



NEWS RELEASE

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Mazalouskas to present research at professional meeting

Matthew D. Mazalouskas, a senior majoring in biology and biophysics at the University of Southern Indiana in Evansville, will present information about his participation in a summer research program in pharmacology at Vanderbilt University on October 17 during the fall meeting of the Indiana Academy of Science (IAS).

The goal of the research is to make discoveries that could lead to the development of better drugs to treat heart arrhythmias.

Mazalouskas, a 2000 graduate of South Side High School in Fort Wayne, Indiana, is the son of Karen Hill of Fort Wayne and Michael Mazalouskas of Crossville, Tennessee. He and other USI students and their faculty sponsors will attend the IAS meeting October 16-17 at Anderson University in Anderson, Indiana.

At Vanderbilt, Mazalouskas conducted research under the guidance of Katherine Murray, M.D., associate professor of medicine and pharmacology. She is a clinical and basic electrophysiologist whose research deals with the molecular biology of ion channels that regulate the human heartbeat.

Murray said the investigation seeks to identify the molecular composition of a channel that resides in the atrium of the human heart, but not the ventricle. Currently, drugs used to treat certain heart arrhythmias (the most common being atrial fibrillation) affect both the atria and the ventricles. The adverse effects in the ventricles can lead to new arrhythmias that cause sudden death.

Mazalouskas said that the discovery of the atria-specific potassium ion channel is relatively recent. During his 10 weeks at Vanderbilt, he worked in the laboratory to identify proteins that interact with this

potassium ion channel. Researchers want to understand how interacting protein partners might modify channel function.

Atrial fibrillation affects about two million Americans. It is the cause of approximately 15-25 percent of all strokes in the United States and costs the health care industry approximately 9 billion dollars each year.

Murray's research is supported by the National Heart, Lung, and Blood Institute of the National Institutes of Health. Mazalouskas was awarded a fellowship for undergraduate summer research by the American Society of Pharmacology and Experimental Therapeutics.

The research at Vanderbilt was the second summer experience in the laboratory for Mazalouskas. Under the direction of Dr. Marlene Shaw, USI professor of biology, in summer 2002, he conducted research related to the chick endoglin protein, a protein that functions in the formation of blood vessels.

Mazalouskas is a student worker for the third consecutive year in USI's genetics and microbiology labs. Shaw said that undergraduate research and student-worker experiences build on classroom experiences and enhance the student's hands-on skills, organizational and time management skills, and the ability to troubleshoot and think critically.

Following graduation from USI, Mazalouskas wants to enter an MD/PhD program. "There are so many exciting areas of research out there," he said.

Dr. Joey V. Barnett, associate professor of pharmacology and medicine at Vanderbilt, said the purpose of the summer research program at Vanderbilt is to recruit young scientists into research directed toward developing new therapeutic drugs.

"The students we select are those who have a strong science program and have expressed a desire to continue their interest in research by going to graduate school or medical school," he said.

Barnett is director of graduate studies in pharmacology and director of educational programs in Vanderbilt's Department of Pharmacology. He is a 1981 graduate of the University of Southern Indiana.

At USI, Mazalouskas holds the W. Paul and Mildred Torrington Presidential Scholarship. Presidential Scholarships are the University's most generous award, covering the cost of tuition, fees, books, and room and board for four years. Valedictorians and salutatorians from qualified Indiana high schools are eligible to apply.

The late Paul Torrington, an executive with Mead Johnson and Company in Evansville before his retirement, was one of USI's most generous benefactors. A wing of the University's \$ 23.1 million science and education classroom building that opened in August is named in his memory.

Located on a 300-acre suburban campus, the University of Southern Indiana has an enrollment of 9,899 students, including 52 from Allen County.