

# SWOSU's Ubeidat Receives Grant for Biological Research

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Dr. Muatasem Ubeidat (center), associate professor in the SWOSU Biological Sciences Department in Weatherford, conducted research this summer with research members (from left): Christa Feasley, Jennifer Johnson, Chris Schafer, Yuechi Xu, Chris West, Hanke van der Wel, Dongmei Zhang and Zhou Wang.

Southwestern Oklahoma State University and Dr. Muatasem Ubeidat, associate professor in the SWOSU Biological Sciences Department in Weatherford, were recently awarded a \$14,500 INBRE grant from the National Institutes of Health through the University of Oklahoma Health Sciences Center.

Dr. Ubeidat's project titled "Genetic Analysis of O<sub>2</sub>-Signaling Using the Amoebazoan *Dictyostelium* as a Model" supports biological research at SWOSU. He conducted experiments this summer in the laboratory of Dr. Chris West at the Biomedical Research Center at OUHSC in Oklahoma City. The mutagenesis experiments were to identify the genes to generate loss-of-function mutants that overcome the shortage of O<sub>2</sub> (hypoxia) by forming fruiting body with spores.

Studies have suggested that at least 10 genes are involved in transducing the signal to allow the slugs to culminate and form a fruiting body. The short-term goal is to identify additional predicted genes to expand mechanistic understanding of pathway function in *Dictyostelium*. In the long term, Ubeidat anticipates the identification of key genes that are similar in pathogenic organisms such as *T. gondii*, the organism that causes toxoplasmosis in cats and humans. These genes can be used as drug targets for potential treatment of such infections.

The research opportunity award by NIH-INBRE helped Ubeidat establish research collaboration with Dr. West and OUHSC.