



UNIVERSITY of
HOUSTON
COLLEGE OF PHARMACY

Report to the
Texas Pharmacy Congress
Nov. 17-18, 2021

SNPhA, APhA-ASP Chapters Secure Clinical Skills, Health Initiative Awards

The UHCOP chapters of the Student National Pharmaceutical Association (SNPhA) and the American Pharmacists Association-Academy of Student Pharmacists (APhA-ASP) recently were honored with national and regional awards in several competition categories.

At the 2021 SNPhA Virtual National Convention July 29-Aug. 1, the UHCOP Chapter brought home wins for three of its health campaigns – HIV Health Outcomes Award, Project Keepsake (Chronic Kidney Disease) and Power to End Stroke – as well as the Bridging the Gap mentorship program.

For a second consecutive year, a UHCOP team secured the national title in the



P3 students Lauren Lee and Noemie Senawong won the 2021 Kroger/SNPhA Clinical Skills Competition at the SNPhA Virtual National Convention.

Kroger/SNPhA Clinical Skills Competition. The 2021 winning team comprised P3 students Lauren Lee, who also was on last year's

winning team, and Noemie Senawong.

In addition, several students received individual honors, including:

- Idris Yusuf — Region IV Facilitator appointee;
- Noemie Senawong — Dr. Craig and Sandra Ruffin Endowed Scholarship;
- Lauren Lee and Julie Nguyen — Rite Aid Community Leader of the Year Award nominees.

At the APhA-ASP Virtual Midyear Regional Meeting Nov. 1-4, the college's APhA-ASP Chapter won the Operation Diabetes and Operation Heart awards for Region VI.

UHCOP Joins RAPID Alliance Project to Develop Research Agenda, Vaccine and Medication Use Strategies

UHCOP has become the first institution in Texas to join the RAPID Alliance Medications 360 Study with a goal of transforming how medications and vaccines are delivered in the U.S. from 2022 to 2031.

The RAPID Alliance is a multi-stakeholder research consortium founded in the University of Louisville Center for Health Organization Transformation (CHOT), a National Science Foundation-funded research center. The college will help lead an all-hands-on-deck effort to co-create the "RAPID Alliance Medications 360 Framework 2022-2031," a set of transformational strategies and a nationally prioritized research agenda for optimizing the use of medications, vaccinations and other therapies.

UHCOP will contribute to this effort by supporting research and action in areas, including state-level strategies for Texas. In addition, UHCOP will help support special study sections on such topics as medication adherence, real-world evidence, prescription drug misuse, geriatric care, and chronic disease state management.

UHCOP joins more than 30 institutions nationwide in the initiative.

College Marks 75 Years Since Founding with Slate of Events

On Oct. 16, UH College of Pharmacy marked the 75th anniversary of its founding by the University of Houston Board of Regents' approval in 1946 to create the second pharmacy college in Texas.

Over the course of 2021-22, UHCOP is hosting several events to celebrate the college's diamond anniversary and 75 brilliant years of displaying "Character, Compassion, Competency and Courage" in teaching, research, service and patient care.

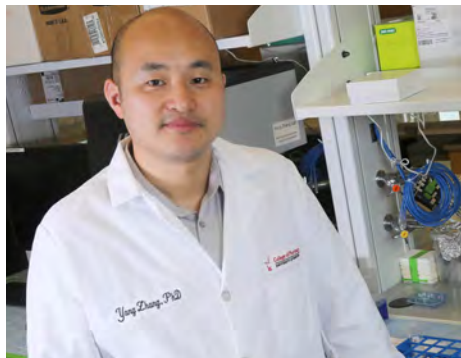
The largest event will be the 75th Anniversary Gala on Friday, Feb. 25, 2022, at the University of Houston Hilton Hotel. Ticket and sponsorship registration information for interested alumni, students and friends will be posted online in the coming weeks. Other planned events include the Phi Lambda Sigma James T. "Jim" McCarty Leadership Lecture in March/April and the UHCOP Golf Classic, which has been held annually (except in 2020) since 1979.

Zhang Receives \$2.5M NIH Grant to Study Arterial Hardening Mechanism

UHCOP's Yang Zhang, Ph.D., associate professor of pharmacology, has received a five-year, \$2.5 million National Heart Lung and Blood Institute grant to explore a new mechanism involving genes that regulate exosome secretion, which may contribute to the development of arterial calcification.

"Arterial calcification resembles osteogenesis, or bone formation, in which arterial smooth muscle cells (SMCs) within the arterial wall transform into osteoblast-like cells, or bone cells, that express many of the proteins associated with bone formation and release exosomes," Zhang said.

"Exosomes are not simply bystanders; they are released and bind to the extracellular matrix (EM), and the exosome-EM



niche serves as sites for the accumulation of crystals that are part of calcification."

Before exosomes are released, they could be degraded by lysosomes. Compromised lysosome function would enhance exosome

secretion and promote the development of arterial calcification.

"We observed that the deletion of a lysine methyltransferase gene in SMCs is associated with lysosome trafficking dysfunction, increased exosome release and enhanced osteogenic transformation in SMCs as well as accelerated arterial calcification," he said.

Zhang's lab is working to identify the factors affected by lysine methylation that may modulate lysosome-trafficking function.

"Our findings will help us understand how arterial hardening starts within cells at the very early stage of patients with cardiovascular risk factor, such as hyperlipidemia and hyperphosphatemia," Zhang said.

Faculty @ Research News

Susan M. Abughosh, Ph.D. associate professor, and **Hua Chen**, Ph.D., M.D., professor, have been awarded a two-year, \$390,000 grant from the CARsgen Therapeutics Corporation for the project, "Comparison of historical standard-of-care therapy with CAR-BCMA T CELLS (CT053) in lummicar study 2 in patients with myeloma."

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Karim A. Alkadhi, Ph.D., professor, has been recognized Expertscape as a "World Expert" in the subject area of "Hippocampal CA1 Region" and an "Expert" in the subject area of "Dentate Gyrus." Expertscape is an online platform that ranks experts according to the quality and quantity of their publications indexed in the National Library of Medicine's MEDLINE database.

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Richard Bond, Ph.D., professor, has received a \$541,415 sub-award contract from Duke University for the National Institute of Allergy and Infectious Diseases-funded R01 project, "Novel Biased Beta2-AR Ligands as Asthma Therapeutics."

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Kevin W. Garey, Pharm.D., M.S., FASHP, FIDSA, professor and department chair, has been elected 2021 Fellow of the American College of Clinical Pharmacy. Garey also has been awarded a three-year, \$149,613 subaward from FZata for the National Institute of Allergy and Infectious Diseases-funded project, "A Serological Assay for Neutralizing Antitoxin Response in Patients with Clostridioides difficile Infection (Phase II)" and a \$20,000 grant from "Clinical Validation of the CDIFF32 Pro Instrument" from Seres Therapeutics.

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Courtney Hunt, Ph.D., research manager assigned to the UH Drug Discovery Institute, has been appointed director of Strategic Research Development for the college. Hunt also was named the 2021 recipient of the Mid-Career Excellence Award by the Society for Research Administrators International.

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Zahra Majd, Pharm.D., a student in the Pharmaceutical Sciences-Pharmaceutical Health Outcomes and Policy Ph.D. program, was recognized with her second consecutive Bronze Medal at the 2021 AMCP Nexus Meeting Oct. 18-21 in Denver, Colo., for her project, "Understanding Barriers to Adherence Among ACEI/ARB Users from A Motivational Interviewing Telephonic Intervention."

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Hanan Qasim, Pharmaceutical Sciences-Pharmacology Concentration Ph.D. student, has been awarded a BCVS Abstract Travel Grant from the American Heart Association's Council on Basic Cardiovascular Science to present her project, "Cardiac AKAP12 Overexpression Reduces Cyclic Amp Accumulation in the Vicinity of β 2Ar," at the AHA Scientific Sessions 2021 Nov. 13-15 in Boston.

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Meghna Trivedi, Pharm.D., Ph.D., BCOP, associate professor, has been awarded a two-year, \$250,000 grant from the Cancer Prevention and Research Institute of Texas for her project, "Novel Pharmacodynamic Assay to Predict Response to CDK4/6 Inhibitor Therapy." Trivedi also has been named director of Clinical and Translational Research Programs for the college.

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College Welcomes Diec, Roy to Faculty

UHCOP recently welcomed new faculty members: Sandy Diec, Pharm.D., a clinical assistant professor in the Department of Pharmacy Practice and Translational Research, and Anirban Roy, Ph.D., a research assistant professor in the Department of Pharmacological and Pharmaceutical Sciences.



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Diec joins the college from Texas A&M University Irma Lerma Rangel College of Pharmacy, where she served as a clinical assistant professor with a clinical practice and preceptorship at the Baylor Scott & White Center for Diagnostic Medicine in Temple. Diec also worked as a clinical pharmacist/preceptor at Baylor Scott & White anticoagulation and family medicine clinics. Her first position with Baylor Scott & White Health was in a PGY1 community pharmacy residency program with an ambulatory care emphasis after earning her Pharm.D. from Texas Tech University Health Sciences Center in Abilene.

Diec has earned certificates in Medication Therapy Management from the American Pharmacists Association and TEAMSTEPPS Master Trainer from the Interprofessional Education Consortium.

She has authored/coauthored papers published in such peer-reviewed journals as *Expert Reviews in Endocrinology Metabolism*, the *American Journal of Health-System Pharmacy*, *Baylor University Medical Center Proceedings*, the *Journal of the American Pharmacists Association*, and *Cureus*. Diec also has presented her work at several national meetings of the American Society of Health-System Pharmacists, as well as continuing education sessions.

Diec was recognized with three awards in 2019: the Faculty/Staff Innovative Research Award at the 5th Annual Interprofessional

Education & Research Symposium Poster Competition for “Impact of a Tele-RX activity on students perceptions of IPE training,” P1 Teacher of the Year Award, and Best Preceptor of the Year Award.

Roy has worked as a UHCOP postdoctoral fellow in the laboratory of Ashok Kumar, Ph.D., Else and Philip Hargrove Endowed Professor of Drug Discovery and PPS department chair, since 2019. Roy also was a member of Kumar’s research team at their previous institution.

Roy’s primary research interest is studying the signaling mechanisms of skeletal muscle growth and atrophy. His present research focusses on understanding the role of TAK1-mediated signaling in genetic muscle disorders, cancer cachexia and aging. He also is investigating the role of IRE1-XBP1 arm of the unfolded protein response (UPR) during muscle regeneration and cancer cachexia. Kumar’s team has recently found that TAK1 protein is responsible for muscle hypertrophy and prevent muscle wasting following nerve damage.

Roy completed his bachelor’s and master’s degrees in biochemistry at the University of Calcutta, India. He initiated his doctoral studies at the Department of Biophysics at the Bose Institute, India, and received his Ph.D. degree from the University of Calcutta. Roy also received a European Molecular Biology Organization (EMBO) travel grant for presenting his research.

He serves as a review editor for the journals *Frontiers in Genetics* and *Frontiers in Cell and Developmental Biology*, and he has authored or coauthored research papers in such peer-reviewed journals as the *FASEB Journal*, *Molecular Cell Biology*, *Molecular Therapy*, *Biochemical Pharmacology*, and *Molecular Carcinogenesis*.

Faculty @ Research News (cont.)

held its 2021 PPS Research Symposium Aug. 12-13 in hybrid virtual/in-person format. This year’s Scholar-in-Residence was Thomas Kodadek, Ph.D., of the Scripps Research Institute. Among the poster and oral presentations winners and finalists were:

Graduate Student Poster Presentation (first-place tie): **Noor Adbulkareem** for “The interaction between ADGRF1 (GPR110) and Laminin-111 alters G-protein coupling and downstream signaling to inhibit tumorigenesis in HER-2-positive breast cancer”; and **Xue Zhou** for “Synthesis, physicochemical and biological evaluations of peptide-anticancer drug conjugates transport across the blood-brain barrier.”

Graduate Student Poster Presentation category were: **Wissarut Wijitrmektong**, first place, for “Expanding the Structure-Activity Relationship of CpCDPK1 Inhibitors for Cryptosporidiosis”; and **Guoyi Jiang**, second place, for “Peptide drug SP16: novel formulation and PK/PD for the treatment of ARDS [Acute respiratory distress syndrome].”

Winners of the Postdoctoral Fellow Oral Presentations category

were: **Anirban Roy**, Ph.D., first place, for “Targeted activation of TAK1 promotes skeletal muscle growth and protects from neurogenic atrophy”; and **Asif Zaman**, Ph.D., second place, for “Angiotensin-1-7 Protects Against Renal Ischemia-Reperfusion Injury via Regulating the Expression of Nrf2 and microRNAs in Fisher 344 Rats.”

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Faculty members **Anees Banday**, Ph.D., and **Xiang Li**, Ph.D., have been promoted to Research Professor and Research Associate Professor, respectively.

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Mingfu Wu, Ph.D., associate professor, is serving as co-investigator on a National Heart Lung and Blood Institute R01 grant project, “Understanding Cardiac C-Looping Using Microscale In Vitro Models,” awarded to Leo Q. Wan, Ph.D., FAHA, of Rensselaer Polytechnic Institute. The total subcontract award to Wu is \$150,185.

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