

# SOUTHERN ILLINOIS UNIVERSITY EDWARDSVILLE

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## **SEGUE: SIUE's DiSalvo Honored with Vaughnie Lindsay New Investigator Award**

On this week's episode of Segue, Southern Illinois University Edwardsville's weekly radio program exploring the lives and work of the people on campus and beyond, College of Arts and Sciences (CAS) Dean Greg Budzban, PhD, interviews Susanne DiSalvo, PhD, assistant professor in the Department of Biological Sciences and recipient of the Vaughnie Lindsay New Investigator Award.

This episode of Segue airs at 9 a.m. on Sunday, Feb. 23. Listeners can tune in to WSIE 88.7 FM The Sound or [siue.edu/wsie](http://siue.edu/wsie).

Although DiSalvo originally attended The Evergreen State College in Olympia, Wash. to study visual art, she quickly fell in love with biology while working in a bacteriophage lab as an undergraduate. She earned her doctorate in biology at Brown University in Providence, R.I. in 2012 and conducted postdoctoral research at Washington University in St. Louis before joining SIUE's faculty in 2016.

SIUE's Vaughnie Lindsay New Investigator Award is designed to recognize and support tenure-track faculty members whose research or creative activities have the promise of making significant contributions to their fields of study. The award was created by Stephen Hansen, former Graduate School dean, in honor of Vaughnie Lindsay, the School's first dean, who was responsible for creating much of the infrastructure that supports faculty research and scholarly activity throughout campus.

"Congratulations on everything you've accomplished in your career," says Budzban. "How did you become a professor in this field?"

"Because of my undergraduate experience at a smaller college, I've always liked the environment of close student-faculty interactions and being able to be a student learning in a lab," answers DiSalvo. "I wanted to be faculty of an institution like SIUE, where I could have undergraduates in the lab while still conducting strong research."

"You've had a fascinating journey," says Budzban. "After starting as a visual artist, you must have noticed that science has a beautiful tone."

“It certainly does,” responds DiSalvo. “I see the connection a lot more now than when I first started in biology. From the visual perspective, I love making figures and generating beautiful images for microscopy labs.”

In her lab, DiSalvo primarily focuses on studying the process of symbiosis, a close living together of two different organisms in which relationships can be neutral, positive or negative. She wishes to further the understanding of this symbiotic spectrum by studying the intimate interactions between amoeba hosts and their bacterial symbionts.

“What kinds of symbiotic relationships are you currently reviewing?” inquires Budzban.

“We are studying soil-dwelling amoebas that crawl around and eat bacteria,” says DiSalvo. “They engulf and digest bacteria as a food source, and in many cases, it’s possible that this interaction will cause the bacteria to evolve strategies either to avoid being eaten by an amoeba or to survive within that amoeba. We’ve been studying groups that serve a variety of bacteria that have longer-term associations with these amoebas.”

Throughout her time at SIUE, DiSalvo has been able to recreate the experiences that initiated her career for undergraduate and graduate students. Currently, nine students work in DiSalvo’s lab, where they are able to design their own projects while contributing to her research focus.

“The students bring my research forward and help me come up with more creative ideas,” says DiSalvo. “When experiments fail, which they do a lot, it can be quite frustrating, but students learn no matter what. There is no failure, because they’re getting these experiences and can learn from experiments that don’t work.”

“Scientists are always looking for the next stage of their research,” notes Budzban. “Tell us about where you see some of this going and what you’d like to be doing in the future.”

“With the help from this grant, I’ll be able to move from identifying and describing these interactions to understanding more of the molecular mechanisms mediating them,” says DiSalvo. “I hope to learn more about how bacteria invade and survive within host cells for better or worse, and what they do to the host to allow this to happen.”

Thanks to grants, DiSalvo will be able to employ two students in the lab to assist her in learning more about the mechanics driving symbiotic relationships. Funding will begin on July 1 and last until June 30, 2021.

Tune in at 9 a.m. on Sunday, Feb. 23, to WSIE 88.7 The Sound to hear the entire conversation.

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