

SWOSU Biology Students Participate in Experiential Learning through Summer Research

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Eight students from the Department of Biological Sciences at Southwestern Oklahoma State University in Weatherford are engaged in making key discoveries through research this summer.

Each student is being supported because they were selected from a pool of applicants for these competitive positions.

Ashna Dhoonmoon of Mauritius, Alina Shrestha of Nepal and Tosha Williams of Mustang are conducting research at the University of Oklahoma Health Science Center. Brooke Rankin of Elgin is performing research at the Department of Biological Sciences at SWOSU. All four interns have secured support from the Oklahoma IDeA Network of Biomedical Research Excellence (OK-INBRE).

Dhoonmoon is performing research under the supervision of Dr. Zachary Dalebroux, assistant professor at the OUHSC Department of Microbiology and Immunology. Dhoonmoon's research analyzes suppressors that connects Cardiolipin homeostasis and Liposaccharide biogenesis in Salmonella.

Rankin is mentored by Dr. Andrea Holgado, associate professor and chair of the SWOSU Department of Biological Sciences. Rankin's research focuses on gaining a deeper understanding of the role of UNC-33 in autophagy and potentially Schizophrenia.

Shrestha is being mentored by Dr. David W. Dyer, professor at the OUHSC Department of Microbiology and Immunology, and by Michael W. Day of OUHSC Bioinformatics. Shrestha's research maps the ferric uptake regulator binding sites in *Neisseria gonorrhoeae* FA1090 by chromatin immunoprecipitation sequencing

Williams is mentored by Dr. David Sherry, associate professor at the OUHSC Department of Cell Biology. Williams' research investigates the effect of very-long chain saturated fatty acid deficiency on synapse formation in Hippocampal Neurons.

Jay Garber of Manhattan (KS), Brittney Le of Edmond, and Justin Lippard of Enid are performing research at the SWOSU Department of Biological Sciences as part of the Summer Mentoring and Research Training (SMaRT) Program funded by the Oklahoma Regents for Higher Education.

Garber is working under the mentorship of Dr. Regina McGrane, assistant professor at SWOSU. Garber's research project focuses on investigating the effects of varying surface conditions on plant pathogens.

Le is performing research under the supervision of Dr. Eric Paul, associate professor at SWOSU. Le's research project investigates whether a viral kinase is a requirement for the induction of cell death.

Lippard is performing research under the supervision of Holgado. Lippard's research project centers on developing molecular tool to study autophagy in *C. elegans*.

Jesse Velasco of Clinton is performing research at the Wistar Institute- University of Pennsylvania as part of the Summer Undergraduate Internship Program (SUIP) at the University of Pennsylvania. Velasco is working under the mentorship of Dr. Zachary Schug, assistant professor in the Molecular and Cellular Oncogenesis Program. Velasco's summer research aims to characterize a critical enzyme for cancer cells called Acetyl-CoA Synthetase 2.

Holgado said the impressive research efforts highlight the caliber of students in the SWOSU Department of Biological Sciences.