

Interactions

The Official Newsletter of the University of Houston College of Pharmacy

Fall 2015/Winter 2016



FIRST *in class*

UHCOP Students Stand Out With National, State and Regional Titles

A message from DEAN PRITCHARD



American Leadership Pioneer Warren Bennis stated “Leadership is the capacity to translate vision into reality.” This aptitude is critically important as we strive to accomplish all of our goals contained within our UHCOP Vision 20/20 Strategic Plan. It is also critically important to ensure a bright future for our profession. In this issue of *Interactions*, you will see exciting examples of leadership in action.

Our college was proud to honor two exceptional UHCOP Pharmacy Leaders last fall during our Annual Mading Society dinner. The Honorable Chuck Hopson was recognized as our Alumnus of the Year. Former Texas State Board of Pharmacy member Ben Fry was recognized as our 2015 Meritorious Achievement Award recipient. We are extremely proud of Chuck’s and Ben’s many contributions to our college, profession and our great state of Texas.

Our students continue to be recognized for their excellent leadership abilities as well. Among the many examples of our recent Student Leadership recognitions are two National Chapter of the Year Awards given to our Upsilon Chapter of the Phi Lambda Sigma National Leadership Society and our Student National Pharmaceutical Association Chapter. Our students also continue to be among our nation’s leaders on both the North American Pharmacy Licensure Exam (NAPLEX) and the Multistate Pharmacy Jurisprudence Exam (MPJE).

Our UHCOP faculty continue to apply their exceptional leadership abilities in the areas of teaching, research and service. The Texas Higher Education Coordinating Board has approved UHCOP’s M.S./Residency Program in Pharmacy Leadership & Administration and the college’s new Hispanic Healthcare Certificate Program. Among the many recognitions of Faculty Leadership in research was the recent naming of Dr. Diana Chow as a 2015 Fellow of the National Academy of Inventors. Our outstanding faculty demonstrated great Research Leadership by setting a new College research funding record of \$7.64 million for FY 2015.

Lastly, we lost a true leader this past fall with the passing of our UHCOP alumna and adjunct Associate Professor Dr. Lakshmi Putcha, chief pharmacologist and technical manager of the Pharmacotherapeutics Laboratories at the NASA Johnson Space Center. Dr. Putcha had a very distinguished history of “translating vision into reality” for our national space program and beyond. She will truly be missed.

I look forward to providing you with important updates in the near future as we continue to build upon our college’s strong tradition of Leadership.

Best Wishes,

F. Lamar Pritchard, Ph.D., R.Ph.

Interactions

The official newsletter of the
University of Houston
College of Pharmacy

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TITANS OF TEXAS PHARMACY

COLLEGE HONORS CHUCK HOPSON, BEN FRY FOR LEADERSHIP ON BEHALF OF COLLEGE, PROFESSION AND PATIENTS IN TEXAS

Two exceptional leaders and role models in the profession — UH College of Pharmacy alumni The Honorable Charles L. “Chuck” Hopson and W. Benjamin Fry, R.Ph., FIACP, FACA — recently were awarded the college’s highest honors.

At the 2015 Mading Society Induction & Dinner Oct. 16, Hopson received the 2015 Distinguished Pharmacist Alumnus Award, and Fry was recognized with the UHCOP 2015 Meritorious Achievement Award.

Hopson, director of Pharmacy Policy at Superior Health Plan, is a 1965 graduate of UHCOP who served 12 years as Texas State Representative for District 11 in the Texas Legislature. A member of the UHCOP Dean’s Advisory Council and the Mading Society of benefactors, Hopson owned and operated the May Drug pharmacy in his native Jacksonville, Texas, for nearly 40 years.

Hopson was first elected to the Texas House of Representatives in 2001 and was re-elected for five additional terms. During his time in office, Hopson became known as “The Pharmacist” whose opinion on topics related to pharmacy and healthcare services was highly regarded by his fellow lawmakers. His tenure included serving as chairman of the powerful General Investigating and Ethics Committee, as well as serving on the Public Health and the Pensions, Investments and Financial Services committees.

In addition to his service at the state level, Hopson is a past president of the Central East Texas Pharmacy Association and

the Texas Society of Hospital Pharmacists (now Texas Society of Health-System Pharmacists).

He also served on the city council, school board and chamber of commerce board in Jacksonville, as well as a the boards of a local community college, bank and hospital foundation. His community honors include “Citizen of the Year,” “Businessman of the Year” and “Best Elected Official.”

Recognized with the UHCOP Distinguished Alumnus Award in 2004 and the Dean’s Special Recognition Award in 2012, Hopson served as the the college’s Commencement Speaker in 2007 and as the Phi Lambda Sigma James T. McCarty Lecturer in 2014. Hopson also has established a scholarship endowment for UHCOP Pharm.D. students.

A longtime independent pharmacy owner and operator, Fry continues to work as a pharmacist at his namesake Fry’s Prescription Pharmacy in San Benito, Texas, after selling the community pharmacy as well as his pediatric pharmacy, Small Fry’s Pharmacy, in neighboring Harlingen.

Fry recently completed 13 years of service on the Texas State Board of Pharmacy, including serving as president from 2008 to 2009, following consecutive appointments to the board by former Texas Gov. Rick Perry.

continued next page

Fry represented the state at the national and regional level in a variety of capacities during his two terms, including serving as District 6 Chairperson of the National Association of Boards of Pharmacy (NABP) as well as a member of NABP task forces on Drug Return and Reuse Programs; Review Recommendations to the Controlled Substances Act; and Continuous Quality Improvement, Peer Review, and Inspecting for Patient Safety.

In addition to being a past president of the Rio Grande Valley Pharmacy Association, his volunteer activities at the local level include serving on both the local school board and the industrial foundation board in San Benito as well as on the irrigation district board for his home county.

A 1972 graduate of UHCOP, Fry is a charter member of the college's Mading Society and a longtime member of the UHCOP Dean's Advisory Council. He also is a founding member and Fellow of the International Academy of Compounding Pharmacists and a Fellow of the American College of Apothecaries.

In addition to the recent college honor, Fry was recognized as a "Champion for Independent Pharmacy" by the Alliance of Independent Pharmacists of Texas and as the Rio Grande Valley Regional Preceptor of the Year by The University of Texas at Austin College of Pharmacy.

He previously received UHCOP's Special Recognition Award in 2008, the year he also served as the college's Commencement Speaker, and the Distinguished Alumnus Award in 2004. During the UHCOP 50th Anniversary celebrations in 1997, Fry was named among the college's 50 Outstanding Alumni.



Alumnus and Dean's Advisory Council member W. Benjamin Fry proudly displays the three awards, including the UHCOP Meritorious Achievement Award, he received in 2015.

College Mourns Passing of Alumna, DAC Member Putcha

UH College of Pharmacy joins family and friends in mourning the passing of three-time UH alumna, Dean's Advisory Council member and adjunct Associate Professor **Vasanta Lakshmi Putcha** on Sept. 28, 2015, at the age of 69.

A pioneer and expert in Space Pharmacotherapeutics, Putcha was chief pharmacologist and technical manager of the Pharmacotherapeutics Laboratories at NASA Johnson Space Center. As the only clinical pharmacologist at NASA, she was responsible for directing and conducting the research and development program for optimizing pharmacotherapeutics in space.

Putcha earned two master's degrees, including an M.S. in Pharmacy, and a doctorate in Biopharmaceutics and Clinical Pharmacokinetics from UH. In addition to serving on UHCOP dissertation committees, Putcha was a longtime collaborator on

space-centered research projects with UHCOP Professor **Diana S-L. Chow, Ph.D.**, and several UHCOP Pharmaceutics alumni during their doctoral education.

Putcha was a recipient of numerous honors and awards at NASA, including the Special Space Flight Achievement Award, Certificate of Commendation and Space Act Award.

A Fellow of the American College of Clinical Pharmacology, Putcha also held adjunct faculty appointments at the University of Texas Medical Branch, Texas Southern University and the University of Florida.





LEADERSHIP LABORATORY

HOUSTON PROGRAM BEGINS NEW CHAPTER WITH APPROVAL OF PHARMACY LEADERSHIP & ADMINISTRATION M.S. DEGREE

With recent approvals at UH and the state level for a new degree program at the UH College of Pharmacy, the Houston Program in Pharmacy Leadership & Administration has entered a new phase in its evolution toward becoming the premier academic and experiential pathway for educating and training tomorrow's leaders in health-system pharmacy.

A collaboration between UHCOP and seven fellow Texas Medical Center institutions, the Houston Program is a concurrent two-year program culminating in a M.S. degree in Pharmacy Leadership & Administration and ASHP-accredited PGY1 pharmacy practice and PGY2 health-system pharmacy administration residencies. The academic component of the Houston Program was approved by the UH Board of Regents in August and the Texas Higher Education Coordinating Board in October.

UHCOP's history of offering a residency-affiliated M.S. in Pharmacy/Hospital Pharmacy dates back to the late 1960s/early 1970s through the early 1980s, with many graduates currently holding high-profile leadership positions in pharmacy nationwide.

Yet, the new program was born from a shared recognition that the profession is facing a leadership crisis, a viewpoint supported by the results of a 2005 American Journal of Health-System Pharmacy survey indicating approximately three-quarters of pharmacy directors and middle managers anticipated leaving their positions in the subsequent decade.

"There are only a handful of programs of this type around the country, but the Houston Program is truly unique in terms of the number of separate institutions as well as the range of clinical specialties they represent and the patient populations they serve," said UHCOP Professor and Department Chair Kevin W. Garey, Pharm.D., M.S., FASHP, who coordinates the academic component of the program.

"Each member institution has built a stellar reputation and achieved success through its current and past leaders; the goal of this program is to ensure this legacy continues and provides the next generation of pharmacy managers and directors with the necessary skills and tools to help their organizations succeed in providing the highest level of patient care."

Since its launch in 2009, the Houston Program has expanded from five to seven leading TMC health-system partners: CHI St. Luke's Health, Harris Health System, Houston Methodist Hospital, Memorial Hermann Healthcare System, Michael E. DeBakey Veterans Affairs Medical Center, Texas Children's Hospital and The University of Texas MD Anderson Cancer Center.

The program's steering committee includes not only residency program directors and operations/administrative leaders from each institution, but also the program participants to ensure the overall program continues to evolve based on their experiential and educational needs as well as changes in health care.



PLANTING A SEED IN STEM



COLLEGE STEPS UP K-12 OUTREACH TO RAISE AWARENESS OF CAREERS IN PHARMACY, HEALTH SCIENCES

“There is a single light of science, and to brighten it anywhere is to brighten it everywhere.”

— Isaac Asimov, American author and academician

Community outreach is one of the undeniable and enduring strengths of the students, faculty and staff of UH College of Pharmacy, and this mission is increasingly expanding beyond traditional wellness-and-health awareness projects to new initiatives to encourage children and teenagers to explore the many career options in pharmacy and the health/biomedical sciences.

The college’s Pharmacy Summer Camp was launched in 2013, the same year the UH STEM Center (Science, Technology, Engineering and Mathematics) was founded to provide greater focus for the university’s diverse academic and outreach programs aimed at increasing interest in the myriad disciplines that fall under the STEM umbrella.

Key activities of the summer camp include shadowing pharmacists at several

Texas Medical Center (TMC) health systems, hands-on learning activities ranging from compounding to blood-pressure measurement, TMC lab tours, the opportunity to interact with UHCOP faculty and students and a mock “crime-scene investigation” inspired by the “CSI”-style TV shows.

“I thought that pharmacy would be a good option for me because, even though I love science, I knew I didn’t want to be a doctor (physician) or be in the lab all day long,” said Gwen Benskin, 16, who traveled from her home state of Colorado specifically for the UHCOP camp. “I never thought there were so many career options available in pharmacy.”

Pharmacy Summer Camp returns June 14-17; for details, visit <http://tinyurl.com/uhcop-camp>.

The Village School

As part of his latest National Institutes of Health grant, Associate Professor **Bradley McConnell**, Ph.D., and members of his lab hosted several students and an instructor from The Village School, a Houston college preparatory school. Designed as an introduction to careers in the health sciences, the STEM mini-symposium included research presentations by UH and non-UH undergraduate and graduate students, demonstrations of advanced laboratory techniques, and a UH campus tour.

MD Anderson

In collaboration with The University of Texas MD Anderson Cancer Center’s High School Summer Program in Biomedical Sciences, UHCOP faculty, staff and student volunteers provided a group of recent Texas high school graduates a taste of careers in pharmacy, pharmacology, pharmaceuticals, medicinal chemistry and other health-related sciences. The 16 high-achieving students, selected from a pool of 160 applicants, had all been accepted into universities such as UH, Stanford and Harvard.

Clear Creek ISD

UHCOP faculty members also have been working with a younger generation of aspiring scientists through a gifted-and-talented magnet school program for sixth- through eighth-grade students in the Clear Creek Independent School District. Presented as a mini-course over nine weeks at Westbrook Intermediate School, UHCOP faculty members gave talks, demonstrations and hands-on activities on such topics as infectious diseases and medication adherence.

Clinical Assistant Professor **Santhi Masilamani**, Pharm.D., CDE, M.B.A., spearheaded the college’s participation, which included guest lectures and on-site tours of the TMC laboratories by Professor **Kevin Garey**, Pharm.D., M.S., FASHP, and Research Assistant Professor **Jahangir Alam**, Ph.D.



Recent Ph.D. graduate Sonal Singh describes some of the cardiopharmacology research experiments conducted by members in the laboratory of faculty member Bradley McConnell to students from The Village School college preparatory academy.



Research Assistant Professor Jahangir Alam discusses some of the experimental techniques used in current infectious diseases research projects at UHCOP to intermediate students from a Clear Creek school district magnet program.



Recent high school graduates work on a compounding exercise at UHCOP TMC Campus as part of the college’s collaboration with MD Anderson Cancer Center’s High School Summer Program in Biomedical Sciences.

Convocation 2015





Spring-Summer 2015

PH.D., PHARMACEUTICS

Sumit Basu
Lili Cui
Zhiyi Cui
Yong Ma
Tao Niu

PH.D., PHARMACOLOGY

Odochi Ohia
Sonal Singh

PH.D., PHARMACEUTICAL HEALTH OUTCOMES & POLICY

Erin Ferries
Shivani Mhatre
Jeetvan G. Patel

M.S., PHARMACY ADMINISTRATION

Gwendolyn G. Burgess
Nelvin N. Daniel
Phuoc A. Nguyen
Lindsey M. Smith

PHARM.D.

Hadel H. Abusaif
Marwan Kamal Ahmed
Onochie Louis Akazie
Mohsin Nizar Ali
Matthew Joseph Angell
Abin Babu
Dhara Bhakta
Tuong Trong Bui

Brittney Richelle Bussell
Jacob Springer Cammarata
Alexandra H. Cao
Henry Cao
Gia Nicole Ray Castorina
Erin N. Chartier
Peng Chen
Yun Jung Choi
Edwin Shuangwing Chow
Samuel Yh Chung
Brian Alan Clark
Heidi Dung Day
Diane Nhu-Quynh Doan
Robert Dorsey
Teenu Elizabeth Elias
Rachel Elizabeth Eppinette
Victor Faniyi
Ryan Scott Ferren
Rey Teofilo Ferrer
Amanda McFarland Fitzhugh
Elizabeth Marie Franco
Anthony Richard Gall
John Wesley Herman
Omaida Magaly Hernandez-Ray
Stephen Clyde Hickerson
Tieng Van Ho
Katelyn Alise Hobaugh
Jonathan J. Huang
Erin Elizabeth Hunnicutt
Julie Ai Huynh
Justin George Idicula
Amy Michelle Isbell
Farah Jamal

Aisha Amin Jangda
Samir Kiran Jani
Nancy Ann Johnson
Kyle Daniel Jones
Soniya Joseph
Sarah Hoira Jung
Miraj Nalin Kanji
Haruna Kato
Soniya E. Keerikattu
Amy Kelleh
Chau Ngoc Kha
Wonyoung Kim
Yoomi Ashley Kim
Zachary Thomas Kirk
Matthew Armand Kordi
Angel Jongmin Lee
Monica Tsing Lee
Ashley Marie Leinweber
Morgan Mai
Bharat Makanji
Patrick Padlan Maranon
Amanda Noelle Martin
Jaganmohan Maturi
Yaneth Elizabeth McLemore
Annilee Miller
Tara Larissa Molina
Lawrence D. Moore
Colleen M. Myers
Noelle Nassri
Andrew Tri Nguyen
Anh Thi Hong Nguyen
Dang Bao Nguyen
Hung Vu Nguyen

Linh C. Nguyen
Mai TN Nguyen
Mark N. Nguyen
Michelle Laverne Nguyen
Tam Khac Nguyen
Ha Na Noh
Osagie A. Ohonba
Lilian Fei Ooi
Bo Pang
Dimitra A. Papadopoulos
Morgan Hillary Payne
Christine Hanh Pham
Han Tuong Pham
Kim Anh Thi Pham
Michael Phuong Pham
Ngoc Boi Pham
Quoc Phuong
Hiva Pourarsalan
Bobbie Noel Quach
Zachary Kaiwi Roberman
Rijo Santhosh
Minoosh Sobhanian
Laura Barbre Stokes
Esther Stephanie Thomas
Lindawaty Nurcahya Tjoa
Ashley Le Tran
Trung Minh Tran
Vi Yen Vu
Sam August Wilson
Amanda Elise Woods
Joann Yoon
Kai Zhang
Belinda Zhou

Summer-Fall 2014

PH.D., PHARMACEUTICS
Lei Wu

PH.D., PHARMACOLOGY
Gloria S. Forkuo
Vaidehi J. Thanawala

PH.D., PHARMACEUTICAL
HEALTH OUTCOMES &
POLICY
Vishal Bali
Parul Gupta
I-Hsuan Wu

M.S., PHARMACY
ADMINISTRATION
Carmine A. Colavecchia
Shalak S. Gunjal
Ruta V. Sawant
Navneet Upadhyay

PHARM.D.
Jacob Mielczarek
Sara Renee Thorsell-Pollard

UHCOP, South Texas College Open Pipeline

Co-op Agreement Aims to Help Alleviate Pharmacist Shortage in Growing Rio Grande Valley

Students in the Rio Grande Valley now have a new streamlined pathway to earn a Pharm.D. degree, thanks to an articulation agreement signed by officials with the University of Houston, UH College of Pharmacy and South Texas College in McAllen, Texas.

“We welcome the creation of a formal agreement between our two institutions to assist students in achieving their goals, while also helping to address the health needs of underserved communities across our state,” said **Paula Myrick Short**, UH Senior Vice President for Academic Affairs and Provost.

Upon acceptance into the UHCOP-STC cooperative program during their freshman year, South Texas College students will complete an Associate of Science degree while simultaneously completing their prerequisite coursework and other eligibility requirements for admission into the UHCOP Pharm.D. program.

“This agreement with South Texas College opens a much-needed two-way pipeline for students to seamlessly transition into our Pharm.D. program and provide South Texas communities expanded access to the unique skills and knowledge of pharmacists, such as medication therapy management to improve



Flanking UH Vice Provost Bruce Jones, South Texas College President Shirley Reed and UHCOP Dean F. Lamar Pritchard shake hands after signing the agreement.

patient outcomes across a range of disease states, especially diabetes and hypertension,” UHCOP Dean **Lamar Pritchard** said.

Cooperative program benefits include mentoring in preparation for matriculation into UHCOP, career counseling and networking opportunities with UHCOP alumni practicing in the Rio Grande Valley region as well as current Pharm.D. students.

“It’s going to open doors for our students and provide opportunities that they may not have thought were ever possible,” said **Shirley A. Reed, M.B.A., Ed.D.**, president of South Texas College.

Texas Higher Education Board Approves Elective Credits for Hispanic Healthcare Certificate

The Texas Higher Education Coordinating Board has approved UH College of Pharmacy’s Hispanic Healthcare Certificate Program, which is designed to recognize UH Pharm.D. student competencies in delivering linguistically and culturally appropriate pharmacy services to Hispanic and Spanish-speaking patients.

Certificate completion requires advanced instruction in Hispanic culture and Spanish language, with an emphasis on Medical Spanish, and the completion of at least two Advanced Pharmacy Practice Experiences at sites serving predominantly Spanish-speaking patients.

Four UHCOP students — now graduates — completed the program requirements during its pilot phase in 2013-2015, and nearly a dozen current students have started or completed the didactic portion of the program as of Summer 2015.

Program partners include the UH Hispanic Studies and Spanish departments as well as Vecino Health Centers.

MPJE Streak Unbroken, NAPLEX Record Falls on Latest Licensure Results

Based on the May-August 2015 testing period results from the National Association of Boards of Pharmacy, UH College of Pharmacy’s streak of a perfect 100 percent first-time pass rate on the Multistate Pharmacy Jurisprudence Exam (MPJE) remains unbroken for a fourth consecutive year.

Although UHCOP narrowly missed extending its perfect 100 percent record on the North American Pharmacy Licensure Exam (NAPLEX) to a third year, graduates still ensured a respectable 99.0 percent pass rate for the college. Despite the dip, UH graduates continue to exceed the national and statewide first-time test-taker averages of 93.86 and 93.15 on the NAPLEX and 93.97 and 96.19 on the MPJE, respectively.



INVENTIVE SPIRIT

CHOW NAMED FELLOW OF NATIONAL ACADEMY OF INVENTORS WITHIN WEEKS OF BEING AWARDED LATEST U.S. PATENT AWARDS

UH College of Pharmacy's **Diana S-L. Chow, Ph.D.**, professor of Pharmaceutics and director of the college's Institute for Drug Education and Research, has been named a 2015 Fellow of the National Academy of Inventors (NAI).

According to the NAI, "Election to Fellow status is a high professional distinction accorded to academic inventors who have demonstrated a highly prolific spirit of innovation in creating or facilitating outstanding inventions that have made a tangible impact on quality of life, economic development and welfare of society."

Chow was recognized for her translational research spanning more than 30 years and resulting in more than 10 U.S. and international patents, including as co-inventor of IV Busulfex® (busulfan), an intravenous conditioning agent administered to leukemia and other cancer patients undergoing blood, bone marrow or stem cell transplantation.

The 100 percent bioavailable agent has resulted in a 10-fold reduction in the three-month, post-transplantation mortality rate of patients. Today, more than 65 percent of all acute leukemia patients transplanted in North America receive the intravenous busulfan-based pretransplant regimen, making significant impacts on patient survival.

In 2009, the Houston Intellectual Property Law Association bestowed its "Inventor of the Year Award" to Chow and her IV Busulfex® co-inventors. IV Busulfex®, now available in more

than 40 countries by Otsuka America Pharmaceuticals, also has generated more than \$10 million in royalties to the University of Houston since it received FDA approval in 1999 - making it among most profitable patents in the university's history.

In October 2015, Chow received notice of award for two continuation patents on lung and liver organ-specific nanoformulations for novel oral and parenteral forms of an antiparasite drug (mebendazole) as an anticancer agent.

In 2010, Chow's lab was recruited as the only college of pharmacy in the nation to be a member of the North American Clinical Trial Network (NACTN), a collaboration of nine academic and clinical institutions in the U.S. and Canada. Established through the Christopher and Dana Reeve Foundation and funded by the U.S. Department of Defense, the NACTN is offering new hope for patients and veterans by investigating potential new therapies for acute and chronic spinal cord injuries.

A UHCOP faculty member since 1981, Dr. Chow received her Ph.D. from the University of British Columbia, M.S. from The Ohio State University and B.S. from the National Taiwan University. She has authored or contributed on nearly 200 national and international journal articles, abstracts and presentations.

The nonprofit NAI has bestowed Fellow status to 582 individuals since its founding in 2010. The 2015 Fellows account for 5,368 issued U.S. patents, bringing the collective patents held by all NAI Fellows to more than 20,000.



UH HONORS SALIM FOR WORK WITH BUDDING RESEARCHERS

UH College of Pharmacy's **Samina Salim**, Ph.D., assistant professor of pharmacology, has been honored with one of UH's most distinguished awards for research: the Early Career Award for Mentoring Undergraduate Research.

Salim has mentored 11 undergraduate students since joining the college in 2004, and 12 of her recent publications have been coauthored by undergraduates.

Her mentees have earned such distinctions as a travel award to present during the Council for Undergraduate Research's "Posters on the Hill" at the U.S. Capitol; a Best Poster Award at the UH Undergraduate Research Day; and inclusion in the Best Poster Competition at the Experimental Biology 2014 meeting. Several of her mentees have continued their educations in graduate or professional degree programs.

"I have been very fortunate to have mentored an outstanding group of young men and women, whose vigor for science has been an immense source of inspiration for me," Salim said. "Their passion and energy keeps me motivated. It is my goal to engage at least two undergraduate students per year in my lab, and whoever walks into my lab must walk out with at least one peer-reviewed publication. But I ask for a lot of devotion, hard work and commitment."

UH undergraduate alumna **Farida Allam**, a past mentee of

Salim who is now pursuing a pharmacy doctorate at another institution, said Salim's personality makes learning exciting.

"What began as a mere curiosity about research quickly developed into passion as I continued to learn and grow," said Allam, who is now pursuing a pharmacy doctorate at another institution. "Dr. Salim not only allowed me to learn more by her continuous faith and encouragement, but she was also able to make it enjoyable through her teaching methods. The amazing work ethics and confidence that Dr. Salim has instilled in me will stay with me forever as she continues to be one of my biggest role models."

Another mentee, senior Health Education undergraduate student **Amber Ansari**, also praised Salim's mentorship.

"Dr. Salim is an exceptional teacher and didn't only teach me the physical process, but she went above and beyond to explain the science behind the steps," Ansari said. "Her teaching methods were exceptional as she was able to take complicated research concepts and convey them in a manner that even an undergraduate student could comprehend."

"Strong work ethics, professionalism, dedication to mentorship, exceptional teaching skills, bright personality and her desire to care outside of the work environment make her who she is: an amazing professor and an excellent mentor."

VA Center of Excellence Taps Hatfield for IPE

UH College of Pharmacy is one of six Texas Medical Center academic health professions institutions collaborating on the newly established Houston Center of Excellence in Primary Care Education at The Michael E. DeBakey Veterans Affairs Medical Center.

The goal of the new center is to educate interprofessional trainees from medicine, mental health, undergraduate nursing, advanced practice nursing, pharmacy and other health professions to deliver high-quality, patient-centered, team-based primary care. The center is designed to benefit and draw upon the unique strengths of each participating institution.

UHCOP's role in the center will be led by **Cathy Hatfield**, Pharm.D., clinical associate professor, director of Interprofessional Education (IPE) and director of Institutional Introductory Pharmacy Practice Experiences. Through a lecture series for center personnel, Hatfield will teach the fundamental principles and skills necessary for effective interprofessional collaborative

practice. Her lectures will include such topics as an introduction to IPE concepts and principles, competencies established by the national Interprofessional Education Collaborative, the benefits to collaborative practice and patient care, overcoming challenges and logistics, leadership and sustainability.



Funded by the VA's Office of Academic Affiliations, the Houston Center is one of only two new sites competitively selected to join the five existing VA Centers of Excellence nationwide.

The center proposal was led by the DeBakey VA; Baylor College of Medicine (BCM); and the Center for Innovations in Quality, Safety, and Effectiveness, an existing BCM-DeBakey VA collaboration. Other center partners are Texas Southern University, Texas Woman's University and The University of Texas Health Science Center at Houston.

Faculty Accolades

Mohammad Asghar, Ph.D., assistant professor, has been appointed to the editorial board of the journal *Clinical and Experimental Hypertension*.

Kim K. Birtcher, Pharm.D., M.S., BCPS, CDE, CLS, clinical professor, was appointed to the American Heart Association/American College of Cardiology (ACC) Taskforce on Practice Guidelines. She also represented the ACC at the Clarity for Patient Care Roundtable, an American Pharmacists Association effort to identify optimal-use strategies for omega-3 fish oil products in patients with very high triglyceride levels.

Julianna Fernandez, Pharm.D., BCPS, CGP, clinical assistant professor, **Samina Salim**, Ph.D., assistant professor, and **Bradley McConnell**, Ph.D., FAHA, FAPS, associate professor, received the 2015 UHCOP Faculty Excellence Awards for Teaching, Research and Service, respectively.

Marc Fleming, Ph.D., MPH, R.Ph., **Louis Williams**, Ph.D., and **Matthew A. Wanat**, Pharm.D., BCPS, BCCCP, received the 2015 Rho Chi Society Beta Omicron Chapter's Teaching Excellence Awards, respectively.

Kevin W. Garey, Pharm.D., M.S., FASHP, professor, was invited to participate in the National Quality Forum-National Quality Partners' Advancing Antibiotic Stewardship in Healthcare Initiative.

Brian J. Knoll, Ph.D., associate professor and assistant dean of Graduate Programs, has been appointed to serve on the

Biochemistry, Biophysics and Structural Biology 1 predoctoral fellowship application review panel for the 2016 National Science Foundation Graduate Research Fellowship Program.

Ke-He Ruan, M.D., Ph.D., professor, has been appointed editor-in-chief of the *British Journal of Pharmaceutical Research* and associate editor for *BMC Biochemistry* and *Future Medicinal Chemistry*.

Vincent H. Tam, Pharm.D., BCPS (AQ-ID), professor, has been elected to the Society of Infectious Diseases Pharmacists' Board of Directors. He also served as a presenter, panelist and organizing committee member of the 2nd International Conference on Polymyxins Sept. 22- 24, 2015, in San Diego, Calif.

Maria V. Tejada-Simon, Ph.D., M.Ed., associate professor, has been appointed to the editorial boards of the *International Journal of Neurology Research*, *Annals of Neuroscience and Psychology*, *Journal of Addiction & Neuropharmacology*, and the *Journal of Pharmaceutical Sciences and Pharmacology*.

Anne M. Tucker, Pharm.D., BCNSP, clinical associate professor, will serve as chair following her three-year reappointment to the Board of Pharmacy Specialties' Nutrition Support Specialty Council.

Matthew Wanat, Pharm.D., BCPS, clinical assistant professor, is among the nation's first practitioners to be recognized as a Board Certified Critical Care Pharmacist (BCCCP) by the Board of Pharmacy Specialties. He also was honored with a 2015 Presidential Citation from the Society of Critical Care Medicine.

FACULTY APPOINTMENTS

M. JAHANGIR ALAM

An infectious disease microbiology researcher at the college since 2011, **M. Jahangir Alam**, Ph.D., has been appointed research assistant professor in the Department of Pharmacy Practice and Translational Research. Alam earned a Ph.D. in Biopharmaceutical Sciences/Microbiology from Okayama University in Okayama, Japan, and a master's degree in microbiology and a bachelor's degree in biology/biochemistry from the University of Dhaka in Bangladesh. Alam has authored or co-authored more than 50 articles in such publications as *Antimicrobial Agents and Chemotherapy*, *Clinical Infectious Diseases*, *Journal of Antimicrobial Chemotherapy*, and *Diagnostic Microbiology and Infectious Disease*.



MARIA BONDESSON

Maria Bondesson, Ph.D., joined the college as a clinical assistant professor of Pharmacology from UH's Department of Biology and Biochemistry and the Center for Nuclear Receptors and Cell Signaling, where she had worked since 2009. Bondesson earned her B.S. in Microbiology/Molecular Biology and Ph.D. in Cell and Molecular Biology from the Karolinska Institutet in Stockholm, Sweden. Her research includes studying how endocrine disrupting chemicals affect embryonic development using zebrafish as a model organism; how zebrafish screening methods can be used to detect obesity-causing chemicals; and using zebrafish to study the effects of exposure to endocrine disruptors on tumor development and cancer cell metastasis. Her work has been published in *PLoS One*, *Reproductive Toxicology* and *BBA - Gene Regulatory Mechanisms*.

Promotions & Retirements

BEYDA, CRUTCHLEY AND SCHWARZ

UHCOP faculty members **Nicholas D. Beyda**, Pharm.D., BCPS, **Rustin D. Crutchley**, Pharm.D., AAHIVP, and **Lindsay Schwarz**, Ph.D., have been promoted to Assistant Professor, Clinical Associate Professor and Instructional Associate Professor, respectively.

Beyda has been with the college since 2010, first as a Fellow in the two-year Infectious Diseases Pharmacy Fellowship program between UHCOP and CHI St. Luke's Health-Baylor St. Luke's Medical Center, then as a research assistant professor. Maintaining a clinical site at Baylor St. Luke's, Beyda's work has been published in the *American Journal of Health System Pharmacy*, *Annals of Pharmacotherapy*, *Clinical Infectious Diseases* and the *Journal of Antimicrobial Chemotherapy*.

A faculty member since 2011, Crutchley teaches in several Pharm.D. program courses as well as precepts students and residents. A certified Practicing HIV Pharmacist (AAHIVP) by the American Academy of

HIV Medicine, Crutchley also serves as director and founder of the college's HIV Ambulatory Care/Pharmacogenetics PGY-2 pharmacy residency program — one of the few in the nation — in collaboration with Companion Dx, Therapeutic Concepts Inc. and Texas Children's Hospital.

A member of the college since 1997, Schwarz has served as an Instructional Assistant Professor and Director of Faculty Development since 2011. She continually champions the scholarship of teaching amongst the college faculty, including the use of novel technologies in the classroom. A UH Teaching Excellence Award recipient in 2011, Schwarz has been a National Association of Boards of Pharmacy exam writer for more than 10 years and served on several American Association of Colleges of Pharmacy task forces.

XIANG LI

A Research Assistant Professor of Pharmacology, **Xiang Li, M.D., Ph.D.**, joined the college from Virginia Commonwealth University. Li earned her M.D. from Peking University in Beijing, her M.S. in Pharmacology and Toxicology from the Medical College of Wisconsin and her Ph.D. in Molecular Biology from the University of Duisburg-Essen School of Medicine in Germany. Li's research interests include mechanisms of cardiovascular diseases and hypertension associated with aging, chronic kidney disease, autoimmune disease and infectious diseases, with a focus on the roles of exosome, microparticles and non-coding RNA in these diseases. Her work has been published in *PLoS One*, the *Journal of Molecular Medicine*, the *Journal of Pharmacology and Experimental Therapeutics*, and *Cellular Physiology and Biochemistry*.



YANG ZHANG

Yang Zhang, Ph.D., joined the college's Department of Pharmacological and Pharmaceutical Sciences as an associate professor of Pharmacology. His research interests include the roles of redox signaling, lipid metabolism, immune cells, adipokines and high glucose in endothelial dysfunction, smooth muscle dedifferentiation and vascular injury in the pathogenesis of cardiovascular diseases. Author/co-author of more than 60 peer-reviewed journal articles and book chapters, Zhang is working on two multi-year RO1 grant projects, totaling \$3.4 million from the National Heart, Lung, and Blood Institute. He earned a Ph.D. in Cardiovascular Pharmacology from the Medical College of Wisconsin and a B.Sc. in Applied Chemistry from Peking University, China, and completed postdoctoral training at the University of Duisburg-Essen in Germany.

VISHNU D. GUPTA

Following 45 years in the classroom and the laboratory, Professor of Pharmaceutics **Vishnu D. Gupta, Ph.D.**, retired from UH College of Pharmacy as of Sept. 1, 2015.

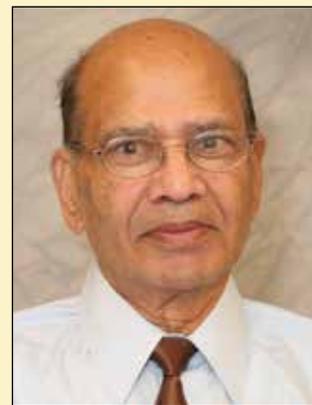
A Fellow of the Academy of Pharmaceutical Sciences and the American Association of Pharmaceutical Scientists, Gupta authored or co-authored hundreds of articles and chapters in peer-reviewed journals and books. His expertise in the areas of pharmaceutical analyses and stability studies made him a highly sought-after consultant and researcher to the pharmaceutical industry on a national and international level.

Gupta and his wife, Kanta K. Gupta, also generously established several endowments at the college and university for Pharm.D. and graduate students, including the Anant Ram Gupta Presidential Endowed Scholarship, Dean Joseph P. Buckley Pharmacy Leadership Award, Yoginder Nath Goel & Swaran Lata Goel Academic Achievement Award

and Vishnu D. & Kanta K. Gupta Scholarship.

The Guptas are longtime members of the college's Mading Society and the university's *In Tempore* Society.

Gupta earned his Ph.D. in Pharmaceutical Analysis and Physical Pharmacy from the University of Georgia and his M.S. in Manufacturing Pharmacy from The University of Texas. A UHCOP faculty member since 1967, Gupta taught Pharmaceutics and Physical Chemistry to thousands of professional pharmacy and graduate students over the course of his career at the college.





Associate Professor Joydip Das and his UH collaborators are using atomic-level resolution, in-vitro biochemistry, and in-vivo behavior and physiology to characterize the presynaptic mechanisms for ethanol action in neurotransmitter release as a potential novel therapeutic drug target for alcohol abuse.

Mind, Body and Spirit(s)

NIH Awards Drive Research into Mechanisms Behind Anxiety, Heart Disease and Alcoholism

Although there is a significant body of research suggesting some health benefits from moderate consumption of certain types of alcohol, particularly wine, excessive alcohol use is widely recognized for the heavy toll it exacts on the individual and collective health of Americans.

Yet, despite such increased awareness, countless prevention campaigns, and tighter laws and regulations, an October 2015 Centers for Disease Control and Prevention study revealed that excessive alcohol consumption is responsible for an average of 88,000 deaths per year and a cost of \$249 billion to the U.S. economy in 2010.

With the aim of preventing or at least reducing deaths and injuries from the world's most widely used — and abused — drug, UH College of Pharmacy Associate Professor **Joydip Das**, Ph.D., is working to shed light on the complex neurochemical processes that occur with alcohol consumption, especially from chronic use.

Although significant insight has been done on the mechanisms of alcohol — or more accurately, ethanol — on the postsynaptic neural network, Das's research is taking a step back in the chain by exploring ethanol's activity in the presynaptic zone.

Researchers over the years have determined that the presence of ethanol in the postsynaptic zone enhances the sedation activity of inhibitory neurotransmitter receptors, such as gamma-Aminobutyric acid (GABA), and suppresses the energizing activity of excitatory neurotransmitters, such as glutamate.

"We know that when you drink alcohol, your behavior is changed, which is based on various modifications in neurotransmitter activity," Das said. "Yet, *how* ethanol causes or contributes to alterations in vesical fusion — the process involved in neurotransmitter production — in the presynaptic zone is not well-defined and warrants exploration."

Under a five-year, \$1.79 million R01 grant from the National

Institute of Alcohol Abuse and Alcoholism awarded in 2015, Das's research is focused on an essential player in the production and release of neurotransmitters in the brain, a protein called Munc 13-1, and specifically its C1 domain.

The C1 domain of Munc 13-1 shares a similar structure with the C1 domain of another protein, the enzyme protein kinase C (PKC), which is a multifunctional regulator of cellular responses, including the behavioral effects of alcohol.

"In our previous work published in the *Journal of Neurochemistry* and other journals, we showed that alcohol not only binds to the C1 domain of PKC, but also to the C1 domain of Munc 13-1," Das said.

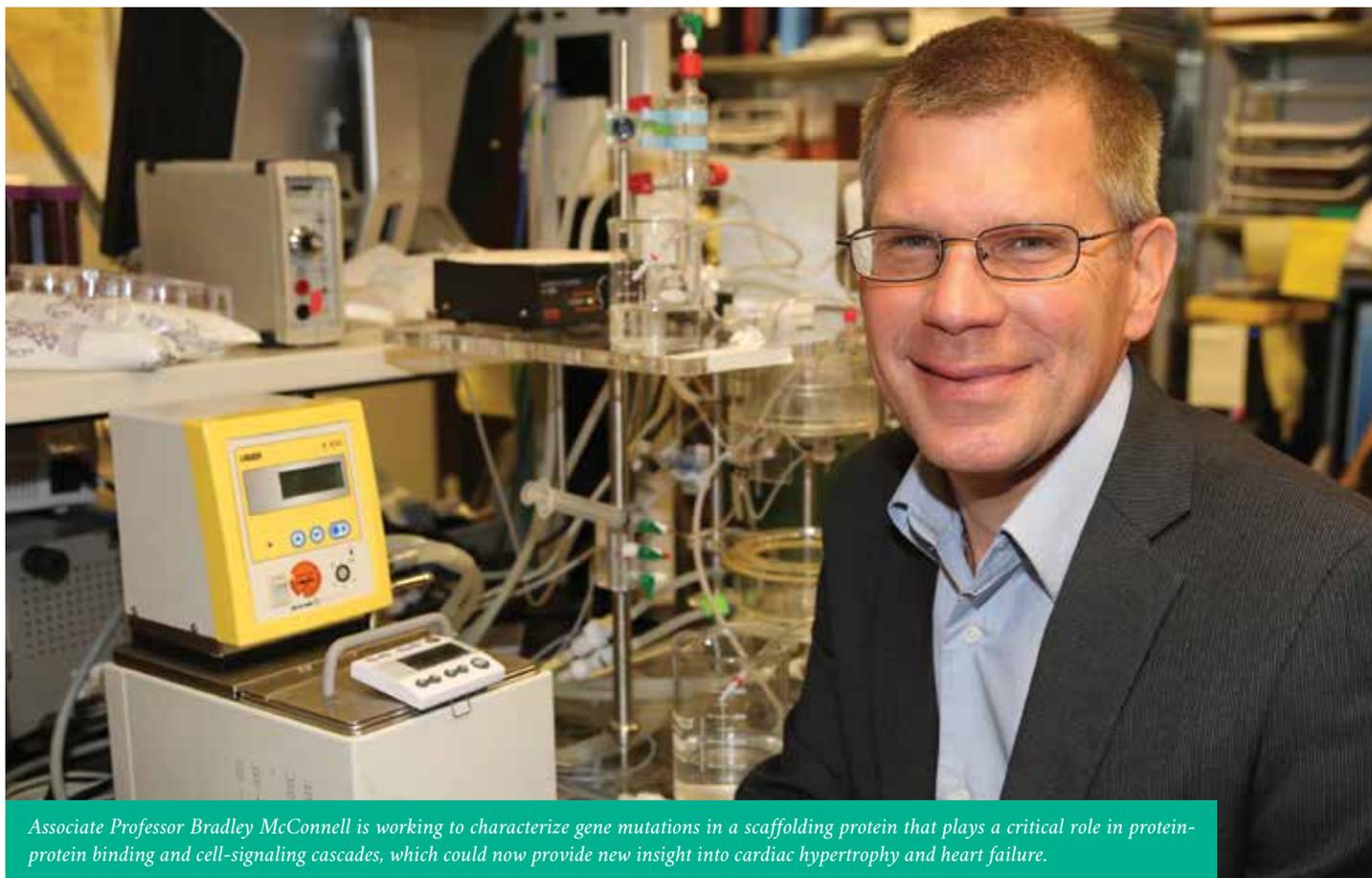
Das's previous NIH-funded work with UH collaborator **Gregg Roman**, Ph.D., professor of Biology and Biochemistry in the College of Natural Sciences and Mathematics, found that *Drosophila melanogaster* fruit flies with reduced activity of the *Dunc13* gene — the fly version of the mammalian *UNC13* gene, or *Munc13* — had an increased preference for alcohol compared to wild-type *D. melanogaster*.

"However, we also showed that this increased preference for alcohol was rescued — or reversed — when we expressed the rat Munc 13-1 gene in the *Drosophila Dunc 13* knock-outs," Das said.

In this new phase, Das and his collaborators — including Roman and J. Leigh Leasure, Ph.D., associate professor of developmental cognitive neuroscience and director of the Behavioral Neuroscience Lab in the Department of Psychology at the College of Liberal Arts and Social Sciences — will explore the mechanisms by which ethanol alters vesicle fusion and consequently regulates neurotransmitter release.

"Understanding how ethanol binds to the C1 domain of Munc 13-1 could offer a potential novel drug target in the development of future therapeutic interventions of alcohol dependence by disrupting the ethanol-unc13-1 interaction," he said.

Spirit(s)



Associate Professor Bradley McConnell is working to characterize gene mutations in a scaffolding protein that plays a critical role in protein-protein binding and cell-signaling cascades, which could now provide new insight into cardiac hypertrophy and heart failure.

Despite significant progress in the age-adjusted deaths from cardiovascular disease over the past 75-plus years thanks to advances in research, therapeutics and prevention, heart disease remains the undisputed leading cause of death in men and women in the U.S.

Nearly 309,000 Americans died from heart failure-related causes in 2014, up from about 290,000 in 2000, according to the U.S. Centers for Disease Control and Prevention. The number of people diagnosed with heart failure is expected to increase from about 5.7 million today to nearly 8 million by 2030, according to the American Heart Association.

An investigation by UH College of Pharmacy Associate Professor Bradley K. McConnell, Ph.D., FAHA, FAPS, into gene-expression mutations in a specific protein that serves a key role in protein-protein interactions and signaling cascades may offer new clues into the development of cardiac hypertrophy, which is among the leading causes of heart failure.

“Comparative analysis of protein-protein binding of mAKAP mutations expressed in human cardiac myocytes will provide mechanistic insights toward cell signaling, gene expression and cardiac hypertrophy,” McConnell said.

McConnell is focusing on a genetic polymorphism in a type of “scaffolding” protein called muscle-specific A-Kinase Anchoring Protein (mAKAP), which provides a physical platform for binding the enzyme Protein Kinase A (PKA) to specific compartments

within the cell as well as fine-tuning of secondary messenger signaling cascades. PKA functions as a key signaling pathway for beta-adrenergic receptor (beta-AR) stimulation, which serves as the primary mechanism to influence calcium balance and increase heart contractility.

Supported by a three-year, \$451,500 R15 grant from the National Heart, Lung, and Blood Institute, McConnell’s lab is attempting to characterize the interactions of these mAKAP mutations in pathological cardiac remodeling.

“The components of pathological remodeling affect how a cell would normally function, and as result of these perturbations of the cellular signaling network, such as altered PKA signaling, aberrant calcium signaling and hypertrophic gene expression, we see the pathogenesis of heart enlargement and fibrosis,” McConnell said. “In turn, this remodeling leads to defective cardiac contractility, which establishes a predisposition to heart failure.”

McConnell’s work is moving from an in-vitro system of a general cell line to human cardiac myocytes by using an adenoviral gene delivery system to transfect express the human mAKAP mutations.

“Ultimately, we are trying to determine whether we can target mAKAP in order to prevent or reduce the pathological effects of altered subcellular signaling responses by using small molecular inhibitors to block signaling mechanisms during periods of stress,” McConnell said.

Body

The machinery of the human body exhibits an amazing ability to respond and manage acute psychological stress. When stress becomes chronic with no opportunity for the system to recover and recharge, however, multiple adverse physiological effects begin to pile up and set the stage for potentially significant and long-term physical and mental health impacts.

Assistant Professor Samina Salim, Ph.D., has been working to trace the trajectory from chronic psychological stress to the development of mental disorders such as anxiety and depression as well as in cognitive and learning-memory impairment.

The results of her research could reveal novel drug targets as an alternative to the traditional focus on neurotransmitter-based therapeutic interventions, which not only have had mixed grades in efficacy but also are commonly associated with a range of side effects that can contribute to nonadherence.

With the support of a three-year, \$451,500 R15 renewal grant from the National Institute of Mental Health, Salim has hypothesized that oxidative stress is actually the causal trigger or regulator — as opposed to merely being an associative byproduct — of the activation or inhibition of pathways that manifest in poor mental health.

“In our previous experiments, we observed that oxidative stress was involved not only in anxiety-like behavior in rats but it also was involved in causing cognitive impairments, learning and memory deficits and depression-like behavior,” Salim said. “We’ve also seen that increased dietary or exercise-induced antioxidant

levels offers protection from oxidative stress and even reverse its effects.”

Salim’s current project is to examine the levels of oxidative stress under chronic psychological stress using a social defeat model to elucidate the pathways involved.

“One of the pathways we’re studying is the role of oxidative stress on mitochondrial function in the hippocampus, which is considered ‘the seat’ of learning and memory,” Salim said.

“Our research suggests that chronic psychological stress-induced oxidative stress compromises mitochondrial function and integrity, which contributes to inflammation and degradation of antioxidant enzymes. This reduction in antioxidant defense impairs the body’s detoxification processes and results in behavioral and cognitive deficits.”

The project also involves determining the role and impact of oxidative stress in synaptic plasticity — the changes in the structure and function of neural connections associated with learning and memory — on specific regions in the brain using the social defeat model of chronic psychological stress. In continuation of her previous parallel investigations of the deleterious effects of psychological stress and oxidative stress, Salim’s lab also will be determining whether mitochondrial dysfunction can be rescued with antioxidant agents.

“Antioxidants could be an important part of an intervention, as supportive or complementary, but I doubt that it will be enough to act alone in preventing or reversing this incredible cascade of effects of oxidative stress,” she said.

Mind



Assistant Professor Samina Salim is investigating whether oxidative stress acts a signaling trigger, rather than a secondary effect, of anxiety resulting from chronic psychological stress.



Professor Vincent Tam is the sole U.S.-based investigator working on a European Union-funded multi-institutional project to develop and evaluate a system to monitor and adjust the therapeutic regimen on an individualized basis in patients with hospital-acquired pneumonia.

RACING THE CLOCK

RESEARCHERS EYE RAPID DIAGNOSTICS, REAL-TIME MONITORING FOR IMPROVED INFECTIOUS DISEASE OUTCOMES, STEWARDSHIP

As drug-resistant bacterial and fungal pathogens continue to round the final turn while new therapeutics are barely out of the starting gate, infectious diseases researchers are turning their attention to advanced technologies such as rapid diagnostics and real-time dosing adjustments to close the gap.

In the midst of this race, UH College of Pharmacy faculty — such as Professors **Vincent H. Tam**, Pharm.D., BCPS (AQ-ID) and **Kevin W. Garey**, Pharm.D., M.S., FASHP, Assistant Professor **Nicholas Beyda**, Pharm.D., BCPS and Research Assistant Professor **M. Jahangir Alam**, Ph.D. — are gaining a national and international reputation for applying their expertise in clinical and experimental infectious diseases therapeutics toward bringing cutting-edge technologies into the laboratory or bedside.

“In the world of infectious diseases, perhaps the most important characteristic that can predict whether a patient lives or dies is that you correctly get the right antimicrobial agent to the right person as quickly as possible,” said Garey, chair of the UHCOP Department of Pharmacy Practice and Translational Research. “As the development pipeline for new therapeutics continues to lag behind the development of infections and, more importantly, drug-resistant infections, it’s ‘mission critical’ for us to look at other options to help us initiate or adjust appropriate therapeutic strategies in less time than what is being done today.”

Candida Detection Direct from Blood Sample

In one of the most significant projects undertaken by Garey, Beyda and Alam, the UHCOP researchers collaborated with the Lexington, Mass., based in vitro diagnostics company T2 Biosystems Inc. to conduct pre-clinical and clinical trials on the company’s new T2Candida® rapid diagnostic platform with its automated T2Dx instrument.

The system uses a combination of magnetic resonance and nanotechnology-based diagnostic reagents to provide a rapid and highly sensitive test for the identification of five species of *Candida* directly from whole blood with limits of detection as low as 1 colony-forming units per milliliter (1 CFU/ml).

In the preclinical phase of the project, the investigators spiked blood samples with five species of *Candida* most commonly associated with the onset of candidemia: *Candida albicans*, *Candida tropicalis*, *Candida parapsilosis*, *Candida glabrata* and *Candida krusei*. They then compared the detection rate of the T2Candida system against currently used automated blood culture techniques considered the “gold standard” in the microbiology laboratory setting.

Published in the journal *Diagnostic Microbiology and Infectious Disease*, the results of the study found that all five species were detected in three to four hours by the T2Candida system vs. four out of the five species detected at varying time periods ranging 30 hours to five days with the traditional technique (with the fifth *Candida* species going undetected in the latter system within the five-day period). In addition, the researchers found the T2Candida generated high sensitivity and specificity of the species detection and identification.

The researchers analyzed blood specimens collected from 1,800 hospitalized patients, which included *Candida*-negative control samples as well as *Candida*-spiked samples, from a dozen sites across the U.S. The results of the full-scale clinical trial, co-authored by Garey and published in *Clinical Infectious Diseases*, again showed detection of all five species within three to four hours by the T2Candida assay and overall specificity identification of slightly higher than 99 percent per assay.

Based on the multicenter clinical trial data, T2 Biosystems received FDA approval of the T2 technology and its T2Candida panel in September 2014. The company has reported completion of its first sales contracts for the platform.

But, the UHCOP team’s collaboration with T2 Biosystems — which has brought in approximately \$275,000 in research support from the company — hasn’t ended there. The researchers are now looking into whether the initiation of common antifungal agents at the time a blood sample is taken may interfere with the diagnostic results of the T2 system to traditional microbiology laboratory techniques.

Computational Identification-Susceptibility

Through the attention garnered from its work with T2 Biosystems, Garey and his UHCOP collaborators have been recruited to perform work on other projects in the rapid diagnostics realm.

Garey recently was awarded a one-year, \$60,787 grant to assess the potential medical utility of an investigational combinatorial identification/antimicrobial susceptibility testing platform developed by Accelerate Diagnostics, a Tuscon, Ariz.-based in vitro diagnostics company.

“What they have done is look at relevant bacterial and fungal organisms and capture how they change over time in terms of growth, morphology and other aspects after exposure to antimicrobials at different concentrations,” Garey said. “Based

continued next page



The UHCOP infectious diseases team of Kevin Gary, Jahangir Alam and Nicholas Beyda published the first results of their work with the T2 Biosystems platform for the rapid detection of *Candida* species infection.

continued from page 21

on this massive amount of supercomputing power, they're able to rapidly identify species as well as the actual phenotypic MIC (minimal inhibitory concentration) of the most commonly used antibiotics in clinical practice.

"It extends current capabilities by not only providing you with resistance traits, but also provides you with commonly used breakpoints of susceptible, intermediate and resistant organisms for the most relevant, commonly used antibiotics."

As part of the project, cultured isolates from hospitalized patients with *Staphylococcus aureus* or *Enterococcus* species bloodstream infections will be tested using the Accelerate ID/AST system compared to conventional methods and turnaround time. Gary's team also will conduct a medical chart review of the patient sample sources to determine what interventions may have been possible if the Accelerate diagnostic had been used in the patients' treatment.

Point-of-care *C. diff* Detection

Gary also has begun working with TechLab Inc., a leading company in the area of gastrointestinal diagnostics, especially in the area of *Clostridium difficile* detection. With the support of a one-year, \$62,400 grant from the Blacksburg, Va.-based TechLab, Gary is investigating how to optimize the company's handheld, disposable diagnostic tool for diagnosis of *C. diff* from a stool sample in about 20 minutes as a bedside, point-of-care tool.

"It's currently being used today, but due to some of the logistical limitations — such as when the patient is able to

provide a sample — we're looking at ways to improve the process," Gary said. "We're studying whether, for example, a technician could take a perirectal swab for the diagnostic test 20 minutes before the infectious diseases team's arrival, at which time the clinicians can have a positive or negative *C. diff* diagnosis."

This potential "jump-start" is in contrast to the time required for obtaining a diarrheal stool and all the other subsequent time periods for obtaining the diagnosis in the clinical microbiology laboratory, which is well beyond the point of time when primary therapeutic and infection control decisions are being made.

"Decisions such as isolating the patient typically aren't made until you have a *C. diff* diagnosis or whether you initiate empirical therapy vs. the more ideal evidence-based therapy, so it's a potential game-changer across the diagnosis and treatment spectrum," Gary said.

Circumventing Culture Stage for MALDI-TOF

Supported by a \$40,000 grant from the Roderick D. MacDonald Research Fund at Baylor St. Luke's Episcopal Hospital, Beyda and his Baylor St. Luke's colleagues Todd Lasco, Ph.D., section chief of Clinical Microbiology and Molecular Pathology, and Alejandro Restrepo, M.D., infectious disease physician, are investigating a new technique to further reduce the identification time of *Candida* species when using an automated rapid diagnostic system recently deployed at the hospital.

The system uses a mass spectroscopy technology called Matrix-

assisted Laser Desorption Ionization-Time of Flight (MALDI-TOF), which can identify bacterial and fungal species from positive blood cultures within minutes vs. days with traditional methods.

“Before the implementation of MALDI-TOF and other recent rapid diagnostic technologies, the entire process of species identification and susceptibility testing was very slow,” Beyda said. “Although MALDI-TOF by itself can shave about 24-48 hours from the process, we still have to incubate and grow the organism over a few days in a lab before it’s ready for the MALDI-TOF.

“What we’re trying to do is extract the organism directly from the blood sample and potentially save another day before we know exactly what we’re dealing with and consequently ensure we’re treating it appropriately.”

Beyda’s team is working specifically on *Candida* species as there has been little work done on fungal pathogens compared to bacterial species.

“Yeasts have a thicker cell wall compared to bacteria, so it’s a little harder for the machine to get a good fingerprint,” Beyda said. “The project aim is to test and validate our process to identify the specific strain of *Candida* and its susceptibility profile about 24-48 hours earlier, which should produce better patient outcomes and lower costs when part of routine clinical use.”

Real-Time Monitoring on Horizon

Thanks to Tam’s expertise in pharmacodynamics and pharmacokinetics, UHCOP is the only non-European Union partner in an 11-member consortium of academic, research, government and private entities spanning sites across Belgium, France, Spain and Estonia working on a nearly “real-time” dose-adjustment system for improving antimicrobial treatment of patients with hospital- or ventilator-associated pneumonia (HAP/VAP).

Supported by a \$500,000 subcontract award from project’s leader, the Université de Liège (Belgium), Tam has been assisting with the preclinical development platform for the project dubbed

MON4STRAT (or “Therapeutic Beta-Lactam Monitoring for Stratified Treatment of hospital-acquired pneumonia, improved dose-dependent efficacy, decreased treatment duration and prevention of emergence of resistance”).

As opposed to evaluating rapid diagnostic tests to correctly identify the infectious species, MON4STRAT’s approach focuses on optimizing dosing regimens after the species has been identified with the specific aim of targeting HAP/VAP, which together present a significant toll in patient morbidity and mortality as well as healthcare costs.

Although the β -lactams class of broad-spectrum antimicrobials (including penicillins, cephalosporins and carbapenems) remain the preferred agents for treating HAP/VAP, the patient’s underlying illnesses can significantly affect the patient’s end-organ functions and disposition of β -lactams, which creates significant variability in their pharmacokinetics and the corresponding blood levels.

“When you give a drug to a diverse population, you will not get the same exposure to the drug, largely due to pharmacokinetic variability among patients,” Tam said. “Now, when clinicians look at the culture results from the microbiology lab — such as species identification and the susceptibility profile — they are still using empirical data to guide antimicrobial dosing, which doesn’t allow for making patient-specific judgments due to the variability.

“With the MON4STRAT platform, we’ll get more precision — basically an individualized dosing regimen — by measuring blood concentration of the drug so you can make better judgments of whether you have enough exposure to reach the therapeutic target.”

The MON4STRAT device is designed to be housed within the intensive care unit, where personnel can get results back within one-half hour. Although some logistics are still being resolved, Tam said personnel likely will perform daily sample collections for the adult and pediatric patients in the full-scale European clinical trials expected to begin in summer 2016.

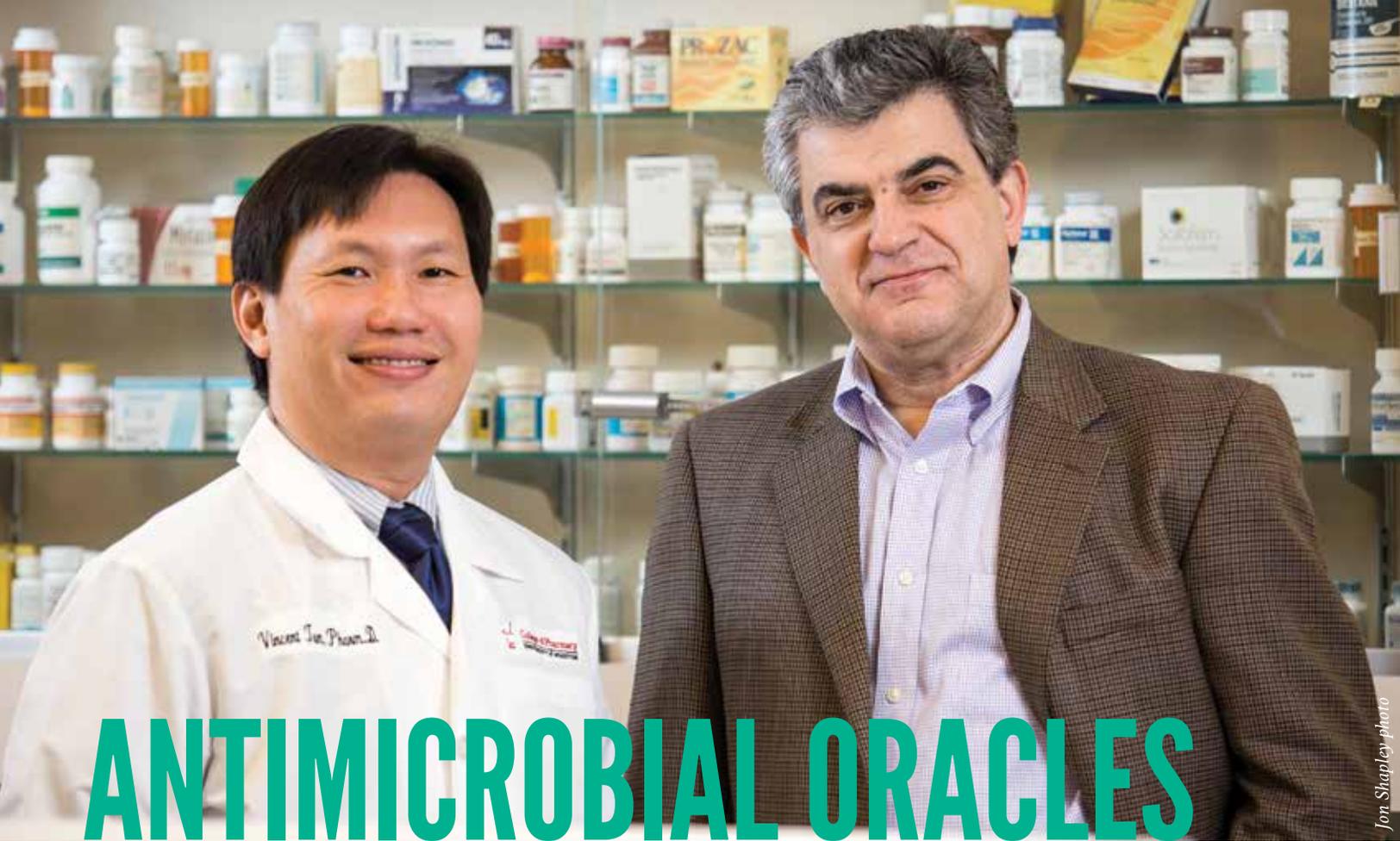
ICAAC Gives Top 10 Mycology Paper Nods to Faculty

Two *Clinical Infectious Diseases* journal articles authored or co-authored by UHCOP faculty members were among the Top 10 Papers of the Year in Medical Mycology at the 2015 Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC) Sept. 17-21.

Assistant Professor Nicholas D. Beyda, Pharm.D., BCPS, was recognized for the paper entitled “FKS Mutant *Candida glabrata*: Risk Factors and Outcomes in Patients with Candidemia.” His co-authors were fellow UHCOP faculty members M. Jahangir Alam, Ph.D., research assistant professor, and Kevin W. Garey, Pharm.D., M.S., FASHP, professor, as well as Todd Lasco, Ph.D., section chief, Clinical Microbiology and Molecular Pathology at CHI St.

Luke’s Health-Baylor St. Luke’s Medical Center. The paper, which also was an ICAAC honoree as an e-pub in the prior year, reported on the emergence of echinocandin-resistant fungal strains associated with previous echinocandin exposure and an underlying gastrointestinal disorder.

Garey also was a co-author with 11 other investigators on another publication recognized as a Top 10 paper at ICAAC. The paper, entitled “T2 Magnetic Resonance Assay for the Rapid Diagnosis of Candidemia in Whole Blood: A Clinical Trial,” detailed the multicenter trial of the T2Dx instrument and T2Candida assay developed T2 Biosystems Inc. The positive results of the trial led to FDA approval of the T2 platform for detection of five *Candida* species.



Jon Shapley photo

ANTIMICROBIAL ORACLES

TEAM REPORTS PROGRESS IN MODELING, SIMULATION SYSTEM FOR BETTER PREDICTING EFFECTIVE AGENTS, DOSING REGIMENS

The multidisciplinary collaboration of two UH faculty researchers which aims to revolutionize how clinicians can achieve optimal dosing of antimicrobial agents and potentially identify novel therapeutics is preparing to enter its next phase of development.

UH College of Pharmacy Professor **Vincent H. Tam**, Pharm.D., BCPS (AQ-ID), and UH Cullen College of Engineering Professor **Michael Nikolaou**, Ph.D., have been working on their mathematical modeling and computer-based simulation platform for the better part of a decade. During this time, their collaboration has drawn nearly \$1 million in funding from the National Institute of Allergy and Infectious Diseases and the National Science Foundation as well as the awarding of a U.S. Patent for the technology.

The team is taking a different approach to the decades-old method of seeking the maximum killing effect of a drug on the infectious micro-organism while avoiding both toxicity to the patient and the emergence of resistance.

“Today, we rely on the traditional microbiology approach of culturing an organism to identify the species and selecting a few antimicrobial agents to see if, and at what point, we achieve the minimal inhibitory concentration,” Tam said.

However, the traditional approach poses various and significant

logistic challenges to evaluating the true potential efficacy of combinatorial agents across a range of regimen variables, such as quantity, frequency intervals and other factors, Tam said.

“It’s very labor intensive; it takes a long time to get the results back from the microbiology lab; and you can’t do serial sampling for patients multiple times, because it’s too prohibitive to be adopted in routine clinical practice,” he said. “There’s no way you can ‘plate’ at the multiple, short-interval time periods we’re proposing that will be plugged into our algorithm in order to accurately guide drug dosing and reduce the overall timeline of completing clinical trials.”

Their design is to replace the traditional “trial-and-error” approach of antimicrobial drug development by extrapolating the effect of novel agents or combinatorial regimens on pathogenic species, with a special emphasis on complete eradication of potentially resistant bacterial subpopulations, in concert with the micro-organism’s growth cycle.

After refining their algorithm and generating preliminary data with the initial rounds of funding, the team is finalizing proposals for large-scale experiments to demonstrate its effectiveness. In preparation for this next phase, Tam and Nikolaou have identified a commercial partner to provide the automation hardware to implement their modeling system.

CHEMO-FREE THERAPY?

TRIVEDI'S DOD-BACKED EXPLOITS NOVEL TARGET TO AID IN MAKING SAFER REGIMENS FOR AGGRESSIVE BREAST CANCER

Despite the fact that nearly one-third to one-half of all pharmaceuticals in the marketplace actively target G-protein coupled receptors (GPCRs) — and consequently have been established as therapeutically safe for a variety of chronic diseases — this large class of membrane receptors is virtually unexplored as drug targets in breast cancer.

Assistant Professor **Meghna Trivedi**, Pharm.D. ('03), Ph.D. ('04), BCOP, is seeking to exploit drug candidates that target GPCRs to improve existing treatment regimens, making them more efficacious and less toxic. Trivedi and her collaborators have identified a member of the GPCR family, the GPR110 oncogene, as a potential target of an aggressive type of breast cancer in which HER2 (or human epidermal growth factor receptor 2) is overexpressed.

Supported by a three-year, \$688,622 U.S. Army Medical Research Acquisition Activity grant from the U.S. Department of Defense, Trivedi is investigating whether GPR110 is a viable target for designing drugs that can be used in combination with current or next-generation anti-HER2 therapeutics that result in regimens with better safety profiles and lower resistance-development potential.

"Most of our cytotoxic chemotherapies today target the dividing cells, whether they are tumor or healthy cells," Trivedi said. "As this 'all-or-nothing' approach is not ideal, we're looking at ways that we can be more selective in killing only the cancer cells while sparing the healthy ones."

In her initial work, Trivedi found that GPR110 expression increased in cancer cells made resistant to anti-HER2 therapies compared to drug-sensitive cells as well as in breast cancer stem cells compared to non-stem cells.

"These results suggest that the GPR110 plays some role in the development of tumors and eventual drug resistance to the HER2 therapies, potentially along the HER2 pathway or another pathway that crosstalks with HER2s," Trivedi said.

Trivedi's project will involve activating or inhibiting GPR110 in a large panel of preclinical breast cancer cell line models to determine whether genetic targeting of GPR110 can alter HER2 signaling and affect anti-HER2 therapy efficacy and resistance.



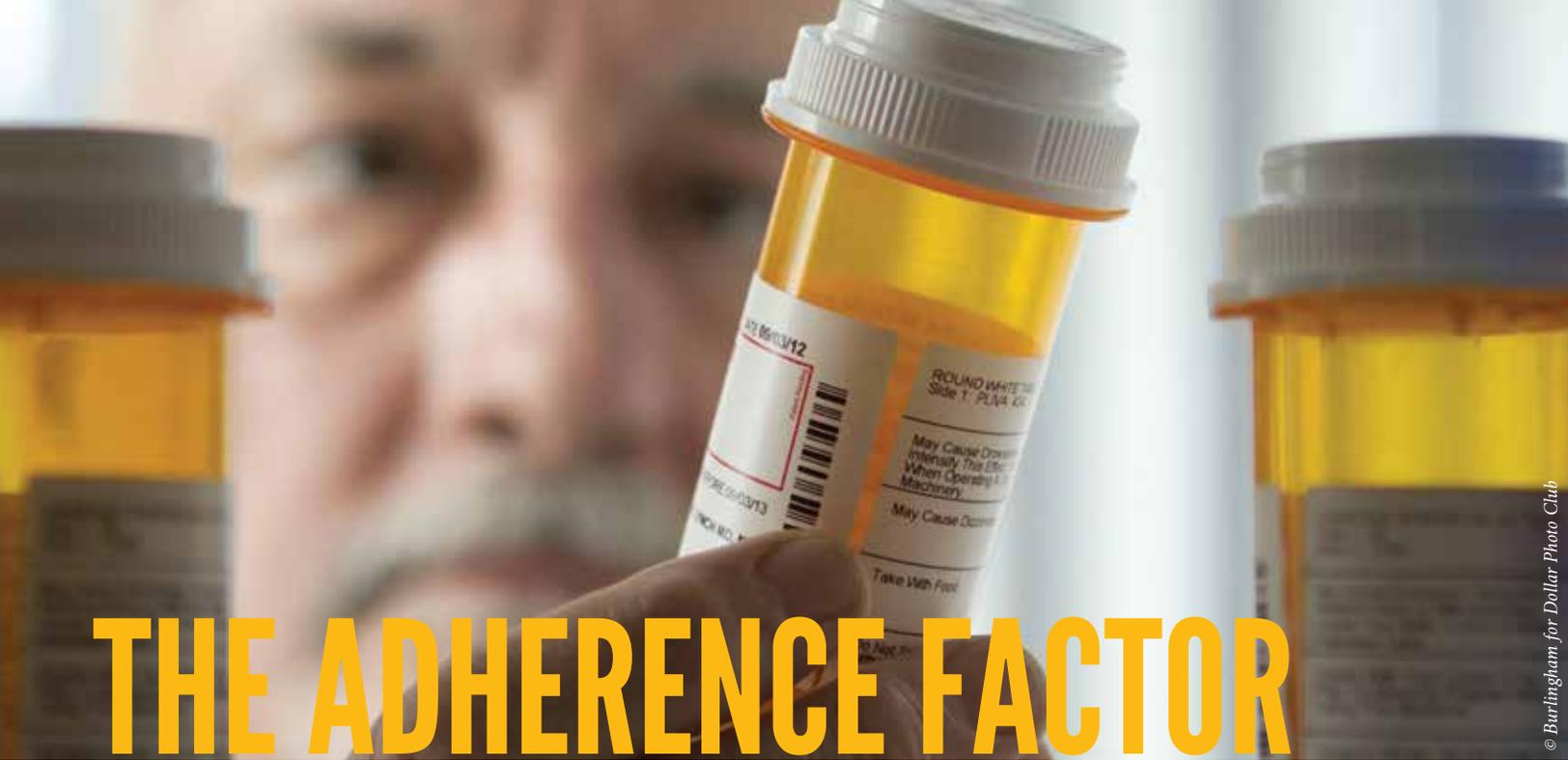
Assistant Professor Meghna Trivedi is investigating the role of the GPR110 receptor as a novel drug target for preventing, delaying or overcoming resistance to anti-HER2 therapy.

The project also will evaluate GPR110 expression in pre- and post-treatment tumor samples from approximately 200 patients treated with the "chemo-free" lapatinib+trastuzumab combination regimen as part of a clinical trial at Baylor College of Medicine under associate professors **Rachel Schiff**, Ph.D., and **Mothaffar Rimawi**, M.D.

The FDA-approved combination of lapatinib+trastuzumab has been shown as a less toxic and effective anticancer therapy but only for a small subset of patients with HER2-positive breast cancer.

"Based on our hypothesis, we would expect to see lower expression of GPR110 in patients who respond to the regimen and higher expression in patients who do not respond to it," Trivedi said. "Ultimately, we're interested in seeing the effects of modifying GPR110 expression at different points in response to the anti-HER2 regimen. We're also interested in seeing not only the time to resistance but also if resistance can be overcome after it develops."

The project's results could open the door for other applications exploring GPCRs as drug targets in breast cancer, given the receptor family's size and its well-established safety profile.



THE ADHERENCE FACTOR

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ABUGHOSH, SANSGIRY STUDY ROLES, IMPACT OF BEHAVIORAL, ECONOMIC FACTORS IN NONCOMPLIANCE COSTS, OUTCOMES

From increased hospitalization to development of comorbidities or complications, poor medication adherence presents a significant resource burden — estimated at \$100 billion to \$300 billion annually — across the entire spectrum of the healthcare system as well as a reduction in quality of life and a potential increase in mortality.

In three separate projects related to patients with chronic diseases, Department of Pharmaceutical Health Outcomes and Policy's **Susan Abughosh**, Ph.D., assistant professor, and **Sujit Sangsiry**, Ph.D., associate professor, are exploring potential interventions such as motivational interviewing techniques and a novel nonadherence prediction tool as well as determining the links and impacts between coverage gaps, adherence and hospitalization.

Supported by a \$50,000 grant from the PhRMA Foundation, Abughosh is studying the effectiveness of a motivational interviewing-based intervention by pharmacy students to improve adherence in patients with both diabetes and hypertension.

Motivational interviewing entails speaking to patients in a collaborative, empathetic way, Abughosh said, turning the provider-patient relationship into a partnership to help patients develop and understand their internal motivation to change their behavior.

"Just because you talk to the patient as an expert, it doesn't mean they will listen to you," she said. "We want to help patients identify why they are not taking their medication and collaboratively address any barriers."

With students trained in motivational interviewing calling patients who have neglected to pick up their refills, the project offers not only a potential tool for improving outcomes but also provides students with influential counseling skills they can

employ in their future practices.

In another project supported by a \$50,000 PhRMA Foundation grant, Sangsiry and PHOP alumna **Shivani Mhatre**, Ph.D. ('15), M.S. ('11), are developing an algorithm to identify diabetes patients at high risk for nonadherence from one year to the next.

This "early warning system" could allow pharmacists to make appropriate interventions before complications develop or progress as well as allow better resource utilization between those at higher risk for nonadherence and those at the lower end of the risk spectrum.

"If diabetes patients don't take their medication for some time, patients may not see an immediate health impact, but there is an immediate financial impact for managed-care plans in negative STAAR ratings," Sangsiry said. "However, nonadherence sets the stage for higher costs, reduced quality of life and a range of negative impacts for everyone in the longer term."

While the algorithm cannot be directly applied to other chronic diseases, Sangsiry said it is possible to create unique formulas that make similar predictions.

With a \$99,488 grant from GlaxoSmithKline, Sangsiry also is examining the impact of the coverage gap — the infamous "Donut Hole" — and the risk of hospitalization for patients with chronic obstructive pulmonary disease (COPD) in the Medicare Advantage Prescription Drug program.

In collaboration with Cigna-HealthSpring, Sangsiry's project will ascertain how many COPD patients actually become non-adherent once they hit a coverage gap.

Specifically, the project will measure the occurrence of hospitalization and ER visits, as well as patient, plan and medication characteristics, among COPD patients in relationship to the coverage gap and catastrophic coverage.

Graduate Investigators Shine in National Spotlight

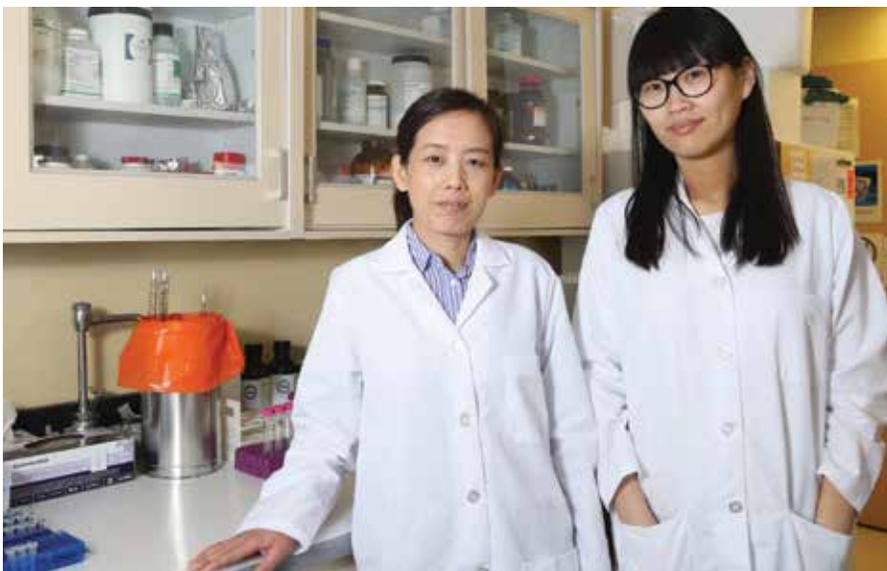
A current student and a recent graduate of UH College of Pharmacy's Pharmaceutics doctoral program recently won Student Abstract Awards from the American College of Clinical Pharmacology, marking the fifth consecutive year lab members of UHCOP Professor **Diana S-L. Chow, Ph.D.**, have been honored at the national meeting.

The 2015 awardees were **Lei Wu, Ph.D.**, who graduated in December 2014, and current Pharmaceutics doctoral candidate **Daping (Debbie) Zhang**. Each received a plaque and a \$1,000 honorarium after presenting their projects at the Annual Meeting Sept. 25-27 in San Francisco.

It was the third ACCP win for Wu, who is continuing her work with Chow as a postdoctoral research fellow. Wu's presentation was entitled "Assessment of bioequivalence of intranasal scopolamine using population analysis in human subjects exposed to a simulated microgravity environment." Co-authors on the project were Chow and the late **Lakshmi Putcha, Ph.D., M.S. ('75)**, a UH/UHCOP alumna, UHCOP Dean's Advisory Council member and chief pharmacologist at NASA who passed shortly before the meeting.

Funded by Houston-based Wyle Laboratories and NASA, the researchers have been working on the project since 2012. As part of an FDA Phase 2 clinical trial, the team has been evaluating the effectiveness of an intranasal form of the motion sickness therapeutic to help prevent or reverse the effects of space-motion sickness in International Space Station crew members.

Co-authored by Indiana University School of Medicine's **Jamie L. Renbarger, M.D., M.S.**, and Chow, Zhang's project was entitled "Explaining Variability in Pharmacokinetics of Mycophenolic Acid in Pediatric and Adult Patients with Hematopoietic Stem



Pharmaceutics graduate student Daping Zhang and post doctoral research fellow Lei Wu, Ph.D. ('14), received national awards from the American College of Clinical Pharmacology.

Cell Transplantation: From Plasma Protein Binding and Metabolic Perspectives."

The focus of the project was to investigate the inter- and intra-patient variability of mycophenolic acid (MPA), the active metabolite of an immunosuppressant prodrug mycophenolate mofetil (MMF) used in the prevention and treatment of graft-vs-host disease following hematopoietic stem cell transplantation (HSCT). The team examined the pharmacokinetic variations of MPA in samples from pediatric and adult patients after HSCT to gain insight for safe and rational dosing of MMF.

Pharmaceutical Health Outcomes and Policy Ph.D. candidate **Pratik Rane** was recognized with an "Early Stage Investigator" Certificate of Recognition from the American Gastroenterology Association for his research presented at the Digestive Disease Week 2015 meeting in Washington, D.C.

Using National Nursing Home Survey (NNHS) data collected by the U.S. Centers for Disease Control and Prevention, Rane and his co-authors found that nearly half (45 percent) of patients in nursing homes on proton pump inhibitors (PPIs) have been prescribed this therapy without an evidence-based indication.

Although PPIs are exceptionally well tolerated, rare but serious adverse events such as increased risk of enteric infections and impairments of bone metabolism are most likely to occur in the elderly. Many of the risks, including impaired metabolism of vitamin D and iron as well as risk of fracture, are likely to increase over time in the elderly.

Rane's study was conducted in collaboration with his advisor, UHCOP Professor **Rajender Aparasu, Ph.D.**, and The University of Texas Health Science Center gastroenterologist **Sushovan Guha, M.D., Ph.D.**



Pharmaceutical Health Outcomes and Policy Ph.D. candidate Pratik Rane was honored as an "Early Stage Investigator" by the American Gastroenterology Association.

RESCHEDULING RAMIFICATIONS

IS DEA'S TIGHTER GRIP ON HYDROCODONE PINCHING PRESCRIBERS, PATIENTS?

The reclassification of hydrocodone combination drugs from Schedule III to Schedule II by the DEA in October 2014 shut out an entire class of Texas healthcare providers – nurse practitioners and physician's assistants – from the legal authority to prescribe the drugs for their patients.

Assistant Professor Marc Fleming, Ph.D., MPH, R.Ph., is looking into whether this shift at the federal level has placed an undue burden on medical practices, especially in rural areas of the state where mid-level prescribers typically provide an essential bridge in patient care due to an undersupply of physicians.

The DEA's rescheduling of hydrocodone combo drugs, including such brand names as Vicodin, Norco and others, was intended to help reverse the upward trend of opioid-related deaths and addiction associated with the most prescribed drug in the U.S. marketplace.

Yet, as statutes relating to prescriptive authority vary by state, the new federal regulations may have produced unintended consequences of steering healthcare providers toward other, more problematic therapeutic options.

Fleming's work is being supported by a \$94,179 grant from Mallinckrodt Pharmaceuticals, a manufacturer of hydrocodone combination products. The Texas Medical Association, Association of Texas Nurse Practitioners, and Texas Academy of Physician Assistants assisted with the survey distribution.



Fleming Probes Pharmacists' Willingness to Counsel, Refer Patients with Prescription Opioid Dependence

What is the pharmacist's role — healthcare provider or police officer — as states grapple with controlling and reversing opioid addiction and opioid-associated deaths in the U.S.?

With the support of a \$10,000 New Investigator Grant from the American Association of Colleges of Pharmacy, UHCOP's **Marc Fleming**, Ph.D., MPH, R.Ph., is compiling the results of pharmacist focus groups about their use of the statewide prescription drug monitoring program known as Prescription Access in Texas (PAT).

The PAT system is part of the state's efforts to assist in the nationwide campaign to prevent and reduce diversion and fraud of controlled substances. Currently operated by the Texas Department of Public Safety, the PAT will move to the Texas State Board of Pharmacy as of Sept. 1, 2016.

Monitoring programs and the laws related to them vary by state (neither Texas nor federal laws specifically require pharmacists to consult the PAT database), but pharmacists nationwide have a legal

and ethical "due diligence" responsibility when dispensing controlled substances. A national database has been proposed, but it has failed to gain serious traction due to a lack of funding.

"We're trying to learn more about how pharmacists use the database and the information in it, including how — or even *if* — they engage the patient as well as identify any barriers and disincentives to using the PAT," he said. "We also want to get their perspectives on whether they believe they're adequately trained to offer addiction counseling or even refer the patient to appropriate help."

Fleming said he hopes his work will encourage further discussion on the role of pharmacists and prescribers in identifying and treating opioid addiction, including consideration of the privacy, safety and training concerns in current healthcare settings.

"One issue of concern is the physical layout of many community pharmacies today, where you typically don't have an area that is both private for the patient and safe for the pharmacist," he said.

Bench Notes

Greg D. Cuny, Ph.D., assistant professor, has received a two-year, \$140,000 American Heart Association grant for his project, titled "Probes to elucidate the role of BMP signaling in vasculature calcification." Cuny also is expected to receive \$404,469 as part of a five-year collaboration with Texas A&M University's Guan Zhu, Ph.D. The National Institutes of Health-funded project is titled "Developing therapeutics against Giardia and other anaerobic protozoa by targeting parasite fatty acyl-CoA synthetase (ACS)."

Kevin W. Garey, Pharm.D., M.S., FASHP, professor, has received two one-year awards from Merck & Co. Inc.: \$120,743 for his project, "Patterns of Healthcare Resource Utilization in Patients with *Clostridium difficile* Infections" and \$87,164 for his project, "Incidence, risk factors, and outcomes of *Clostridium difficile* infection (CDI) in patients with chronic liver disease."

Ming Hu, Ph.D., professor, has received a two-year, \$174,931 "Supplements to Promote Diversity in Health-Related Research" award to his R01 NIH grant, titled "Disposition of flavonoids via glucuronidation, critical role of efflux transporter." He also has received a \$152,758 NIH-funded subcontract award on a project titled "UGT Engineering for Detoxifying Anticancer Drug SN-38" with Xiaoqiang Wang, Ph.D., at the University of North Texas.

Bradley K. McConnell, Ph.D., FAHA, FAPS, associate professor,

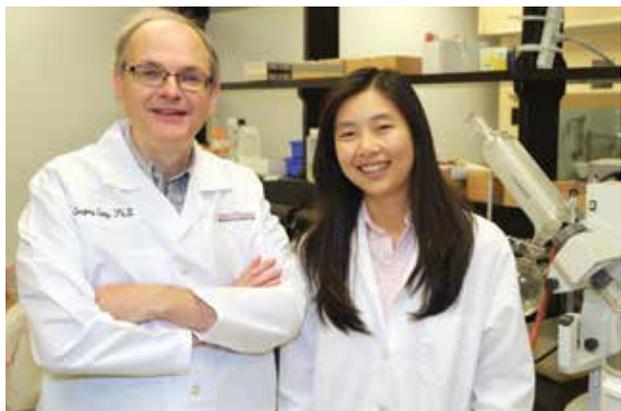
Research Funding Hits New Record of \$7.6M

UH College of Pharmacy achieved a new college record of \$7.64 million in grant support received during the 2014-15 Fiscal Year, surpassing the previous record of slightly more than \$6 million in 2010.

Among the factors contributing to the year's success were several new multiyear R01 and R15 awards from the National Institutes of Health as well as the hiring of new faculty with significant current or post-appointment NIH funding awards.

has received a \$62,657 subcontract award on a NIH-funded project titled "Effects of chronic catecholamine exposure on post-burn wound healing and scarring." The project leader is Celeste Finnerty, Ph.D., at The University of Texas Medical Branch at Galveston.

Student Research



MALTO

UH graduate Chemistry student **Chalada Suebsuwong**, who works in the lab of UHCOP Assistant Professor **Gregory Cuny, Ph.D.**, won the Robert A. Magarian Outstanding Podium Presentation Award at the 42nd Annual MALTO Medicinal Chemistry and Pharmacognosy Meeting-in-Miniature at the University of Mississippi. Suebsuwong's project was titled "Structure-based design of potent and selective DLG-out RIPK1 inhibitors." It was Suebsuwong's second win at MALTO, having captured the Thomas L. Lemke Outstanding Student Poster Presentation at the 40th MALTO meeting in 2013.

GRaSP

Pharmacology doctoral program student **Santosh Suryavanshi** and Pharmaceutical Health Outcomes and Policy (PHOP) doctoral program student **Ruta Sawant** received the People's Choice and First-runner Up awards, respectively, at the 2nd Annual UH Graduate Research and Scholarship Projects (GRaSP) Day Oct. 30. Working under advisor Associate Professor **Bradley McConnell, Ph.D., FAHA**, Suryavanshi presented "Absence of Gravin's Scaffolding Increases Cardiac Sensitivity to Calcium." A student of Associate Professor **Sujit Sansgiry, Ph.D.**, Sawant presented "Impact of Insulin Tier Status on Medication Adherence for MAPD Beneficiaries."



URD

Ahad Azimuddin, UH Honors Biomedical Sciences undergraduate student, earned the Audience Choice Award for his poster presentation at the 11th Annual UH Undergraduate Research Day Oct. 22. Ahad presented a project titled "Cardiac Calcium Cycling in Fortilin Deficient Mice," which was based on his volunteer work in the lab of UHCOP Associate Professor **Bradley K. McConnell, Ph.D., FAHA, FAPS**. Undergraduate Research Day is presented by the UH Office of Undergraduate Research in the UH Honors College.

MALTO 2016

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3rd ANNUAL PPS RESEARCH SYMPOSIUM

EVENT OFFERS STAGE FOR PRACTICING ART OF PRESENTATION

More than 40 diverse research projects within medicinal chemistry, pharmaceuticals and pharmacology were showcased at the 3rd Annual PPS Research Symposium sponsored by the Department of Pharmacological and Pharmaceutical Sciences (PPS).

Pharmacology Ph.D. student **Naimesh Solanki** won the graduate student poster presentation for “Grape powder supplementation prevents and reverses cognitive, behavioral and biochemical impairments in a rat model of social stress” (advisor: Assistant Professor Samina Salim, Ph.D.).

The graduate student oral presentation winner was **Sonal Singh**, who graduated in summer 2015, for her project, “Role of calcium desensitizing mutation of cardiac troponin C in the development of dilated cardiomyopathy” (advisor: Associate Professor **Bradley McConnell**, Ph.D., FAHA, FAPS).

The post-graduate oral presentation winner was **Jaspal Singh**, Ph.D., for “On-bead peptoid applications in molecular imaging tool development” (lab member of Associate Professor **D. Gomika Udugamasooriya**).

The Aug. 13-14 event presentations were evaluated by panel of distinguished researchers, including UHCOP alumni **Jaymin Shah**, Ph.D. ('88), Pfizer Research and Development research fellow and Pharmaceutical Sciences Team leader, and **Vihang A. Narkar**, Ph.D. ('97), assistant professor in the Center for Metabolic and Degenerative Diseases of the Institute of Molecular Medicine at The University of Texas Medical School at Houston.

Renowned neuroscientist **Yasmin Hurd**, Ph.D., of the Icahn School of Medicine in New York and the Mount Sinai Behavioral Health System, served as the symposium's Scholar-in-Residence.

Presentation Travel Awards

Pharmaceuticals doctoral student **Prajakta Gadgil**, a student of Professor **Diana S-L. Chow**, Ph.D., received a 2015 American Association of Pharmaceutical Scientists (AAPS) Pharmacokinetics, Pharmacodynamics and Drug Metabolism Section Travelship Award to present “Pharmacokinetics and Biodistribution with Enhanced Brain Delivery of Radio-protective Agent Lazaroid Using Lipid Based Nano-formulation” at the AAPS 2015 Annual Meeting Oct. 17-21 in San Francisco.

Infectious Diseases Pharmacy Fellow **Nancy Vuong**, Pharm.D., working with Professor **Kevin W. Garey**, M.S., Pharm.D., FASHP, received an ID Fellows Grant Program Travel Award to present their research at the 2015 Interscience Conference on Antimicrobial Agents and Chemotherapy Sept. 17-21 in San

Diego. **Vuong** made two oral presentations, titled “Patterns of Cytomegalovirus Antiviral Use and Associated Toxicities in Allogeneic Hematopoietic Stem-Cell Transplantation Recipients” and “Use of PROMIS Network to Evaluate Patient-Reported Health Status Associated with *Clostridium difficile* Infection.”

Pharmaceuticals doctoral program student **Jian Zhou**, working with Professor **Vincent H. Tam**, Pharm.D., BCPS (AQ-ID), received an American Society of Microbiology Student and Post-Doctoral Fellow Travel Award to present their research at the 2015 Interscience Conference on Antimicrobial Agents and Chemotherapy Sept. 17-21 in San Diego. Their project was titled “In Vivo Efficacy of Minocycline for Infections Caused by *Acinetobacter baumannii*.”



ACROSS THE BOARD

UH STUDENTS TAKE TOP HONORS AT NATIONAL, REGIONAL AND STATE LEVELS OF PROFESSIONAL PHARMACY ORGANIZATIONS



Left, members of the Upsilon Chapter of Phi Lambda Sigma and, above, the UHCOP SNPhA Chapter had much to celebrate after both chapters won National Chapter of the Year titles in 2015.

UH College of Pharmacy students distinguished themselves in competitive arenas at every level — national, regional and state — throughout 2015, from being crowned with student organization chapter awards to winning titles for clinical, disease state and self-care counseling skills.

The college’s streak of accolades began with the Upsilon Chapter of the Phi Lambda Sigma (PLS) National Leadership Society bringing home the National Chapter of the Year title from the organization’s 50th anniversary celebration and national meeting, which was held in conjunction with the American Pharmacists Association 2015 Meeting & Expo.

The award recognizes chapters based on their projects and activities from the previous academic year. The Upsilon chapter’s 2013-14 activities included a range of newly created and annual workshops, exercises, presentations and lectures and other events designed to promote leadership development through such topics as public speaking and communication, team-building, problem-solving, networking and professional advocacy.

Pharm.D. candidate Kathaleya “Kay” Yindeemark, past chapter president, credited the hard work by the entire chapter and its support network for helping realize the national honor.

“Being a member of Phi Lambda Sigma’s Upsilon chapter has given me the opportunity to work with students and

pharmacists who are highly motivated and passionate about seeing our profession grow,” Yindeemark said. “Our members have strongly supported the national goals of PLS through leadership enhancement and promotion. With the support of local pharmacists, as well as faculty and staff, the Upsilon chapter has been able to go above and beyond in providing opportunities for personal and professional growth and skill development.”

At the 2015 Texas Society of Health-System Pharmacists Annual Seminar in San Antonio, UHCOP pharmacy students nearly swept all of the live competitions.

The Clinical Skills Competition saw more than 60 teams from around the state battling it out in three class-year divisions. Repeating their success in the P2 category in the prior year, Sunny Bhakta and Salman Farooqui — both now Pharm.D. candidates — won the P3 division award in the 2015 competition. With the win by fellow students Marissa Blumenthal and Eric Kao, UHCOP kept the P2 division title in Houston.

Bhakta also captured the state title in the TSHP Disease State Management Competition, which required him to counsel a family member of the patient due to a language barrier.

At the Texas Pharmacy Association 2015 Conference & Expo, the UHCOP team of Heather Harrison, Ryan May, Ciara Will and

Our impact in the community is shown by organizations inviting us back to their events every year.

— Tracey Thomas, SNPhA

continued next page



UHCOP students Salman Farooqui, Marissa Blumenthal, Eric Kao and Sunny Bhakta won two divisions of the TSHP Clinical Skills Competition, while Bhakta claimed the statewide title in the Disease State Management Competition at the TSHP 2015 Annual Seminar.

Katie Williams brought home the trophy in the Texas Self-Care Championship.

Developed by the National Alliance of State Pharmacy Associations (NASPA) and the Nonprescription Medicines Academy (NMA) in 2006, the championship draws more than 150 colleges across more than 30 states. Using a format similar to a quiz bowl and the Jeopardy game show, the competition features teams going head to head as they attempt to correctly answer questions focusing on self-care and OTC medications.

Harrison said she’s seen first-hand how much patients rely on the knowledge and recommendations of the community pharmacist in the area of OTC and self-care.

“I have worked in some small towns where access to physicians is very limited, so I see patients with all kinds of ailments come to the pharmacist for self-care needs,” she said. “I think having a strong OTC knowledge base is so essential, because pharmacists in the community setting are the most easily accessible healthcare professional and often we are the first line of defense.”

In addition, Pharm.D. candidate **Pari Wafayee** was one of the three third-place finalists in the TPA Patient Counseling Competition.

Perseverance has paid off for the UHCOP’s Student National Pharmaceutical Association chapter, which claimed the SNPhA/ Rite Aid Chauncey I. Cooper Chapter Excellence Award at the organization’s 2015 Annual Meeting.

The chapter not only won the Overall National Chapter of the Year title against 90 U.S. chapters but also the top-ranked Large Category Chapter against 14 Large chapters with more 100 members each. The chapter had been a finalist for both awards in each of the previous three years, making the win even sweeter for the chapter and its faculty advisor **Louis Williams, Ph.D.**

“This award is solely a reflection of all the hard work and dedication put forth from our initiative chairs, officers and members,” said chapter past president **Tracey Thomas**. “Our impact in the community is shown by organizations inviting us back to their events every year.”

During the year, the chapter increased their



SSHP officers Kaitlin Wasko, Dao Ly and Meghann Davis were on-hand to discuss the chapter’s award-winning Residency Mentoring Social at the ASHP Clinical Midyear Meeting.

membership as well as the number of events and overall patient impact, logging nearly 500 hours of community service/patient care.

The UHCOP Chapter of the American Pharmacists Association-Academy of Student Pharmacists (APhA-ASP) secured the Operation Heart Award at the Region 6 Midyear Regional Meeting (MRM) Oct. 30-Nov. 1.

The award for Operation Heart, one of several initiatives promoted by the national APhA-ASP organization and implemented through local chapters, recognized the UHCOP chapter's work during the 2013-14 academic year.

Through collaborative events with non-profit and private organizations across Greater Houston, the chapter provided nearly 2,000 blood pressure, blood glucose and cholesterol screenings, body mass index measurements and seasonal flu immunizations. In addition, the chapter's outreach impacted thousands more through student-delivered radio and TV public service messages and one-on-one engagements as well as guided tours through a giant inflatable heart display.

At the 2015 American Society of Health-System Pharmacists' Midyear Clinical Meeting Dec. 6-10 in New Orleans, the UHCOP Chapter of the Student Society of Health-System Pharmacists received national recognition for its 10th Annual Residency Mentoring Social.

UHCOP was among two dozen chapters from across the U.S. honored with an Outstanding Professional Development Project



Pari Wafayee, left, and Caroline Root, right, join Kay Yindeemark in displaying the chapter's Operation Heart Award from the APhA-ASP Midyear Regional Meeting.

Award from the ASHP Student Forum. Hosted by the UH chapter in January of each year, the annual Residency Mentoring Social is a collaborative event open to Pharm.D. students at UHCOP and Texas Southern University.

With timed round-robin sessions, the event provides students with an opportunity to interact with residents and residency program directors from across the Greater Houston area. The 2015 event drew representatives from more than 19 residency programs and more than 100 students from UH and TSU.

The Residency Mentoring Social also was recognized earlier in the year with the Outstanding Program Award at the 2015 UH Campus Leaders Reception, which is hosted by the UH Center for



The UHCOP team of Ryan May, Heather Harrison, Katie Williams and Ciara Will are pictured at the start of the Texas Self-Care Championship at the Texas Pharmacy Association 2015 Conference & Expo.

Future Faculty Program Recruits UHCOP Students

Two UH College of Pharmacy doctoral program students — **Qinglan Ling** and **Aisha Vadhariya** — were among only 20 students from across the UH campus to be competitively selected for a program designed to help prospective academicians succeed through skill development and coaching.

The inaugural Future Faculty Fellowship (F3) is an initiative of the UH Graduate School and the Office of the Provost, with financial and curricular support from a National Science Foundation-funded network of more than 20 universities across the nation.

The year-long program began with a four-week “boot camp” last summer and continues with periodic workshops and seminars. Students who complete the program, including required teaching assignments, receive a \$1,800 fellowship award.

A Pharmacology Ph.D. student studying small GTPases in cognitive function under Assistant Professor **MariVi Tejada-Simon**, M.Ed. ('11), Ph.D., Ling said her interest in academia was passed down by her mother, who teaches at a high school in their native China.

“Recurring topics in our conversations included ways to inspire proactive learning and ways to effectively teach, given the diversity of each student’s abilities,” Ling said. “From this, I



Graduate students Qinglan Ling and Aisha Vadhariya were selected for the inaugural Future Faculty Fellowship program to train the next generation of research-focused teachers in higher education.

learned that teaching was both rewarding and challenging.”

Vadhariya, a Pharmaceutical Health Outcomes and Policy student working with Associate Professor **Michael Johnson**, Ph.D., to investigate medication risks and dementia in elderly patients, said she finds great reward in helping others understand difficult concepts.

“I have always found myself drawn to pursuing a career which allows independent research, the process of continuous learning and the diffusion of knowledge by mentorship and training of students,” Vadhariya said.

Student Accolades

Nine Pharmaceutical Health Outcomes and Policy Ph.D. students completed internships during summer 2015: **Archita Bhansali** and **Aylin Yucel** — AbbVie; **Nandita Kachru** and **Ruta Sawant** — Amgen; **Rohan Medhekar** — Biogen; **Pratik Rane** — EPI-Q; **Manvi Sharma** and **Navneet Upadhyay** — MD Anderson Cancer Center; and **Xin Wang** — Tufts Medical Center.

Pharm.D. candidate **Erin McGregor** won the 2015-16 UH American Pharmacists Association-Academy of Student Pharmacists Patient Counseling Competition and represented UHCOP in the national competition during the 2016 APHA Meeting and Expo March 4-7 in Baltimore.

Pharm.D. **Ashley Trojcak** was honored as the UHCOP Outstanding Chapter Member at the American Pharmacists Association-Academy of Student Pharmacists Region 6 Midyear Regional Meeting Oct. 30-Nov. 1.

Pharm.D. candidate **Stephanie Underwood** received a Student Travel Award to attend the American College of Clinical Pharmacy’s Global Conference on Clinical Pharmacy Oct. 17-21. Pharm.D. candidates **Nicholas Yarbrough** and **Anna Zulfiqar** represented UHCOP in the National Clinical Skills Competition at the ASHP Midyear Clinical Meeting Dec. 6-10.

The UH Chapter of the **Student National Pharmaceutical Association** has received its fourth consecutive \$2,000 grant from Target Pharmacy in support of the chapter’s annual spring community wellness event.

The **Kappa Psi Pharmaceutical Fraternity’s Delta Delta Chapter** at UHCOP presented a check for \$1,000 from its “Mr. Pharmacy Pageant” proceeds to the Greater Houston Chapter of the American Red Cross in August 2015.

LEGACY OF LEADERSHIP



photo courtesy of William Giang

WATSON, TRAN UPHOLD COLLEGE TRADITION OF STEPPING UP TO ADVANCE PROFESSION, MOTIVATE PEERS TO TAKE ACTION

UH College of Pharmacy students continue to rise to the challenge of pursuing leadership positions in professional pharmacy organizations beyond the state and local level, as the college recently marked its eighth consecutive year in which at least two students have held a regional or national position.

The latest students to stretch their wings outside of Texas are second-year student **Katrina Watson**, who was elected Region 6 Member At-large of the American Pharmacists Association-Academy of Student Pharmacists, and **Marc Tran**, who was appointed Regional Facilitator for Region IV in the Student National Pharmaceutical Association (SNPhA).

Watson, currently the UHCOP APhA-ASP Chapter's 2015-16 president-elect and who will assume the chapter presidency in fall 2016, was elected and installed into the Region 6 post at the APhA-ASP Midyear Regional Meeting Oct. 30-Nov. 1.

"I'm very thankful for the support of the entire chapter and the faith that our members have in me being able to hold both positions," Watson said, adding that she also intends to run for a national office. "I'm excited about the opportunity to increase communication within our region, especially through social media channels, and to do more to promote the great ideas and projects from the chapters and members in the region."

Currently a P3, Tran became the fourth consecutive UHCOP student to represent Region 4 on the SNPhA National Executive Committee upon his appointment to the post at the 2015 SNPhA Annual Meeting.

After finding success as co-chair of the chapter's Power to End Stroke initiative — which was voted Initiative of the Year by the chapter's membership — Tran sought ways he could serve the organization and the profession at a higher level.

"One of the things I wanted to accomplish is to bring more recognition to all of the great things being done by the individual chapters within our region and motivate those chapters and the other chapters to what can be achieved for our patients through teamwork," Tran said. "If there's one thing I've learned — and want to pass on to others — is that almost anything is possible if you have the determination, organization and the support of your team."



Students Record 1,300 Screenings, Shots in 8 hours

UH College of Pharmacy Pharm.D. students made their annual autumn trek to the Humble Civic Center Oct. 6 to provide more than 1,300 free seasonal flu immunizations and wellness screenings combined to residents of the Humble-Kingwood-Northeast Houston area.

Pharm.D. students performed 450 seasonal flu immunizations and nearly 900 wellness screenings ranging from blood pressure, blood glucose and cholesterol screenings to diabetic foot/metabolic syndrome, peripheral artery disease and mini mental status exams. In addition, UHCOP students and faculty preceptors counseled more than two dozen patients on their medications.

More than 100 UHCOP students, as well as about a dozen faculty preceptors and pharmacy residents from faculty members' clinical practice sites, participated in the event.



Pharm.D. student Tiffany Sieben shares a laugh with Kingwood resident Thomas Drapela after she administered a seasonal flu immunization at the Humble 55+ Health Fair in October.

The Humble 55+ Health Fair is a collaboration between UHCOP and Memorial Hermann Northeast Hospital's 55-Plus Program that stretches back roughly two decades.

Visit the college's YouTube Channel at <http://tinyurl.com/uhcop-youtube> to watch the video from the 2015 event.

Suryavanshi Draws Invitrogen 'Lab Citizen' Award

Running experiments, overseeing operation of the laboratory, supervising the work of other students, teaching and attending classes, preparing manuscripts and posters — the life of a graduate student can be a challenge for even the most organized, patient and driven among the ranks of future research leaders.

In spite of all his responsibilities, Pharmacology doctoral program student **Santosh Suryavanshi** recently was among the winners of the Invitrogen 2015 Science Hero Awards. Suryavanshi was recognized in the "Lab Citizen" category at the awards ceremony the company held in conjunction with the Society for Neuroscience's annual meeting Oct. 18-21 in Chicago.

Suryavanshi said he's a strong believer of what can be accomplished when everyone on the team is willing to roll up their sleeves.

"I always took special effort to ask senior lab members for help in their work to maintain a healthy working environment



Santosh Suryavanshi displays the Science Hero "Lab Citizen" Award from Invitrogen.

in the lab," he said. "I used to come in during weekends or sometimes late at night so that I could help my senior lab members in their work, then work on my own project during regular hours."

From his days as a junior member to his current status as the most senior member in the lab of advisor **Bradley K. McConnell, Ph.D., FAHA, FAPS**, Suryavanshi is always ready to take on the less glamorous duties, such as genotyping of mouse colonies or washing laboratory materials.

One of his nominators expressed awe and admiration of Suryavanshi's dedication and work ethic.

"It blows my mind how he even has time for me, considering that he has his own tasks and projects in the lab. I do not know how he does it, but he has always been a safety net for myself and those under him. What is even more

impressive is his ability to maintain his projects, keep a watch over the lab and the students in the lab and still help out without being asked."

FROST FINDS NICHE MOVING FROM BEDSIDE TO BOARDROOM



Craig Frost is the first to admit that he couldn't have imagined that a part-time pharmacy job as a West Texas teenager would lead to becoming a health-system pharmacy executive in the heart of the world's largest medical center and president of a statewide foundation aiding pharmacy students and researchers.

"I had two great uncles who were pharmacists, but it honestly wasn't foremost on my mind when I started working at the pharmacy my family used in Amarillo; it was more a matter of I wanted a job and had a driver's license," Frost said. "But, I was impressed how much trust the customers — back then in the community setting, we didn't refer to them as patients — gave to the pharmacist."

While taking pre-pharmacy courses at Texas Tech University, he met fellow UHCOP alumna **Theresa West**, R.Ph. (B.S. '88), a hospital pharmacist in Lubbock at the time who would become one of Frost's longtime friends and mentors.

"Theresa encouraged me to check out Houston, and I think the diversity I saw within the city opened me up to all the possibilities available in pharmacy," he said.

After graduating in 1992, Frost embarked on his lifelong career in health-system pharmacy, which led him to CHI St. Luke's Health-Baylor St. Luke's Medical Center (formerly St. Luke's Episcopal Hospital) in 1997. He has served as a preceptor for most of his career, but today primarily precepts pharmacy students and residents on management rotations.

"I started on a clinical pharmacy path, but soon realized I could better serve the profession on an administrative/leadership

track than at the bedside," he said. "What I enjoy the most about pharmacy and my role in it is the ability to continuously improve and manage change in a positive way."

After rising through the ranks at Baylor St. Luke's Medical Center — from staff to informatics pharmacist, then manager and associate vice president — Frost now serves as CHI St. Luke's Health division director of Pharmacy-Texas.

Frost completed his MBA at UH Bauer College of Business in 2006 shortly after being promoted to pharmacy manager under another mentor, **Joyce Tipton**, R.Ph. (B.S. '79), MBA, FASHP, and became a fellow of the American College of Healthcare Executives in 2015.

"The pharmacist, more than any others, is the most responsible to the business of health care," he said.

As if overseeing the entire pharmacy operations at Baylor St. Luke's Medical Center and working on a doctorate in Public Health weren't enough, Frost is the latest in a proud line of UHCOP alumni to lead the Texas Society of Health-System Pharmacists Research and Education Foundation. A member of the foundation's board of directors since 2009, Frost previously served as treasurer, chair of the poster competition and the organization's first president-elect before his installation as president in 2015.

"We're the largest state health-system pharmacy foundation, second only to the ASHP Foundation itself," Frost said. "I'm very honored to help guide and grow the foundation, because it's such a rewarding way to give back to the profession through our student scholarships, research grants, poster competitions and the Alcáldé conference for residents."

Alumni Mailbox



Class of 1965 Golden Cougars

1960s

Bruce Biundo, R.Ph. (B.S. '61), pharmacy consultant at PCCA and Dean's Advisory Council member, was recognized as PCCA's Employee of the Year for 2015.

UHCOP Class of 1965 alumni **James E. Casey, Sr.***, **Celso Cuellar, Jr.**, **Ray Denson**, **Wallace C. Kittman**, **Wilford Victor Morris, Jr.** and **J. Arly Nelson** were welcomed back to campus as Golden Cougars for the May 2015 Convocation in honor of the 50th anniversary of their college graduation. (*Casey passed in August 2015.)

1970s

Lourdes M. Cuellar, M.S. ('79), R.Ph. (B.S. '73), FASHP, TIRR, Memorial Hermann administrative director of Pharmacy, was co-editor and co-author on the 3rd edition of *ASHP Preceptor's Handbook for Pharmacists*.

ALUMNI PASSAGES

Eugene John Bartels, B.S. ('53), 11-16-2015

Harold Carson, B.S. ('62), 04-21-2015

James E. Casey, Sr., B.S. ('65), 8-29-2015

John S. Giglio, B.S. ('58), 1-10-2015

Mark Edwin Glaeser, B.S. ('61), 3-16-2015

Michael S. Hagos, B.S. ('92), 3-6-2015

Michelle E. Hamilton, Pharm.D. ('04), 2-8-2015

Robert S. Harker, B.S. ('53), 11-20-2015

Romualdo L. Herrera, B.S. ('51), 2-21-2015

Gary G. Heyland, Sr., B.S. ('60), 8-23-2015

Roy J. Mazzagate, Jr., B.S. ('67), 10-17-2015

1980s

F. Paul Lott, R.Ph. (B.S. '84), FASCP, owner of LLW Consulting Inc. and member of the UHCOP Dean's Advisory Council, was elected to serve in one of two Region 4 positions on the American Society of Consultant Pharmacists Board of Directors.

Gary K. Rice, R.Ph., M.S. ('84), M.B.A., CSP, has been promoted to senior vice president, Clinical Services, Education and Human Resources, at Diplomat Specialty Pharmacy in Flint, Mich.

1990s

Diane B. Ginsburg, Ph.D., M.S. ('90), R.Ph., FASHP, assistant dean for Student Affairs and clinical professor at The University of Texas at Austin College of Pharmacy, served as co-editor and co-author on the 3rd edition of *ASHP Preceptor's Handbook for Pharmacists*.

John Mohr, Pharm.D. ('98), has joined Tetrphase Pharmaceuticals based in Watertown, Mass., as vice president of Medical Affairs.

Vihang A. Narkar, Ph.D. ('97), assistant professor at The University of Texas Medical School at Houston's Institute of Molecular Medicine, was awarded a \$1.65 million National Institutes of Health grant for his project, "Regulation of angiogenesis by nuclear receptors and cofactors."

Lisa M. Scholz, Pharm.D. ('99), M.B.A., FAHRQ-PSIC, has joined Deerfield Beach, Fla.-based Sentry Data Systems Inc. as senior vice president of Market Strategy.

Jenny Downing Yoakum, R.Ph. (B.S. '97), pharmacist-in-charge at Med Shop Total Care Pharmacy in Longview, Texas, was appointed to the Texas State Board of Pharmacy by Gov. Greg Abbott.

Louise Stewart Newcombe, B.S. ('54), 11-2-2015

Vasanta Lakshmi Putcha, M.S. ('75), Ph.D. ('80) NSM, 9-28-2015

James Marvin Reynolds, B.S. ('73), 10-7-2015

Andres Rosas, B.S. ('82), 10-31-2015

Joe B. Schmidt, Jr., B.S. ('52), 1-26-2015

Dale Cutler Smith, B.S. ('51), 7-30-2015

Roberto Villarreal, B.S. ('69), 8-21-2015

Beverly Blackwood Watson, B.S. ('60), 7-19-2015

Robert Eugene Watson, B.S. ('63), 12-13-2015

Charles E. Wells, B.S. ('68), 10-02-2015

Lewis J. Wilson, B.S. ('59), 10-1-2015

2000s

Ola Adejuwon, Pharm.D. ('07), BCPS, passed the Board of Pharmacy Specialties exams to become a Board Certified Nutrition Support Pharmacist (BCNSP) and a Board Certified Critical Care Pharmacist (BCCCP). Adejuwon also recently joined Houston Methodist Willowbrook Hospital as a Critical Care Clinical Pharmacy Specialist.

Tasneem Bawa-Khalfe, Ph.D. Pharmacology ('03), has returned to UH as an assistant professor in the Department of Biology and Biochemistry and the Center for Nuclear Receptors and Cell Signaling.

Thani Gossai, Pharm.D. ('08), inpatient pharmacy manager at Michael E. DeBakey Veterans Affairs Medical Center in Houston, was installed as 2015-16 president of the Gulf Coast Society of Health-System Pharmacists.

Lori Markel, Pharm.D. ('08), recently opened the independent Sienna Compounding Pharmacy in Missouri City, Texas as pharmacist-in-charge and co-owner.

Denise Martinez Jonathan, Pharm.D. ('05), director of Pharmacy Health Plan Services for Kelsey-Seybold Clinic, and **Bamrom Jonathan**, Pharm.D. ('02), vice president of Pharmacy Operations at Universal American, welcomed their second child, Micah Bamrom Jonathan, in March 2015. Their first child, Ezra Bamrom Jonathan, celebrated his second birthday in December 2015.



Alex C. Varkey, Pharm.D. ('05), M.S., has been promoted to Director of Pharmacy Operations at Houston Methodist Hospital.

2010s

Bernadette Asias, Pharm.D. ('11), BCPS, Ambulatory Care clinical pharmacy specialist at Memorial Hermann-Texas Medical Center, and **Brian Dinh**, Pharm.D. ('11), Oncology clinical pharmacy specialist at Memorial Hermann-Texas Medical Center, married on April 18, 2015, in Pearland, Texas. (photo courtesy of Fernando Weberich, www.fernandoweberich.com)



Rachel Bedard, Pharm.D. ('13), BCPS, has joined INTEGRIS Health in Oklahoma City as a transplant clinical pharmacist.

Brandon Blake, Pharm.D. ('11), has joined Gale Compounding Pharmacy in Pearland as pharmacist-in-charge.

Bobby Clay, Pharm.D. ('14), has joined Correct Care Solutions in Beaumont, Texas as chief pharmacist.

Jennifer "Jenny" L. Collins, Pharm.D. ('14), married Ray Ali, Pharm.D., on April 25 in McKinney, Texas. The Alis both work for Wal-Mart in the greater Dallas/Fort Worth area.



What the 'Cool Kids' are Wearing

UH College of Pharmacy Dean F. Lamar Pritchard, Ph.D., R.Ph., invites UHCOP alumni to show off their pride and joy, in both their alma mater and their "Lil' Coogs" with a free, limited edition "Future Pharmacist" 12-month-sized T-shirt.

Simply contact Barbara Knight at 713.743.3705 or bwknight@uh.edu or Mary Reed at 713.743.1252 or mandress@uh.edu to confirm your mailing address. In exchange, we kindly request that you submit a photo of your "Lil' Coog" in the T-shirt as well as his or her birth month and year for publication in the Alumni Mailbox section of a future issue of *Interactions*.

Modeling the "Future Pharmacist" T-shirt at right is Ella Kathryn Pritchard, granddaughter of Dean Lamar Pritchard and Judy Pritchard.



Alumni Mailbox cont.

Mallory Gessner-Wharton, Pharm.D. ('11), M.S. ('13), Kingwood Medical Center clinical pharmacy manager, was installed as 2015-16 president-elect of the Gulf Coast Society of Health-System Pharmacists.

Katherine Clouser Hunt, Pharm.D. ('12), and **Tiffany Wright**, Pharm.D. ('12), have partnered to open their own independent Gulf Coast Compounding Pharmacy in League City, Texas.

Apurva Javkhedar, Ph.D. Pharmacology ('11), joined Bristol-Myers Squibb as a QC specialist.

Sandhya Mehta, Ph.D. Pharmaceutical Health Outcomes and Policy ('12), has joined Quintiles in Washington, D.C., as Epidemiology manager.

Tanay Samant, Ph.D. Pharmaceuticals ('13), has joined Novartis in East Hanover, N.J., as a senior scientist, Oncology Clinical Pharmacology.

Pranav Shah, Ph.D. Pharmaceuticals ('14), has been promoted to Scientist (ADME) at the National Institutes of Health's National Center for Advancing Translational Sciences in Bethesda, Md.

Renu Singh, Ph.D. Pharmaceuticals ('10), has joined the U.S. Food and Drug Administration in Washington, D.C., as a clinical pharmacology reviewer.

Michelle (Drumm) Thomson, Pharm.D. ('14), has been promoted to Director of Pharmacy at Texas Rehabilitation Hospital of Arlington in Arlington, Texas.



Cougar sightings at TPA 2015

Members of the Cougar Family spotted at the UHCOP Reception at the Texas Pharmacy Association 2015 Conference and Expo included, clockwise from top left, alumna Ashley Burns, Pharm.D. ('12), students Faizan Sattar, Erin McGregor and Katie Williams, alumna Leslie Myers, R.Ph. (B.S. '94); Larry McClaugherty, R.Ph. (B.S. '72), MPH, and John Rediger, R.Ph. (B.S. '66); Stephen Wyatt, Pharm.D. ('07), George Webb, R.Ph. (B.S. '51), and Celso Cuellar, R.Ph. (B.S. '65); and Paul Lott, R.Ph. (B.S. '84), FASCP, and Angela Andries-Lott, R.Ph. (B.S. '84), CGP, FASCP.

MOTHER'S ACT OF LOVE INSPIRES NGUYEN IN PROFESSION, LIFE



An act of love by her mother guided **Phuoc Anh (Anne) Nguyen, Pharm.D., M.S. ('15)**, into pharmacy and continues to inspire her to use her skills and training to serve others.

Raised in the Cypress area of northwest Houston since she was 9 years old, Nguyen earned her bachelor's and Pharm.D. degrees from The University of Texas at Austin before returning to her adopted hometown to complete the Pharmacy Leadership and Administration M.S./PGY1-PGY2 program at UHCOP and the Michael E. DeBakey Veteran Affairs Medical Center last summer.

A native of Vietnam, Nguyen recalls how her mother walked four hours from their village to the nearest city to retrieve an anti-malarial medication that she credits for saving her life. Through her past experiences with malaria and poverty, Nguyen is driven by a passion to integrate her interests in pharmacy and public health to improve patient outcomes not only in her primary job but her volunteer activities for the underserved.

Nguyen even missed her May 2015 UHCOP graduation to take part in a medical mission trip to Guatemala, serving on an interprofessional team that provided care for 2,000 patients of all ages and medical needs.

"It was challenging because I was tasked to manage many disease states that I was not familiar with in my training, like scabies, pediatric dosing, anti-parasitic therapies and others that are not commonly seen in the U.S.," Nguyen said. "It was mentally and physically demanding, but I loved every moment of it because of the impact on patient care in these underserved villages.

"Even though the pharmacy may be very hectic, I made sure I took time to talk to the patients on critical medications. I tried to communicate with the patients with my broken Spanish, and

I think they were amused with an Asian woman trying to speak their dialect."

After finishing the Houston Program, she obtained a hybrid administrative and clinical position at The University of Texas-MD Anderson Cancer Center as an internal medicine/transitions of care clinical pharmacy specialist. Her responsibilities include implementing a patient-centric pharmacy practice model by project coordination, education and training, mentoring, and oversight and participating in evaluation of outcomes, electronic health record development and clinical practice.

"I'm blessed to be in a position where I can help to change the pharmacy practice model at a large institution and empower our pharmacy staff and students to provide comprehensive patient-care services," Nguyen said. "It's critical to empower patients to understand their treatment regimen to improve medication education and adherence, and hopefully reduce emergency room visits and re-admissions."

Nguyen continues to be active in health-system pharmacy organizations, including as a director on the Gulf Coast Society of Health-System Pharmacists board, chair-elect of the Texas Society of Health-System Pharmacists New Practitioners Section and member of two American Society of Health-System Pharmacy advisory groups. Her past activities within TSHP earned her its Special Recognition Award for Organizational Service and the Leo F. and Anne Godley Resident Fellow Award, both in 2015.

While looking forward to participating in future medical mission trips, Nguyen is currently engaging in local community outreach projects with GCSHP and TSHP, including an event for a Houston-based "meals on wheels" nonprofit organization that provides food assistance to preschool-aged children.



DONOR SOCIETY CLOSING IN ON 150 MEMBERS LESS THAN 2 DECADES AFTER INCEPTION

Mading Society members inducted nine individuals into their ranks — bringing the total number of members to nearly 150 — at the 2015 Mading Society Induction and Dinner Oct. 16 at the Bell Tower on 34th Street in Houston.

The 2015 inductees have given back to the college in a variety of ways, including through endowed or annual scholarships, sponsorship of the college's annual golf tournament (which in turn provides scholarship and travel awards) and planned gifts.

The 2015 inductees were:

- Linda Vu Caesar, Pharm.D. ('98), and Greg Caesar;
- Carl W. Driever, Ph.D.;
- Joe Clay Fischer, Jr., R.Ph. (B.S. '86);
- Jennifer Harrison, Pharm.D. ('05), and Jeffrey Harrison, Pharm.D. ('05);
- Michael D. Monzingo, R.Ph. (B.S. '78); and
- Paula Sabrsula, R.Ph. (B.S. '84), and Scott Sabrsula.

In addition, the Mading Society also bestows its highest honor for those who have surpassed the milestone of \$100,000 in lifetime or cumulative giving: a Cougar red sports coat

emblazoned with the college coat-of-arms. Receiving the coat at the event was Class of 1965 Golden Cougar honoree and Dean's Advisory Council member Celso Cuellar, Jr., R.Ph. ('65), who has supported the college through endowed scholarships in memory of his parents and in honor of his sisters as well as gifts to the college's new home in Health and Biomedical Sciences Building 2.

The society was established in 1997 to recognize individual donors who have made gifts or bequests of \$10,000 or more to the college. In 1998, membership privileges were extended to corporations and foundations that contribute \$25,000 or more in cumulative gifts to the college.



Top, Dean Pritchard welcomes 2015 Mading Society inductees Jeffrey and Jennifer Harrison and Linda Vu and Greg Caesar. Above, Pritchard presented Celso Cuellar with the Mading Society red coat for his milestone in giving to the college.

Putting for the Pestle

Sponsors, Players Raise \$9,600 for Students at 2015 UHCOP Golf Classic

UH College of Pharmacy extends its sincere thanks to the 2015 UHCOP Golf Classic sponsors and players for raising \$9,600 in support of UH Pharm.D. students.

The 2015 sponsors were:

Gold – Jeff Harrison ('05) and Jennifer Harrison ('05), and Industrial Insulation & Sheet Metal Inc.

Silver – Brookshire Brothers, and Marshal Clouser ('66) and Katherine Clouser Hunt ('12);

Red & White – Doug Eikenburg, Fred Emmite ('77), Donald Lackey ('81), Kip Lackey and Pitney Bowes Foundation, Javier Manzano ('01), and David Wallace ('98) and Sarah Lake-Wallace ('00); and

Cougar – Chi-Ngo Chen ('02), Melchor Garza ('92), McKesson, Jim Rutan ('92), and Shara Zatopek ('74).

In addition, the committee expressed its appreciation to the following supporters who provided in-kind gifts and door prizes: CougarsDen.com, Edwin Watts Golf, Coy Edge, Doug Eikenburg, Golf Galaxy, Golfsmith, King's Biergarten, truecolorGRAPHICS/FastSigns, and David Wallace ('98) and Sarah Lake-Wallace ('00).

Rounding out the top teams and individual competition winners were: 2nd Place Gross – Jeff Hall, Larry Jones, Joe Murillo and Brian Parrish; 2nd Place Net – Mark Carter, Thomas Chen,



Above, the team of Rick Schneider, Dick Schneider, Fred Emmite and Kyle Schneider took home the First Place Low Gross title and, below, the team of Johnny Hargroue, Jim Rutan, Melchor Garza and Chuck Kneip won First Place Low Net.



Kathy Haydel and Matt Lageman; Closest to the Pin: Laura Edmundson (Women's division) and Melchor Garza (Men's division); and Longest Drive: Liz Coyle (Women's division) and Jim Rutan (Men's division).



Donor Roll Call Jan. 1, 2015 - Dec. 31, 2015

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Ms. April R. Yarbrough
Ms. Lois E. Yawman
Drs. Christopher and Kimthi Yuan
Ms. Michelle M. Yung and Mr. Pokil Wong
Ms. Shara L. Zatopek
Zions Management Services Company

UH College of Pharmacy regrets any errors or omissions in the Donor Roll Call, and would appreciate corrections sent to Matt Perkins at mrperkins@uh.edu or 713.743.6545.

Science and Research Building 2
 3455 Cullen Boulevard, Room 141
 Houston, Texas 77204-5000

CHANGE SERVICE REQUESTED

Calendar

April 22

UHCOP Reception @ TSHP 2016
 Embassy Suites, Frisco, TX
www.uh.edu/pharmacy/alumni-and-friends/
 Contact: Barbara Knight, 713.743.3705 or
bwknight@uh.edu; Mary Reed, 713.743.1252 or
mandress@uh.edu

May 12

Class of 2016 Awards Reception
 Hilton Hotel, UH Campus
<http://tinyurl.com/uhcop-grad>
 Contact: Adrien Turner, 713.743.1733 or
aktur@central.uh.edu

May 13

Convocation and Class of '66 Golden Cougar Walk
 Cullen Performance Hall, UH Campus
<http://tinyurl.com/uhcop-grad>
 Contact: Paige Pitman, 832.842.8376 or
ppitman@uh.edu (students); Barbara Knight,
 713.743.3705 or bwknight@uh.edu (alumni)

May 14

UH Class of 2016 Commencement
 TDECU Stadium, UH Campus
www.uh.edu/commencement
 Contact: Paige Pitman, 832.842.8376 or
ppitman@uh.edu

June 6

UHCOP Golf Classic
 Wildcat Golf Club, Houston, TX
<http://tinyurl.com/uhcop-golf>
 Contact: Barbara Knight, 713.743.3705 or
bwknight@uh.edu; Mary Reed, 713.743.1252 or
mandress@uh.edu

June 14-17

Pharmacy Summer Camp
 UHCOP TMC Campus
<http://tinyurl.com/uhcop-camp>
 Contact: Nekesa Sapp, 713.743.1261 or
nsapp@uh.edu