

SWOSU Student Wins Best Poster at Summer Research Symposium

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Southwestern Oklahoma State University honors program and biology student Ashley Powers-Watson of Loco recently won the best poster presentation at the Oklahoma IDeA Network of Biomedical Research Excellence (OK-INBRE) summer research symposium held at the University of Oklahoma Health Sciences Center in Oklahoma City.

Judges evaluated poster presentations from 57 summer undergraduates attending from out of state schools such as Duke University, Cornell University, California Institute of Technology plus many Oklahoma universities. Watson, a student on the SWOSU campus in Weatherford, ended up winning the prestigious award.

As one of two recipients of this award, Watson will represent SWOSU and OU-HSC during the 2017 Research Day at the State Capitol in Oklahoma City.

Watson performed research during the summer under the mentorship of Dr. Ding, associate professor at the University of Oklahoma Health Sciences Center Department of Cell Biology. Their research focused on increasing the understanding of the role of calcium channels in pathologies that lead to cone photoreceptor dystrophies.

Mutations in the cone cyclic nucleotide gated (CNG) channels are associated with cone dystrophies. Mice with CNG channel-deficiency undergo endoplasmic reticulum (ER) stress and cone photoreceptor cell death. This phenomenon is accompanied with altered activity of cyclic guanosine monophosphate (cGMP) dependent protein kinase (PKG) and ER stress.

A progress report of the effects of cGMP/PKG signaling on ER calcium channels and cone photoreceptor viability was presented by Watson at the 2016 OU- HSC summer undergraduate research symposium.