

PharmTox Weekly Buzz

(A publication of the UAMS Department of Pharmacology and Toxicology)

Week of July 19-23, 2021

A Winning Team!



Dr. Ho and Dr. Leung Receive High Score on R01

Professor and Vice Chancellor for Research Shuk-Mei Ho and associate professor Ricky Leung received an impact score of 20 corresponding to a percentile score of 3% on their revised R01 grant submitted in April as co-principal investigators! The application is titled “RNA modifications by paternal exposure to arsenic and intergenerational effects on sperm quality”. This grant will fund a five-year project with a requested direct cost of \$1.7 million. The grant was reviewed by panel members from the “Systemic Injury by Environmental Exposure” (SIEE) Study Section and was dual-assigned to the National Institute of Environmental Health Sciences (NIEHS) and the Eunice Kennedy Shriver National Institute of Child Health & Human Development (NICHD). This proposal addresses the emerging concern that paternal exposure to arsenic compromises sperm quality and male fertility in offspring. The team will apply nanopore sequencing technology to determine the role of small RNA epitranscriptomics in sperm that may contribute to the intergenerational effects and the sensitive period in the life course to the arsenic insult. Assistant professor Neville Tam and professor Jun Ying (Department of Biostatistics) were indispensable contributors and co-investigators on the team. Other significant players included Drs. Piroon Jenjaroenpun and Thidathip Wongsurawat from Mahidol University in Thailand, and Dr. Noriko Nakamura from the National Center for Toxicological Research (NCTR). The grant proposal was professionally edited by UAMS SciCom senior editor Kerry Evans and submitted by OSPAN grants administrator Amanda Richards.

Dr. Ho Receives New VA Merit Award

Professor Shuk-Mei Ho’s VA Biomedical Laboratory Research & Development Merit Award titled “Metal-induced cell-level changes in prostate epithelium and cancer risk” officially started July 1. The 4-year VA proposal with direct costs of \$708K received an impact score of 163 and a percentile score of 4.7% on first submission. The research team will use mouse models and functional assays to investigate the role of epithelial stem-like cells in prostate carcinogenesis and identify arsenic-associated signaling pathways in flow cytometry-sorted stem-like cells using single-cell transcriptomics technology. The key investigators in the project include associate professor Ricky Leung, assistant professor Neville Tam, and professor Jun Ying. Other supportive members in this team include SciCom senior editor Kerry Evans and from the Central Arkansas Veteran’s Healthcare System, Ralph Suarez, who prepared the budget. Professor Richard Owen and professor Richard Dennis provided administrative support during the proposal submission.