

SWOSU Student Working on Inflammatory Disease Research

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Southwestern Oklahoma State University senior Daniel Turner (center) of Woodward has been awarded a NASA research scholarship to perform research on the cells involved in inflammatory diseases, such as rheumatoid arthritis. Pictured with Turner are Madeline Baugher, NASA grant principle investigator, and Dr. Tim Hubin, assistant professor in the SWOSU Department of Chemistry.

Southwestern Oklahoma State University senior Daniel Turner of Woodward has been awarded a NASA research scholarship to perform research on the cells involved in inflammatory diseases, such as rheumatoid arthritis.

Turner, who is majoring in chemistry, will work under the tutelage of Dr. Tim Hubin, assistant professor in the SWOSU Department of Chemistry in Weatherford.

Their research will focus on CXCR4 chemokine receptors found on the surface of immune cells. CXCR4, when found with CXCL12, has involvement with a number of inflammatory diseases. CXCR4 and CCR5 co-receptors have been revealed as the entry route for HIV into cells, according to Hubin. CXCR4 expression has been reported in at least 23 different types of cancers.

Turner will synthesize and characterize the chemical properties of new analogues in a series of chemical compounds. Special emphasis will be placed on growing crystals for structural studies.

Southwestern Oklahoma State University is a member of the NASA Oklahoma Space Grant Consortium, which provides scholarship funds for students in science and technology areas at member institutions. SWOSU matches these funds with an equivalent amount of its own.

All scholarship awardees are required to volunteer 10 hours of their time to either the Stafford Air and Space Museum, located in Weatherford, or another appropriate community service organization. The grant principle investigator is Madeline Baugher, faculty member in the Department of Entrepreneurship and Computer Systems. More information about the program may be found at <http://www.swosu.edu/academics/ace/compsi/nasa/grant.asp>.