

ASIAN PACIFIC ISLANDER AMERICAN

HERITAGE MONTH
AT KU MEDICAL CENTER

Virtual Research Day
May 19, 2021 | 10 a.m. – 1 p.m.

WEDNESDAY, MAY 19 | 10 A.M. – 1 P.M.

ZOOM MEETING ID: 970 8142 3909

JOIN BY PHONE: +1 312 626 6799

10 A.M. – 12 P.M.

FACULTY, STAFF AND STUDENT RESEARCH PRESENTATIONS

12 1 P.M. | KEYNOTE ADDRESS

Venkat Sharma, Ph.D.

**Dean, College of Science and Health; Professor of Biology
William Patterson University**

As Dean and Professor of Biology at the College of Science and Health at William Patterson University (WPU) Venkat Sharma, Ph.D. oversees nine academic departments, consisting of approximately 300 faculty and 2,600 students. Prior to joining WPU, he served as the Founding Dean of the School of Natural and Mathematical Sciences and Professor of Biology at State University of New York (SUNY) and as Dean and Professor of Biology, School of Natural Sciences and Mathematics at University of West Alabama (UWA). Dr. Sharma completed a certificate in the Management of Leadership Education (MLE) program at Harvard University and at the American Association of State Colleges and Universities (AASCU), Millennium Leadership Initiative (MLI), Washington, D.C. He is also a member of a think tank group, Arden Society.

Dean Sharma has published extensively, serves on the editorial board of several journals and has been the reviewer for many granting agencies. He has also reviewed book chapters for *Molecular Biology of the Gene*, 5th Edition, by James D. Watson (Nobel Laureate) and *Fundamental & Applied Immunology*. His co-authored work has been cited by scores of investigators around the globe including Dr. Jonas Salk, inventor of Polio Vaccine.

Dr. Sharma has mentored over 100 undergraduate students in research, has supervised ten graduate thesis and six postdoctoral fellows and 12 early career scientists in the STEM discipline.

Dean Sharma Dr. Sharma has received multiple grants from Federal and Private foundations. Dean Sharma has initiated outreach and service learning activities at WPU, SUNY Oneonta, UWA, and UWF, such as Science Saturdays, Women in Sciences Educating Girls engaged in Math and Science (WISE GEMS), faculty forum to develop a community of learners, *Share Science* and Undergraduate Research Symposium (URS@NSM). Dean Sharma established several research laboratories in cybersecurity, plant genomics, environmental studies, watershed studies, and Laboratory of Cytokine Research. He also helped create a leadership program for faculty development in all his tenures.



CONTINUING EDUCATION CREDIT WILL BE AVAILABLE.

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PRESENTERS

"Liver Regeneration and Liver Cancer Pathogenesis"

UDAYAN APTE, PH.D., was born in India. After earning an MSc in zoology at Shivaji University, Kolhapur, Maharashtra, India, he came to the United States for his Ph.D. training at the University of Louisiana at Monroe in Toxicology. Dr. Apte completed his postdoctoral studies at Texas A&M University (2003-2004), followed by the University of Pittsburgh School of Medicine (2004-2008). Dr. Apte joined the faculty of the Department of Pharmacology, Toxicology & Therapeutics at KU Medical Center. He works on liver regeneration, liver cancer, and the effect of environmental contaminants on the liver. Hobbies include theater (he has his own active theater group in KC), cell phone photography, reading, and writing, including poetry.

"Circadian Clock Disruption in Chronic Inflammatory Lung Disease"

ISAAC SUNDAR, PH.D., is an Associate Professor in the Department of Internal Medicine, Division of Pulmonary, Critical Care and Sleep Medicine at the University of Kansas Medical Center. He is the principal investigator for the NIH/NHLBI-funded R01 that is focused on understanding the role of circadian clock molecule REV-ERB alpha in allergic asthma. Dr. Sundar received his bachelor's degree in Microbiology from the University of Madras, Chennai, India, and master's degree in Applied Microbiology from Periyar University, Salem, India. Later, he pursued his Ph.D. in Biotechnology from Pondicherry University, Puducherry, India.

"Inflammatory Factors in Chronic Kidney Diseases"

MADHULIKA SHARMA, PH.D., was born in Shimla and grew up in Palampur. Both these towns are located in the state "Himachal Pradesh," which sits in the arms of the Himalayas in India. Most of Dr. Sharma's education was in Saint Paul's High School, Palampur; DAV college Kangra; and Basic Science College, HPKV, Palampur. For her Ph.D., Dr. Sharma moved to a beautiful city in India (Chandigarh). Dr. Sharma finished her Ph.D. at the Post Graduate Institute of Medical Education and Research (PGIMER) Chandigarh. Dr. Sharma's first brief postdoctoral fellowship was in Mount Sinai School of Medicine, New York. Dr. Sharma moved to Kansas City in 2002 to work in kidney diseases under the guidance of Dr. Vanden Heuvel. Her family decided to settle down here and has been loving this place since.

"Role of VMP1 in Regulation of Hepatic Lipid Metabolism"

XIAOXIAO JIANG, Ph.D., obtained her Ph.D. degree in China at Fudan University in 2018. Then, she joined Dr. Wen-Xing Ding's lab as a postdoc at the University of Kansas medical center. Dr. Ding's lab research focuses on autophagy and apoptosis in liver injury, lipid metabolism and cancer therapy, mitochondrial damage, and mitophagy.

"Qigong Exercise for Managing Chronic Pain in Individuals with Fibromyalgia"

WEN LIU, PH.D., focuses the research in his laboratory on the rehabilitation of people with sensorimotor functional impairment after stroke, spinal cord injury, or sports injury. His lab has developed a novel walking training/exercise device that can help people to walk on a treadmill even though they cannot walk independently by themselves. They have also established a novel model in people with functional ankle instability after severe ankle injury. In recent research works, they have tested the Qigong exercise in patients with fibromyalgia, Parkinson's disease and cancer. Qigong exercise is a mind-body approach rooted in Chinese Traditional Medicine. Findings indicate that Qigong exercise may benefit those people by improving their symptoms in pain, fatigue and sleep dysfunction. Dr. Lui's research also examined the immune pathway and found that those improvements of Qigong exercise may be related to the changes in the inflammatory factors of the human body. Research works have been supported by NIH, National Science Foundation, American Heart Association, the University of Kansas, KU Medical Center and other provide foundations.

"Parenting Stress and Child Communication Skills in Autism"

SUMA SUSWARAM (she/her) holds a master's degree in Audiology and Speech Language Pathology from India. She is currently a doctoral candidate in the Intercampus Communication Disorders program. Her research focuses on the effects of culture on early communication skills in children with and without disabilities. In her dissertation, she is studying the link between parenting stress and early communication skills in children across two cultures. Apart from research, she also advocates for equity and inclusion in higher education at local (university), national (professional organization) and international (India). She is also a fluent multilingual who speaks five Indian languages and English.

"Central Mechanisms of Low Back Pain"

NEENA SHARMA, PT, PH.D., CMPT, is an associate professor in the Department of Physical Therapy, Rehabilitation Science, and Athletic Training within the SHP at the KUMC. Her clinical background is in orthopedics. Her research focus is low back pain. She conducts studies related to spine mechanics, central pain processing, effects of various conservative interventions in modulating low back pain, and outcome-based research following spine surgeries. Dr. Sharma grew up in the northwestern part of India, where she earned an undergraduate degree in psychology from the University of Jodhpur. She completed her graduate and post-graduate degrees at the University of Kansas Medical Center. She enjoys lifestyle activities and reading books about ancient civilization and history.

"Hospital Characteristics Associated with Patient Turnover in Acute Care Settings"

SHIN HYE PARK, Ph.D., RN, is an Associate Professor at the University of Kansas School of Nursing. Her research has been focused on the nursing workforce, nursing work environments, and their relationship to patient safety and quality of care. Dr. Park has been involved in various research projects on the nursing workforce and patient safety using large-scale databases. Her current R01 project (Role: PI) is funded by the Agency Healthcare Research and Quality (AHRQ) and aims to examine the effects of patient turnover on nursing care and patient outcomes in acute care hospital settings.

"Spontaneous Facet Joint Osteoarthritis in NFAT1-Mutant Mice"

JINXI WANG, M.D., PH.D., Dr. Jinxi Wang received his medical degree from Suzhou Medical College in China and PhD degree in cell biology as well as clinical training in orthopedic surgery from a joint program of Suzhou Medical College and Loma Linda University in California, followed by a postdoctoral fellowship in skeletal biology and orthopedic surgery at Harvard University Medical School and Boston Children's Hospital in Boston, Massachusetts. Currently, Dr. Wang is Harrington Distinguished Professor of Orthopedic Surgery, Professor of Biochemistry & Molecular Biology, and Director of the Harrington Laboratory for Molecular Orthopedics at the University of Kansas Medical Center. His major research areas include the role of collagenous biomaterials for osteoblast differentiation and bone regeneration, pathogenetic mechanisms of osteoarthritis, and chondrocyte differentiation and articular cartilage repair. His research program has been supported by the U.S. National Institutes of Health (NIH), the Department of Defense (DoD), and the Orthopedic Research Foundation. He has served as an associate editor and editorial board member for several biomedical journals. He has also served as a grant reviewer for the NIH, DoD, and several international medical research funding agencies. He has received many research awards from national and international organizations, including NIH, Orthopedic Research Society (USA), and International Society of Chemistry and Biology of Mineralized Tissues. In addition to the research and professional services, Dr. Wang teaches courses on musculoskeletal biology and specific skeletal diseases to medical students and orthopedic residents.

"Mitochondrial and Iron Defects in Alzheimer's Disease"

ANURADHA KALANI, PH.D., has been working as a senior research associate in the department of Alzheimer's disease Center at the University of Kansas Medical Center. Dr. Kalani is currently discovering novel mechanistic pathways and therapeutic options against neurodegenerative diseases, for example, Alzheimer's disease. Dr. Kalani earned a PhD from India in 2013 and postdoctoral training in brain sciences from the University of Louisville, Kentucky. Dr. Kalani published over 40 articles in peer-reviewed journals, and those publications received over 2000 citations. Dr. Kalani is the recipient of 20 awards and honors that include Excellence in Neuroscience and Mean Johnson research awards.

"Using Spatial Transcriptomics to Reveal Fetal Liver HSCs-Nice Interactions"

RUOCHEN DONG, PH.D., received his Ph.D. in Pharmacology from KU Medical Center in 2019. Dr. Dong's Ph.D. projects include the study of epithelium-mesenchymal transition and cancer stem cells in pancreatic cancer. Dr. Dong joined Dr. Linheng Li's laboratory after graduation. His current research interests are to investigate the hematopoietic stem cell niches during development. The studies provide novel insights into understanding the biology and development of hematopoietic stem cells and contribute to the expansion of hematopoietic stem cells *ex vivo*, which are extremely important in clinical applications.

"The Next Phase of Protein Folding and Assembly in Vivo"

YAN YAN, PH.D., received a Ph.D. in 2015 at Biophysics of Institute, Chinese Academia of Science, focusing on lipid-droplet biology and aging. From 2015-2017, Dr. Yan worked as an assistant professor at Biophysics of Institute (CAS) and focused on proteostasis and obesity. In October 2017, Dr. Yan joined the Kausik Si lab as a Postdoc to study protein folding, assembly and liquid-liquid phase separation.

"Good Fences Make Good Neighbors: Implications for Cancer Therapy"

SUFI THOMAS, PH.D., is an Associate Professor of Otolaryngology at the University of Kansas Medical Center. She holds secondary appointments in the Departments of Cancer Biology, and Anatomy and Cell Biology. In addition, she is a co-Leader in the Cancer Biology Program at the University of Kansas Cancer Center. Dr. Thomas completed her Ph.D. at the University of Mumbai in India and a postdoctoral fellowship at the University of Pittsburgh, Pennsylvania. Dr. Thomas joined KU Medical Center as an Associate Professor in 2013 and was awarded tenure in 2018. Dr. Thomas specializes in head and neck cancer translational research. Her lab is currently delineating the mechanisms whereby non-malignant cells in the tumor microenvironment facilitate head and neck cancer progression and response to therapy. She has published extensively, holds a patent for an antisense gene therapy approach, and developed several therapeutic approaches that have been tested in clinical trials. Her work is funded through the National Cancer Institute, where she serves as a member of a study section panel. Dr. Thomas also teaches several courses in the graduate school.

"Role of REST in Uterine Pathologies"

VARGHEESE CHENNATHUKUZZHI, PH.D., studied chemistry, earning BSc and MSc degrees before joining graduate school at the Indian Institute of Technology (IIT), Madras, India, for a Ph.D. in biochemistry. After graduating from IIT Madras, Dr. Chennathukuzhi spent two years at the Indian Institute of Science (IISc), Bangalore, before joining Dr. Norman Hecht's laboratory at the University of Pennsylvania, where his research was mainly on the mechanism of mRNA trafficking and translational regulation in male germ cells. During this time, Dr. Chennathukuzhi received a major research fellowship award from the Andrew W. Mellon Foundation to study the role of a novel kinesin motor protein in mRNA transport. After three years as a postdoc and three as a research fellow, he was recruited to work on contraceptive drug development in Wyeth, leading a research and development group working on contraceptive drug discovery, osteoporosis, endometriosis and uterine fibroids. Dr. Chennathukuzhi left the pharma industry in 2009 to join the Department of Molecular and Integrative Physiology and established a research laboratory to continue working on uterine fibroids. The lab's main focus is understanding the mechanisms that trigger and promote various uterine pathologies, including leiomyomata, adenomyosis and endometriosis. Various genetically modified rodent models are generated and utilized to study the pathogenic mechanisms of these diseases as well as to develop and test preclinical drug candidates. In addition, Dr. Chennathukuzhi's laboratory is involved in male contraceptive drug discovery and development.

"Infection and Cancer: The Link Could Be Stronger Than We Think"

SHAHID UMAR, PH.D., is a Professor of Surgery at KU Medical Center. Dr. Umar completed his Ph.D. from Central Drug Research Institute in India in 1993 and has been serving as a faculty in various institutions within the United States since 2001. Dr. Umar joined our faculty in 2011 and currently serves as the Vice-Chair of Research for the Department of Surgery. Research in Dr. Umar's laboratory is focused on the role of enteric pathogens in cell proliferation, cellular transformation, and neoplasia. His laboratory is investigating the role of the gut microbiome in colon cancer and if changes in gut bacteria can lead to drug resistance. In addition, his laboratory is also developing pre/probiotics to boost the immune system by promoting good bacteria in the gut. Dr. Umar's laboratory is funded by the National Cancer Institute (NCI) and the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK).