

SWOSU Group Presents at Prestigious Neuroscience 2011

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Two SWOSU biology students—Tanner Wheeler of Weatherford and Erica Benda of Yukon—and mentor Dr. Andrea Holgado (left) recently presented at the 2011 Neuroscience meeting in Washington D.C.

Southwestern Oklahoma State University students Erica Benda of Yukon and Tanner Wheeler of Weatherford, accompanied by SWOSU Assistant Professor Dr. Andrea Holgado, attended the 2011 Neuroscience international meeting that brought together over 32,000 neuroscientists from around the world.

The annual meeting in Washington D.C. is the premier venue for neuroscientists to debut cutting-edge research. Among the topics this year were learning, memory, Alzheimer's disease, Parkinson's disease and many more neurological disorders.

The SWOSU research group contributed to the discussion, presenting novel findings linked to neuronal communication and molecular mechanisms underlying this process.

"Synapses are dynamic signaling connections that aid in the transmission and execution of voluntary actions as well as involuntary reflexes," said Dr. Holgado. "The neuroscience laboratory at SWOSU is researching these dynamic connections and contributing to the understanding of conditions that include Alzheimer's, schizophrenia and epilepsy.

To do this, Holgado said the SWOSU group studies microscopic worms called *C. elegans*. Every nerve cell in the *C. elegans* nervous system is known and numbered, thus, making its nervous system much easier to study than that of some other organisms. Because of its simplicity, the SWOSU group targets specific sections in the nervous system and researches what proteins are being used in those synaptic connections.

"This allows us to study what is happening in the nervous system of an organism that is lacking that protein and see if there is anything that can be done to 'rescue' that organism from said defect," Holgado said.

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