this center.

“We are proud of the research and clinical excellence in the College of Medicine at UTHSC;" Dean Stern says. “It is our plan to continue to leverage that for the benefit of community, national and global health.”

Next - The Public Service Front

Photo credit: By Peggy Reisser

Alex Dopico, MD, PhD

“It has become clear that the societal costs of alcohol intake are not dependent only on alcoholism, but also, and mainly, on alcohol misuse,” says Dr. Dopico. Having spent more than 20 years researching the effects of alcohol on the arteries in the brain, he believes UTHSC can carve out a unique position of expertise in research on alcohol use disorders.

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Next - The Public Service Front
n March 18, 2015, the community leaders who constitute the College of Medicine Advisory Board were presented with a plan for an initiative to help reduce the number of children who become embroiled in the juvenile justice system. Seventy percent of children in the system meet criteria for a mental health disorder. Often, it's not the severity of their crime, but a lack of appropriate community-based treatments, a condition that goes unrecognized, or a poorly coordinated service delivery system that lands them in court.

The plan was the result of a discussion at a previous board meeting regarding how the community could best make use of UTHSC’s capabilities – a real-world example of the College of Medicine collaborating with community partners to help deal with areas of critical need in Memphis and the Mid-South. The state is not adequately capturing the data needed to avoid the revolving door of juvenile incarceration,” says Tennessee Senate Majority Leader and Advisory Board member Mark Norris, “and it is not impacting the underlying causes of juvenile delinquency, which often stem from the neurological consequences of the toxic environments too many Tennessee children find themselves in today.”

The UTHSC Center for Health in Justice-Involved Youth

The plan was presented by Altha J. Stewart, MD, a psychiatric consultant, health care administrator and nationally recognized expert in public sector and minority issues in mental health care. An invited participant at the Historic 1999 White House Conference on Mental Health, Dr. Stewart is the recipient of numerous awards and honors. The subject was the creation of a UTHSC Center for Health in Justice-Involved Youth. When the idea was conceived, Dr. Stewart, a native Memphian, was the first choice to head the organization. Dean David Stern believed her experience as director of Systems Administrator of the Just Care Family Network made her the ideal candidate. In July, Shelby County and UTHSC worked out a unique publicprivate partnership. Dr. Stewart was employed part-time by the public defender’s office and part-time by the College of Medicine. She is now at UTHSC full-time. The Juvenile Court of Memphis and Shelby County has a variety of tools and resources to identify and treat youth with behavioral health issues within the system, but the system lacks the necessary coordination to translate effective interventions and programs into real-world solutions. The Center for Health in Justice-Involved Youth, in collaboration with the juvenile justice system, will divert eligible juveniles from the justice system into existing services provided by community partners or services and programs developed by the center and its clinical partners at the university and in the community. More and better programs are not the solution to the challenges of juvenile justice. Success requires a coordinated system that places the right youth into the right program for the right reasons.

The Addiction Factor

The center’s primary focus will be the general needs of justice-involved juveniles, but the population being dealt with has a high incidence of mental illness, and that includes substance abuse disorder. Problems of dependency are often a factor and will be one of the circumstances that will need to be dealt with.

“We are tasked with addressing both the needs of child and family. It’s a triage concept,” says Dr. Stewart. “People think of triage as a purely medical concept, when in fact, triage has a much broader meaning. A child does not exist outside the family unit, whether that’s biological, adopted, extended or foster. The child alone cannot be the focus of our intervention. If we don’t deal with the issues of that child within the context of that family, we are not really helping that child. Children are now exposed to drugs at an earlier age, everything from prenatal exposure to earlier use of various drugs. We know that because of the unique developmental challenges of children, the brain is developing. What we believe happens is that drugs make the brain development suppersensitive to changes and rewiring, some of which becomes irreversible as the child ages.” Dr. Stewart concludes, “If we don’t deal with addiction problems in childhood, we are likely producing irreversible as the child ages.” Dr. Stewart concludes, “If we don’t deal with addiction problems in childhood, we are likely producing irreversible as the child ages.” Dr. Stewart concludes, “If we don’t deal with addiction problems in childhood, we are likely producing irreversible as the child ages.” Dr. Stewart concludes, “If we don’t deal with addiction problems in childhood, we are likely producing irreversible as the child ages.” Dr. Stewart concludes, “If we don’t deal with addiction problems in childhood, we are likely producing irreversible as the child ages.” Dr. Stewart concludes, “If we don’t deal with addiction problems in childhood, we are likely producing irreversible as the child ages.” Dr. Stewart concludes, “If we don’t deal with addiction problems in childhood, we are likely producing irreversible as the child ages.” Dr. Stewart concludes, “If we don’t deal with addiction problems in childhood, we are likely producing irreversible as the child ages.” Dr. Stewart concludes, “If we don’t deal with addiction problems in childhood, we are likely producing irreversible as the child ages.” Dr. Stewart concludes, “If we don’t deal with addiction problems in childhood, we are likely producing irreversible as the child ages.” Dr. Stewart concludes, “If we don’t deal with addiction problems in childhood, we are likely producing irreversible as the child ages.” Dr. Stewart concludes, “If we don’t deal with addiction problems in childhood, we are likely producing irreversible as the child ages.”

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Dr. R. Lebron Cooper Appointed Chair of Anesthesiology in the College of Medicine

Dr. David Shibata Named Chair of Surgery for the College of Medicine

David M. Stern, MD, Robert Kaplan Executive Dean for the UTHSC College of Medicine and Vice Chancellor of Clinical Affairs, has named R. Lebron Cooper, MD, chair for the UTHSC Department of Anesthesiology. An alumnus of the UTHSC College of Medicine in Memphis, he will begin his new role on September 28. Dr. Cooper is assuming responsibilities previously held by John Zanella, Jr., MD, PhD, who retired from UTHSC in October. Dr. Zanella joined the department in 1979 and had served as its chair for more than 23 years. “Dr. Cooper has a tremendous depth of knowledge and experience in this field,” Dean Stern said. “We are gratified that he has agreed to bring his talent and skills back to Memphis. UT anesthesiologists provide high-quality services to both pediatric and adult patients in hospitals throughout our community. In addition, our faculty-clinicians provide rigorous training for medical students and residents who go on to serve patients across the Mid-South region.” Reporting directly to Dean Stern, as department chair Dr. Cooper will oversee research, education, and clinical care in Anesthesiology at Regional One Health, one of UTHSC’s core teaching hospital partners. Dean Stern has also charged him to re-establish the Anesthesiology Residency Program. Dr. Cooper joins UTHSC after most recently holding academic faculty and clinical appointments with two organizations over the past several years. For seven years, he was an Associate Professor of Clinical Anesthesiology at the University of Miami Leonard M. Miller School of Medicine, and an Associate Professor of Clinical Nurse Anesthesia at the University of Miami School of Nursing and Health Studies in Miami, Florida. While in Miami, Dr. Cooper served as Chief of Anesthesiology Clinical Operations, Medical Director for Perioperative Services, and Site Director for Cardiovascular and Thoracic Anesthesiology at the University of Miami Hospital. In 2013, he accepted the appointment as Director for Clinical Operations, Cardiac Catheterization and Electrophysiology Laboratories in the Center for Structural Heart Disease, Departments of Anesthesiology and Cardiology at Henry Ford Hospital, Detroit, Michigan. In 2014, he was appointed to the clinical faculty, at the academic rank of Professor of Anesthesiology at Wayne State University School of Medicine in Detroit. With some 25 years of hands-on health care expertise, Dr. Cooper has been included multiple times on the list of America’s Best Doctors. He has solid academic credentials at several colleges and universities, especially in teaching residents, fellows and students in the operating room. His work includes more than 80 lectures and mock oral exams, and more than 40 regional, national and international presentations to his credit, along with more than 100 peer-reviewed publications, book chapters, and abstracts. His research interests are in reducing errors and improving safety, practice, and improving quality and safe anesthesia patient care. He has served on several quality control boards and committees, and currently leads the Anesthesiology Quality Assurance and Process Improvement initiatives at Henry Ford Hospital. He has been honored with multiple news reports, awards and invited speaking engagements. Dr. Cooper has been an invited lecturer at several national and international medical society conferences, including American Society of Anesthesiologists, Florida Society of Anesthesiologists, Society of Cardiovascular Anesthesiologists, Thoracic Anesthesiology Symposium, Midwest Valve Symposium for Cardiologists and Surgeons, and American Society of Health-System Pharmacists. Dr. Cooper has served numerous times as a board or panel expert for both medical society and industry events with regional, national and international recognition. His involvement with peer-reviewed publication and service as an editorial board member for both the ISMP Newsletter and the Journal of Cardiology and Therapy, and he has been a peer reviewer for several anesthesiology journals for many years. An alumnus of the University of Tennessee College of Medicine, Dr. Cooper earned his MD at the UTHSC College of Medicine in Memphis, after completing an internship at Methodist Hospital and a residency in anesthesiology at Wayne University Medical Center in New Orleans, Louisiana. His training also included completion of a fellowship in cardiovascular anesthesiology at Texas Heart Institute/Texas Children’s Hospital in Houston. He holds a Bachelor of Business Administration from Middle Tennessee State University in Murfreesboro.

David M. Stern, MD, Robert Kaplan Executive Dean for the UTHSC College of Medicine and Vice Chancellor of Clinical Affairs, has named David Shibata, MD, the Scheinberg Endowed Chair of Surgery for the UTHSC Department of Surgery following a national search. In addition, Dr. Shibata will serve as a professor in the department. He will assume his new responsibilities on September 1, relocating to Memphis after 11 years living and working in Tampa, Florida. Most recently, Dr. Shibata was a Professor of Surgery and Oncology at the University of South Florida Morsani College of Medicine, plus Senior Member and Chief of the Section of Colorectal Oncology at the H. Lee Moffitt Cancer Center & Research Institute in Tampa. Dr. Shibata is assuming the role vacated by Timothy C. Fabian, MD, who, in January, announced his intention to step down after more than 15 years as chair for the UTHSC Department of Surgery. Dr. Shibata will immediately assume the responsibilities of a professor in the department, fulfilling his ongoing academic, clinical, and research activities. “Dr. Shibata brings a powerful combination of clinical, academic, research and leadership skills to this position,” Dean Stern said. “He has proven expertise at organizing important initiatives, meeting institutional goals, and identifying talent. Couple these attributes with his ability to build solid relationships, fulfill responsibilities, and you have an outstanding choice for the next Surgery chair.” Reporting directly to Dr. Stern, Dr. Shibata’s responsibilities as chair will include supervision of approximately 50 faculty members and 50 residents participating in research, education and clinical services at affiliated hospitals that include Methodist UT Hospital, Baptist Memorial Hospital, Regional One Health, St. Francis Hospital, Le Bonheur Children’s Hospital, St. Jude Children’s Research Hospital and the Veteran’s Administration Medical Center. The divisions within the Department of Surgery include general surgery, surgical oncology, thoracic surgery, pediatric surgery, transplant surgery, trauma/surgical critical care, cardiac surgery, minimally invasive surgery, and vascular surgery.Working in tandem with UTHSC leaders, the new Surgery chair will develop and execute a strategic plan, lead a comprehensive surgical clinical service, lead a clinical and basic science research program, and provide a strong approach towards growth and enhanced excellence within the department. Through recruitment, hiring, retention, development and support of outstanding faculty and staff, Dr. Shibata will strive to strengthen and enhance the department’s academic, research and clinical excellence. With more than 24 years of experience, Dr. Shibata has held academic appointments and been employed at several world-renowned institutions including Beth Israel Deaconess Medical Center and Harvard Medical School in Boston, Massachusetts, where he completed his residency in General Surgery and a research fellowship in Cancer Biology; Memorial Sloan Kettering Cancer Center in New York, New York, where he completed a clinical fellowship in Surgical Oncology, and the University of Maryland School of Medicine in Baltimore, Maryland, where he was Assistant Professor of Surgery. Dr. Shibata is an internationally recognized authority in the multidisciplinary management of colorectal cancer and, in particular, brings significant expertise in minimally invasive and robot-assisted surgical approaches. At Moffitt Cancer Center, he served as Medical Director of both the Colorectal Cancer Survivorship and Hereditary and High Risk Colorectal Cancer Clinics. He is consistently listed among “America’s Top Doctors” and the “Best Doctors in America.” In addition, Dr. Shibata serves as a member of the National Comprehensive Cancer Network (NCCN) guidelines panel for colon and rectal cancer, as well as the Lower GI Expert Panel for the American Joint Commission on Cancer. He has served on the Executive Council of the Society of Surgical Oncology and holds numerous committee appointments in multiple national surgical societies. An accomplished clinical, translational and laboratory research investigator, Dr. Shibata has published more than 100 peer reviewed publications, reviews and book chapters. To date he has served as principal investigator or co-investigator on grants and awards, including those from the National Institutes of Health, totaling more than $10 million. Dr. Shibata brings substantial experience as a medical educator, having served for a decade as the Associate Program Director for Moffitt Cancer Center’s Surgical Oncology Fellowship and the Site Director for the University of South Florida College of Medicine’s General Surgery residency. While at Moffitt, he was the recipient of multiple teaching and mentorship awards. Co-chairing the search committee that recruited Dr. Shibata were Lee S. Schwartzberg, MD, FACPS, division chief of Hematology at UTHSC, and Medical Director, the West Campus; Robert E. Shibata, MD, professor and vice chair in the UTHSC Department of Otolaryngology (Head and Neck Surgery), and division chief for Head and Neck Surgery. An external search firm that specializes in health care leadership assisted the committee.
Steven R. Goodman, PhD, Appointed Vice Chancellor for Research

Steve J. Schwab, MD, UTHSC chancellor, has named Steven R. Goodman, PhD, vice chancellor for Research. Dr. Goodman arrives at UTHSC from the SUNY (State University of New York) Upstate Medical University where he was the former vice president for Research, dean of the College of Graduate Studies, and professor in both the Department of Biochemistry and Molecular Biology, and the Department of Pediatrics. As the vice chancellor for Research, Dr. Goodman reports directly to the chancellor and his impact will extend throughout UTHSC and all its statewide campuses. He assumed his new responsibilities Aug. 1.

“We are pleased to welcome Dr. Goodman to our campus. He will play a central role in managing, maximizing and expanding our institution’s research portfolio,” said Chancellor Schwab. “Each year, our faculty and staff receive, on average, nearly $100 million in research funding from federal institutions and private foundations. Through vision, collaboration and innovation, we anticipate Dr. Goodman will increase that funding to significantly higher levels.”

The vice chancellor for Research is charged with building strong teams of scientists who will accelerate the growth of research in all UTHSC colleges and all major locations. He will direct the development and implementation of UTHSC’s comprehensive research strategy in keeping with its mission to move into the ranks of the top biomedical research institutions across the country for creating innovative research opportunities and a state-of-the-art infrastructure to meet the needs of our researchers, positioning them to compete successfully for extramural funding. Dr. Goodman will represent UTHSC to external funding organizations, government agencies and partner institutions; advocate for research and related activities to lay audiences; and administer all facets of our growing research program.

Additionally, Dr. Goodman will be responsible for the research infrastructure, ensuring the highest level of research productivity and performance efficiency of the centrally funded support units; developing and implementing strategies to continuously improve the infrastructure and services provided by central administration; and leading, managing and holding institutional responsibility for the research infrastructure and services. Plus, Dr. Goodman will advise the chancellor on matters of university research policy, vision, strategic planning and long-range budgeting. He will work closely and collaboratively with the university’s deans to integrate the research and educational missions of UTHSC. He will also work closely with the University of Tennessee Research Foundation (UTRF) to facilitate the discovery, protection and commercialization of intellectual property.

Dr. Goodman has served as chair of the School of Medicine; center director; director of the Comprehensive Sickle Cell Center at the University of North Carolina at Chapel Hill; professor of hematology and medicine; professor of medicine and director of the Comprehensive Sickle Cell Disease Center at the University of Texas at Dallas; and professor of biostatistics at the University of New Mexico. He previously served as chair of the Department of Pediatrics at SUNY Upstate Medical University.

Dr. Goodman is a member of the American Association for the Advancement of Science, the American Medical Association, the American Society for Clinical Investigation, the American Society for Hematology, the American Society of Hematology, the American Society of Human Genetics, the American Society of Human Genetics, and the Association of American Physicians. He has also served as chair of the Board of Directors of the American Society of Human Genetics. Dr. Goodman is a member of the editorial boards of several scientific journals, including Blood, The American Journal of Hematology, and the Journal of the American Medical Association. He has served on the editorial board of the Journal of Hematology and Oncology.

Lori S. Gonzalez, PhD, Appointed Vice Chancellor of Academic, Faculty and Student Affairs

Steve J. Schwab, MD, UTHSC chancellor, has named Lori S. Gonzalez, PhD, vice chancellor of Academic, Faculty and Student Affairs. Dr. Gonzalez joins UTHSC from the University of North Carolina General Administration, the North Carolina higher education authority, where she served as special advisor to the chief academic officer. As the chief academic officer of UTHSC and its statewide campuses, Dr. Gonzalez reports directly to the chancellor. She assumed her new responsibilities on July 1.

"With more than 27 years of experience in higher education at the universitywide, division, department and college levels, Dr. Gonzalez brings a wealth of experience and insight to this position," said Dr. Schwab. "We look forward to the many contributions she is sure to make to our statewide campus community.”

The vice chancellor of Academic, Faculty and Student Affairs is responsible for setting policy and procedure for all academic programs as well as for the development and execution of strategic initiatives to promote these programs. Her office will be responsible for the vision, leadership, policy, and monitoring of academic, faculty and student affairs for UTHSC. Vigorous advocacy for the academic programs and the intellectual life of the university community is essential. Dr. Gonzalez will work closely with the deans and other vice chancellors to set academic priorities and to allocate funds to move these priorities forward. She will collaborate with the deans and lead academic planning; policy, curriculum, and program development efforts; provide for meaningful faculty and academic staff development activities; and establish academic budgeting priorities. In this role, Dr. Gonzalez will also serve as the primary academic officer for the interface with the Faculty Senate and academic officers in all colleges.

Before joining the University of North Carolina in October 2014, Dr. Gonzalez served for three years as provost and executive vice chancellor at Appalachian State University in North Carolina. Before that, she spent 28 years at the University of Kentucky, taking on roles that grew in both levels of responsibility and leadership including assistant professor, associate professor, associate dean for Academic Affairs, and then dean and professor for the College of Health Sciences. Her first 11 years in academia included varied teaching, research and clinical roles that laid the foundation for her successful forays into her expanded teaching and administration positions.

She has extensive experience as a public speaker, has given more than 25 invited presentations, and has produced or contributed to some 140 refereed presentations, abstracts, book chapters and peer-reviewed articles. Dr. Gonzalez holds a BA with High Distinction in Biological Sciences and Physics from the University of Kentucky, and an MA in Education from Appalachian State University. She completed her PhD in education authority, special advisor to the president of Appalachian State University, and then vice chancellor for Academic Affairs. She has served as chair of the Faculty Senate and the interface with the Faculty Senate and academic officers in all colleges.

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Margaret Rhea Seddon, MD, alumna of the UTHSC College of Medicine ('73), was inducted into the Astronaut Hall of Fame on May 30, 2015, in a public ceremony held at the Kennedy Space Center Visitor Complex in Cape Canaveral, Florida.

One of NASA’s first female astronauts, Dr. Seddon joined the ranks of well-known space explorers including Alan Shepard, Neil Armstrong and Buzz Aldrin. This year marks the historic 25th anniversary of the Hall of Fame, which was conceived in the 1980s by the six remaining Mercury astronauts as a place where space explorers could be remembered. Past Hall of Fame inductees include Mercury, Gemini, Apollo, Skylab and Space Shuttle astronauts.

Dr. Seddon, a three-time space shuttle astronaut, has spent a total of 30 days in space. She was selected by NASA in 1978 as one of the first six women to enter the astronaut program. On her final flight, STS-58/Columbia, Dr. Seddon was payload commander in charge of all science activities. This life science research flight is recognized by NASA as the most successful and efficient Spacelab mission ever flown.

From 1986 until 2007, Dr. Seddon served as assistant chief medical officer at Vanderbilt University Medical Center in Nashville. Since 2007, she has been a co-owner of LifeWings Partners, LLC, providing health care institutions across the country with support and guidance on leadership and patient safety. Her memoir, Go For Orbit, was published in late May.

The United States Astronaut Hall of Fame opened in 1990 in Titusville, Florida, outside the gates to Kennedy Space Center. Today, the Astronaut Scholarship Foundation (ASF) serves as a consultant for the Hall of Fame, which includes conducting the selection process of astronauts for enshrinement by an outside committee. The Astronaut Scholarship Foundation awards merit-based scholarships to the best and brightest students pursuing science, technology, engineering and math. Since its inception, ASF has awarded over $4 million in scholarships to more than 370 of the nation’s top scholars.

The University of Tennessee College of Medicine Alumni Association has selected James B. Dale, MD '77; B. Mark Evers, MD '83; and Robert M. Herndon, MD '58, as the 2015 recipients of the Outstanding Alumnus Award. The Alumni Association's highest honor is presented in recognition of their contributions to their alma mater and the medical profession.

James B. Dale, MD '77

Growing up in Norris, Tennessee, Jim Dale dreamed of becoming a firefighter until age 16, when he took a job as an orderly at a hospital in Lake City (now named Rocky Top). The 40-bed hospital was run by John Burrell, MD '60, and Curtiss Sexton, MD '62. While Burrell and Sexton were supportive of Dale's career goals, he credits two of the hospital's senior nurses for providing him with his true inspiration: "They had seen it all and taught me a tremendous amount about people, health, disease and compassionate care," Dale explained.

Dale received his bachelor's in zoology from the University of Tennessee, Knoxville in 1973. Following graduation, he served as senior research technician at UT Hospital and Research Center in Knoxville before graduating from the College of Medicine. Dale calls his time as a research technician the most meaningful detour of his career: "I loved it. To complete some projects and papers, I deferred medical school for six months. This initial experience set the stage for a lifelong interest in medical research," he said.

Following an internship at Parkland Memorial Hospital in Dallas, Texas, a residency at City of Hope in Duarte, California; Johns Hopkins Hospital and School of Medicine; University of Rochester; and Good Samaritan Hospital and School of Medicine in Portland, Oregon, Evers applied for the Berry Plan, which deferred him for specialty training and guaranteed they would use him in his specialty. His dream trip is to The Masters in Augusta, Georgia. Evers calls his fellowship at UTMB the most meaningful detour in his career. Galveston was his first destination west of the Mississippi, and it was the farthest he had ever been from his family: "This time served as the basis for an academic career in surgery which has been extremely rewarding and gratifying," Dr. Evers said. By the time he left UTMB, he had risen through the ranks to professor and Deputy Chair in Gastrointestinal and Hepato-Biliary Surgery. He then served as Chair in General Surgery and the director of the Sealy Center for Cancer Cell Biology.

In May 2009, Dr. Evers was recruited to the University of Kentucky as director of the Lucille P. Markey Cancer Center, professor and chair in the Department of Surgery, and director of the Oncology Service Line for UK HealthCare. He led the efforts for the Markey Cancer Center to achieve National Cancer Institute designation in 2013 (the only NCI-designated cancer center in Kentucky), a crowning achievement for the institution and the region.

Throughout his career, Dr. Evers has authored more than 600 peer-reviewed publications and abstracts and more than 70 reviews and book chapters. His research has been continuously funded from the NIH for 23 years. A highly-respected teacher, he has mentored more than 70 students, residents, fellows, housestaff, and junior faculty, many of whom are now faculty at various institutions across the country with active independent research laboratories. Dr. Evers also maintains his own active clinical practice that deals with surgical problems related to GI oncology, endocarcinoma and soft tissue tumors.

This die-hard Rolling Stones fan aspires to climb Mount Kilimanjaro. Dr. Evers says his family grounds him, so it's no surprise that his proudest personal accomplishments are his 30-year marriage to his wife, Karen, and his two children, Lauren and Ben.

Robert M. Herndon, MD '58

Robert Herndon always knew he would pursue a career in the physical sciences as a child in Buffalo, New York and East Tennessee, but he acknowledges his brother for providing the focus for the rest of professional life. "While in my second year of college [at the University of Chicago], my brother gave me a book on the brain and from that time on, I wanted to study the brain," he said.

Herndon received his bachelor's degree in liberal arts from the University of Chicago. He credits Mary Todd, a family friend and nurse, with her interest in pursuing medical school to get a foundation in neuroanatomy, biochemistry, physiology and pharmacology. Although Herndon deferred from medical school with honors, he had no intention of practicing medicine, but he decided to finish rather than just take the first two years, before going for a PhD in neurophysiology at the University of Chicago. As fate would have it, he got drafted. With the idea of being able to continue his study of the brain, Herndon applied for the Berry Plan, which deferred him for specialty training and guaranteed they would use him in his specialty.

Herndon did his internship and residency in neurology at Wayne State University School of Medicine, a research fellowship in neurology at the Montreal Neurological Institute and a research fellowship in anatomy at Harvard Medical School. During his service in the United States Air Force, Herndon served as a neurologist, eventually becoming chief of neurology, at Travis Air Force Base in Fairfield, California.

Before joining the neurology department at University of Mississippi Medical Center and the Veterans Administration Medical Center in Jackson, Herndon held faculty and clinical appointments at Veteran's Administration Hospital and Stanford University in Palo Alto, California; Johns Hopkins Hospital and School of Medicine, University of Rochester; and Good Samaritan Hospital and Medical Center and The Oregon Health Sciences University in Portland.

An expert in the field of neurology, Herndon has participated in grand rounds across the country. He has also authored or co-authored almost 200 peer reviewed publications, books, book chapters, journal review articles, editorials, abstracts and commentaries. His research is focused on the treatment of Parkinson's disease and multiple sclerosis is very impressive as well. In fact, his proudest accomplishment is related to his multiple sclerosis research. "Probably it [my proudest accomplishment] is my role in designing the original intra-spinal trial of interferon for multiple sclerosis; insisting that it be a controlled trial. This led to the development of interferon as the first treatment for MS," Herndon explained.

Having never finished high school, Herndon has definitely made his mark in the field of neurology and helped improve the quality of life for people battling diseases of the brain. He hopes to venture to Australia and New Zealand on a wildlife photography trip - with classical music playing in the background.
Join your fellow alumni in Memphis to reminisce about your days in school and learn about the exciting things happening in the College of Medicine and on the Health Science Center campus. Whether you are looking for continuing medical education courses, opportunities to interact with current students or the chance to catch up with old friends, Medicine Alumni Weekend is the event for you!

Don't miss this opportunity to celebrate the accomplishments of your fellow alumni!

**Things to Do:**
- Outstanding Alumni Awards Dinner •
  honoring Martin A. Croce, MD; Paul J. Huffman, MD; John C. Jennings, MD; and William H. Woods, MD
- UTHSC Surgical Oncology Annual Cancer Symposium •
- UT Health Science Center Campus Tour •
- Class Social & Recognition Dinner at the Memphis Zoo •

Should you have any questions or if you are interested in chairing your class reunion, contact Chandra Tuggle at (901) 448-5042 or ctuggle@utfi.org. The UT Health Science Center Office of Development & Alumni Affairs hopes you will make every effort to join us in Memphis in August for this Grand Celebration.
Claire Pendergrass has wanted to be a doctor for as long as she can remember. As she begins her journey through medical school, she is excited to be working toward that dream in her hometown of Memphis. Claire says she will likely stay in the area to treat patients in her own community.

"Seeing my dad interact with his patients, how much they loved him, and how much he impacted them really inspired me to want to be a doctor," Claire says.

Claire's parents graduated from UTHSC—mother Donna (Hedrick) with her MD in 1987 and father Landon with his MD in 1986. Landon has been a pediatrician in Memphis ever since. While both have been supportive of her decision, Claire says she never felt pressured to pursue medicine.

"They've always been there to give me a push and tell me they were proud of me," she says.

The latest push toward her dream came unexpectedly when she received the Legacy Scholarship, awarded by the University of Tennessee Alumni Association to incoming students with parents or grandparents who hold degrees from any campus in the UT system. Claire is the 2015 Legacy Scholar for the College of Medicine.

"I'm so grateful because the cost of education is getting so high, and it's difficult to think about how much debt you'll have," Claire says. "[Having scholarship support] helps you relax and not focus so much on the cost."

This type of support, as well as the moral support from her family, is critical to anyone entering medical school. As College of Medicine alumni, Landon and Donna know firsthand the challenges Claire will face.

"They've given me a lot of advice and let me know that it's going to be hard, but it will be well worth it in the end," Claire says.

She draws tremendous confidence from their encouragement.

Beyond Excellence in Medical Education

Medical students at the University of Tennessee Health Science Center already are exposed to a highly immersive clinical training environment. Just as clinical care advances with the use of new tools, so does education, and the College of Medicine must keep pace with advancements to ensure the UT physician can meet the needs of their patients and collaborate with members of their care teams.

Help us build on current, unprecedented momentum to take our training capabilities to a new standard by supporting new technologies. By meeting this challenge, we can set the standard for medical education.

Ultrasound Simulators, aka the Stethoscopes of the Future, are emerging as a necessity to training, bringing an important new approach to teaching and helping refine auscultatory skills by confirming or refuting suspected findings.

• Portable Ultrasounds for internal and emergency medicine clerkships
• Ultrasound Certification for someone at each training site
• Travel for training, scholarship and conferences
• Virtual Cases for Assessment of third-year students

TIMELINE FOR SIMULATION AT UTHSC

• Simulation training began at UTHSC in 1999
• Robert J. Kaplan Simulation Center opened in 2005
• Department of Medical Education formed in 2013
• Renowned Medical Education leader Clint Snyder, PhD, MBA, hired as program director in 2014
• 45,000 square-foot Multi-Disciplinary Simulation Building opening 2016

For more information on how you can support our efforts in medical education, contact Zach Pretzer, Director of Development at the College of Medicine, at zach.pretzer@uthsc.edu (901) 448-4975.

Legacy Scholar
Claire Pendergrass

The latest push toward her dream came unexpectedly when she received the Legacy Scholarship, awarded by the University of Tennessee Alumni Association to incoming students with parents or grandparents who hold degrees from any campus in the UT system. Claire is the 2015 Legacy Scholar for the College of Medicine.

Beyond Excellence in Medical Education

"We need to help our learners apply information, not just recall it... We need the support of our alumni community to help us move our education model to the next level."

Clint Snyder, PhD, MBA, Senior Associate Dean and Chair, Department of Medical Education

For more information on how you can support our efforts in medical education, contact Zach Pretzer, Director of Development at the College of Medicine, at zach.pretzer@uthsc.edu (901) 448-4975.
October 14-16, 2015
Golden Graduates Honoring the Class of 1965

Thank you to our Golden Graduates who were able to attend the 2015 event October 14-16!

We hope you can join us again in 2016...
Once a Golden Graduate, always a Golden Graduate.

Photos from the 2015 Golden Graduates event can be found in Vital Signs at www.uthscalumni.com/2015gg.

MARCH QUARTER
(back row left to right) Dr. John Vanderpool; Dr. John Crockarell, Sr.; Dr. James Geeslin; Dr. Jack Williams; Dr. Jim Clifton; Dr. James Herron; Dr. F. Edward Silvers; Dr. Keith Van Epps
(front row left to right) Dr. Nicholas Sutton, Jr.; Dr. Charles Norton; Dr. Patricia Davis; Dr. Charles Darby; Dr. Gary Sessions

JUNE QUARTER
(back row left to right) Dr. John Buchignani; Dr. John Downs; Dr. Walter Allison; Dr. William Marioncheck
(front row left to right) Dr. Gene Allford; Dr. Thomas Wood; Dr. Philip Lieberman

SEPTEMBER QUARTER
(back row left to right) Dr. Jo Sweet; Dr. John Glover; Dr. Joel Grossman
(front row left to right) Dr. James Fancher, Jr.; Dr. James Key, Sr.; Dr. Lanny Harris

DECEMBER QUARTER
(back row left to right) Dr. Jerald Duncan; Dr. Paul Jackson, Jr.; Dr. Victor McLaughlin; Dr. Edwin Rother; Dr. Frank Sutton; Dr. Kenneth Allum, Jr.; Dr. Jerry Campbell; Dr. Samuel Weber; Dr. Eldred Eyster; Dr. Joseph Wolfe
(front row left to right) Dr. Hugh Brown; Dr. Benjamin Pike; Dr. Leonard Crawford; Dr. Charles Kingston; Dr. Richard Drewry

We are planning the following events just for you:

• Dinner at the Rendezvous
• College Open Houses
• Breakfast with Chancellor Schwab
• Golden Graduate Ceremony and Dinner

All class years prior to 1966 are invited to attend. Once a Golden Graduate, always a Golden Graduate.

Please watch your mailbox for a detailed event brochure. Call (901) 448-5516 or visit uthscalumni.com for more information.

You’re Invited to the 2016 Golden Graduate Homecoming
October 19-21, 2016
Memphis, TN
Honoring Graduates of 1966 from all six UTHSC Colleges
Where would you be without UTHSC?

Dana Latour, MD ’77, Res ’81
Hometown: Old Hickory, Tennessee
Family: husband Paul, MD ’77, Res ’80, daughters Elizabeth and Tricia
Hobbies: Travel, boating

What is your favorite memory as a UT student?
I met my husband, Paul, there, and my family encountered a wonderful couple named Jenny and Bill Fulmer, who became close friends and surrogate grandparents to my children. I would not have made it through medical school without them.

Why did you select UTHSC COM?
I received my master’s from the University of Memphis and was working at Shelby State when I decided to pursue medical school. It was a natural choice to enter the program at UTHSC.

What are some of the highlights of your professional career?
Just after I finished my residency training, I was invited to join Rex Amonette’s practice in Memphis. It was a successful practice from the start, and it was a great experience for me. When Paul finished his nephrology residency a year later, he found a position in Nashville, so we relocated. Eventually, he joined my practice at Franklin Dermatology/ Latour Skin Care.

How have you volunteered?
I have mentored residents and those entering practice and have been so impressed to see how quickly they dive in to hands-on care, especially compared to some other programs. I also give consistently to the Department of Dermatology as a show of gratitude for all it has done for my life.

What is your advice to other UT Alumni about getting involved?
It is important to provide mentorship and support to future physicians. When I think about my time as a student, there were so many who made my success possible – notably Dr. Marion Dugdale and Dr. Lloyd King – and I think we should pay that experience forward.

Where would you be without UTHSC?
My life would truly be different. The support system I had as a student was the key to my career. My experience there really laid the foundation for our lives.
Tennessee Medical Association Honors Two UTHSC Doctors with Outstanding Physician Awards

Dr. James Eason

James Eason, MD, FACS, professor and chair of the Division of Transplant Surgery in the UTHSC College of Medicine and medical director of the Methodist University Hospital Transplant Institute, received an Outstanding Physician Award from the Tennessee Medical Association (TMA) at its recent annual convention in Nashville.

Dr. Eason moved to Memphis from New Orleans after Hurricane Katrina to become director of the transplant institute. His leadership helped transform the institute into one of the best programs in the country for liver and kidney transplants. In just nine months after he joined the program, it became one of the 10 largest liver transplant centers in the nation.

“I am very honored to receive this award and feel it is a testament to the extraordinary team I have been able to build with the support of Methodist Le Bonheur Healthcare and the University of Tennessee,” Dr. Eason said.

In 2011, Dr. Eason was appointed as program director of the University of Tennessee College of Medicine at the University of Tennessee Center for the Study of Aging.

Dr. J. Mack Worthington

The TMA also honored J. Mack Worthington, MD, FAAPP, professor and chair of Family Medicine in the UTHSC College of Medicine, Chattanooga, with an Outstanding Physician Award.

Dr. Worthington has practiced family medicine for more than 30 years. He has served as president of the Memphis-Shelby County Family Physicians, president of the Tennessee Academy of Family Physicians, president of the Chattanooga-Hamilton Medical Society, and president of the TMA.

Dr. Worthington is actively involved in the teaching at UTHSC. Besides chairing the Department of Family Medicine in Chattanooga, he serves as program director for Geriatric Medicine and clerkship director.

“I was both surprised and honored to have been selected for this award,” Dr. Worthington said. “I am thankful for my family and those in my practice who have allowed me to participate with the Tennessee Medical Association to improve the medical care for our patients and make the medical profession more enjoyable for physicians in Tennessee.”

Tennessee Chapter of American Institutes of Architects Honors UT President Emeritus Joe Johnson

The Samuel Morgan Lifetime Award for Contribution to Architecture in the Public Realm was presented to former University of Tennessee President Joseph E. "Joe" Johnson by the Tennessee chapter of the American Institutes of Architects, honoring him as a lifetime contributor to the profession and practice of architecture.

Johnson, who served as UT president from 1990-99 and now serves as president emeritus, serves on the UT Knoxville College of Architecture Department of Advisors and is a member of the Community Design Center in Knoxville.

Dr. Gerald Jenkins Appointed Interim Chief of Pediatric Urology at Le Bonheur

Dr. J. Mack Worthington

Gerald Jenkins, MD, has been appointed to the position of Interim Chief of Pediatric Urology at Le Bonheur Children’s Hospital. Dr. Jenkins is also an associate professor in the UTHSC College of Medicine Department of Urology.

Dr. Claudette Shephard, Selected as a 2015 Top Doctor by Memphis Magazine

Claudette Shephard, MD, an associate professor in the UTHSC Department of Obstetrics and Gynecology, has been named by Memphis Magazine as one of its Top Docs for 2015.

Dr. Shephard is the only fellowship-trained Adolescent Gynecologist in the region. Under her direction, the Pediatric and Adolescent Clinic provides comprehensive gynecologic services to girls and young women in Memphis.

Dr. ‘Hank’ Herrod Receives 2015 Methodist Healthcare Foundation Living Award

Henry G. "Hank" Herrod, MD, was honored with a “Physician Inspiration in Faith & Health” award at Methodist Le Bonheur Healthcare’s Living Awards Benefit Aug. 13.

Dr. Herrod occupied the Le Bonheur Endowed Chair in Pediatrics, served as Vice Chairman of the Department of Pediatrics at the University of Tennessee, Memphis, and as Senior Vice President for Medical Affairs at Methodist/Le Bonheur until 1998, when he assumed the role of Dean of the College of Medicine at the University of Tennessee Center for the Health Sciences, a position he held until 2005. Dr. Herrod has published more than 200 articles, abstracts, and book chapters. In 2009, he left the University of Tennessee and is currently a Fellow at The Urban Child Institute in Memphis.

The Living Awards recognize individuals or organizations that have distinguished themselves by their leadership and commitment to the healing mission of Methodist Le Bonheur Healthcare and to whose faith-based initiatives have had a profound impact on health care locally, nationally and globally.

Dr. Rick Boop Named President-Elect of the American Association of Neurological Surgeons

F ederick A. Boop, MD, FAANS, has been named president-elect of the American Association of Neurological Surgeons (AANS) and will serve on 2015-2016 Executive Committee. His appointment was announced during the 83rd AANS Annual Scientific Meeting in Washington, D.C.

Named one of America’s top doctors by the U.S. News and World Report in 2012, Dr. Boop is currently a professor and chair of the department of neurosurgery at UTHSC, and co-director of Le Bonheur Children’s Hospital’s Neuroscience Institute.

Dr. Boop’s other professional memberships include the American Board of Neurological Surgery, the American Board of Pediatric Neurological Surgery, the International Society of Pediatric Neurosurgeons and NeurosurgeryFAC, for which he is a past-president. In 2010, he received the Endowed Chair of Pediatric Neurosurgery at St. Jude’s Children’s Research Hospital.

Memphis Business Journal 2015 Health Care Heroes

Two longtime UTHSC physicians received Memphis Business Journal 2015 Health Care Heroes Awards. Barrett Haik, MD, FACS, won the Lifetime Achievement Award. Samuel Daggojo-Jack, MD, received the top award in the Health Care Provider – Physician category.

Health Care Provider - Physician Award

Dr. Samuel Daggojo-Jack

Dr. Daggojo-Jack is an internationally known figure in the field of diabetes education, treatment and research. In addition to his duties at UTHSC, he was the 2015 president, Medicine and Science, for the American Diabetes Association, working on the national and international stage as a leader in the fight against the disease.

Dr. Daggojo-Jack was selected as the Internal Medicine Section Physician of the Year in 2013 by the National Medical Association, the nation’s oldest and largest organization representing African-American physicians and health professionals. He serves on the World Health Organization’s Strategic Planning Committee on Diabetes Mellitus. He is the Hamilton Professor of Ophthalmology and director of the UT Hamilton Eye Institute at UTHSC.

The Hamilton Eye Institute opened in 2004 under Dr. Haik’s leadership and has since been recognized as among the top 10 eye clinics in the nation.

Dr. Haik also developed an ocular oncology center at St. Jude Children’s Research Hospital. He has been extremely successful in academia. Dr. Haik has served in leadership roles for more than 60 organizations and professional medical societies, served as editor or reviewer for 17 publications and has authored or co-authored more than 160 peer-reviewed journal articles, 55 book chapters and four books.

The Health Care Heroes Awards salutes companies, individuals and organizations for their contributions to improving health care in Memphis and the Mid-South.

Dr. Samuel Daggojo-Jack and wife Dr. Alogua Daggojo-Jack

Dr. Barrett Haik

Dr. Barrett Haik is the Hamilton Professor of Ophthalmology and director of the UT Hamilton Eye Institute at UTHSC. He serves on the World Health Organization’s Strategic Planning Committee on Diabetes Mellitus. He has been extremely successful in academia. Dr. Haik has served in leadership roles for more than 60 organizations and professional medical societies, served as editor or reviewer for 17 publications and has authored or co-authored more than 160 peer-reviewed journal articles, 55 book chapters and four books.

The Health Care Heroes Awards salutes companies, individuals and organizations for their contributions to improving health care in Memphis and the Mid-South.
At ceremonies on May 15, 22 and 29, the University of Tennessee Health Science Center graduated a total of 698 health care professionals. Six different graduation ceremonies were hosted by the deans of the six UTHSC colleges. During each of the ceremonies, UTHSC Chancellor Steve J. Schwab, MD, conferred the degrees and gave the charge to the graduates.

The 698 UTHSC graduates included:
- 116 from the College of Dentistry
- 38 from the College of Graduate Health Sciences
- 142 from the College of Health Professions
- 149 from the College of Medicine
- 78 from the College of Nursing
- 175 from the College of Pharmacy

The 2015 graduating class included 68 African-Americans, 12 Latino-Americans, and 145 graduates who came from out of state to study at UTHSC. In addition, this graduating class comprised 410 women and 288 men.

Alvin Crawford, MD ’64, was the commencement speaker for the College of Medicine. Dr. Crawford was the first African-American graduate of UTHSC and is currently professor emeritus of orthopaedic surgery at the University of Cincinnati College of Medicine.
When Bonnie Barnes – then Bonnie Lynch – began medical school, she knew it would be an experience like no other. However, what she did not see coming were the additional experiences. Besides earning her MD, she served as a student representative on the UT board of trustees this past year.

Both her father, a dentist in the Memphis area, and her brother, a mechanical engineer, are UT graduates. “The three of us have a combined 23 years that have been dedicated to education through the University of Tennessee!” Barnes laughed.

Barnes enrolled in the University of Tennessee, Knoxville as an honors biochemistry and cellular and molecular Biology major, minoring in child and family studies. It only seemed natural for Barnes to choose the field of medicine.

“I chose a career in medicine because I love getting to know people. I enjoy puzzles and challenges, and that is what medicine is all about.” Barnes said, “One of the many reasons that I decided to come to UTHSC was because of my family history at this school. In addition, our clinical experience is unparalleled. UTHSC has connections with some of the top hospitals in the world and very few medical schools can give you the exposure that UTHSC can… The professors here are always willing to help and your classmates become your best friends. I can’t think of anything I would want more in a school.”

Involvement came naturally for Barnes at UTHSC. She currently serves as the secretary for the class of 2016. She also had the opportunity to serve on the University of Tennessee board of trustees as a non-voting member for the 2013-2014 year and a voting member for the 2014-2015 year. The student position rotates between each of the campuses every year, and there are two student trustees on the board at any given time.

“Being on the University of Tennessee board of trustees was one of the greatest experiences in my life,” said Barnes. “It was intimidating at first. Shaking hands with individuals like Governor Haslam and President DiPietro left me star struck for a while, but I quickly learned that the board members are just like everyone else. I enjoyed being a student on the board. I felt like my opinions mattered immensely. Being able to speak with some of the greats like Dr. Ed Boling and Coach Pat Summitt was definitely a highlight of my life.”

For incoming medical students, Barnes has the following advice. “You are probably accustomed to being top of your class in high school and college. That will change for most of you. You most likely will make a grade on a test that you have never seen before in your life. Just know that it’s completely normal! You were selected to be here for a reason, so do not be discouraged!”

At a UT board of trustees meeting June 25, 2015, trustee Brad Lampley introduced a resolution honoring Bonnie Lynch.

“Sitting next to Bonnie was an invaluable experience for me,” Lampley said. “Students, in so many ways, are the lifeblood of what we do as a university. I love being able to pick the brain of the student trustees regarding the effect that certain policies and initiatives would have on the students, and never have I benefited more from that experience than when I was seated next to Bonnie.”

Lynch, now Barnes, started her remarks to the board by joking to Lampley, “You’ve helped me to develop a greater appreciation for one of God’s greatest gifts – UT football.”

Of UTHSC, she said, “And going from college to medical school – Wow. Your mentality changes when you realize that you are a future health care provider! I grew up more in one year of medical school than I had in my life. Thank you, Chancellor Schwab, for all that you do for the Health Science Center.”

She added, “UT Health Science Center helped mold me into a professional.” She concluded by saying that “serving on the board was the opportunity of a lifetime.”
On Friday, March 20, 2015, UTHSC College of Medicine students gathered with friends and family to find out their residency locations on Match Day.
Keith Anderson, MD, is New President of the Tennessee Medical Association
A Memphis cardiologist is the new president of the Tennessee Medical Association, the state’s largest association for physicians. Dr. Keith Anderson, an interventional cardiologist at Sutherland Cardiology Clinic, will serve as TMA president for 2016-17.

Dr. Anderson earned his medical degree at the University of Tennessee Health Science Center, and is board certified in cardiovascular disease, interventional cardiology and internal medicine.

David R. Spigel, MD, Named Vice Chair of TriStar Centennial Medical Center
David R. Spigel, MD, medical oncologist at TriStar Centennial, has been named vice chair of TriStar Centennial Medical Center in Nashville, has been affiliated with TriStar Centennial for more than 10 years, and has served as chair of the oncology department, chair of the cancer committee, and is currently president of the medical staff.

Dr. Spigel attended medical school at UTHSC in Memphis, followed by an internal medicine residency at VCU University Medical Center in Indianapolis and a fellowship in hematology-oncology at the Dana-Farber Cancer Institute in Boston. Dr. Spigel has been recognized as a Nashville Business Journal “Healthcare Hero” (2011), a U.S. News “Top Doctor in Tennessee” (2011) and by Best Doctors, Inc., as a Best Doctor in America (2009-2013).

Dr. Paul Finch Joins Marshall University Joan C. Edwards School of Medicine Department of Pediatrics
Dr. Paul Finch, MD, a pediatric oncologist/hematologist in Huntington, West Virginia, has joined the department of pediatrics at the Marshall University Joan C. Edwards School of Medicine and the Edwards Comprehensive Cancer Center as an assistant professor. Finch earned his medical degree from Temple University School of Medicine. He completed a residency in pediatrics at the University of Tennessee Health Science Center/Le Bonheur Children’s Hospital in Memphis.

Dr. Timothy Fullagar Awarded 2015 Hope Award at Annual Charity Gala
Timothy Fullagar, MD, Neurourosurgeon, was presented with the 2015 Hope Award on May 2, 2015, at the Spine Health Foundation annual fundraiser, Derby Day. The Hope Award symbolizes excellence in accomplishing the mission of the Spine Health Foundation and is offered to an individual who has selflessly provided his or her time to help fulfill our goals of helping others get back to life. Dr. Fullagar received his doctorate of medicine from the Medical College of Virginia, Richmond, and completed a neurosurgical residency with the University of Tennessee Health Science Center’s Semmes Murphy Clinic, Memphis.

Founded in August 2010, SHF is a non-profit organization advocates on behalf of uninsured or under-insured individuals affected by spinal injuries or disorders. SHF provides eligible individuals access to specialized spine care, helping them get back to life and become contributing members of society, once again.

Dr. Jay SoloRio Joins AVH Surgical Associates in Berlin and Colebrook
Jay R. SoloRio, MD, has joined the Orthopedic Surgery and Sports Medicine staff of Androscoggin Valley Hospital Surgical Associates. Dr. SoloRio was most recently employed at Redding Faireview Hospital in Snowhegan, Maine.

Dr. SoloRio earned his Doctor of Medicine from the University of Tennessee Center for the Health Sciences in Memphis. He also earned a Bachelor’s Degree in Chemistry, Magna Cum Laude, from Central Michigan University. He served as Chief Resident of University of South Carolina, Richland Memorial Hospital and William Jennings Bryan Dorn Veterans Hospital. He was also an Assistant Clinical Instructor at the University of South Carolina School of Medicine.

Dr. H.S. Jackson Retires from Urology Practice after 44 Years
A graduate of the University of Tennessee at Memphis, Dr. H.S. Jackson, MD, has retired from active practice with Urology Associates on Aug. 26, 2015, after 44 years of providing health care to the community of Murray, Kentucky.

Dr. Angela M. Riley Joins Staff of Baptist Memorial Hospital-Golden Triangle
Angela M. Riley, MD, a nephrologist, has joined the medical staff. Riley recently joined Nephrology Associates in Columbus, Mississippi. Originally from Madison, Dr. Riley earned her medical degree, completed an internal medicine residency, served as chief resident and concluded with a fellowship in nephrology all at UTHSC in Memphis.
Dr. Louis G. Brit, passed away at the age of 84 on August 22, 2015, in Memphis.

Dr. Russell Chesney, passed away at the age of 73 on April 2, 2015, in Memphis.

Dr. Chesney possessed an enthusiasm for learning that carried over into great commitment to his students and faculty. To honor his distinguished career and service to the university, its students, and the community, UTHSC established the "Russell W. Chesney Excellence in Pediatrics Award" in 2012. It is awarded annually to the top graduating student.