



Derek Fisher, right, associate professor of microbiology at Southern Illinois University Carbondale, works with Tayla Harvey, left, and Ellen Werderitsch, center, both seniors in microbiology, in his laboratory. Fisher is teaming up with and Kyle Plunkett, associate professor of chemistry and biochemistry, to study ways to prevent chlamydia, a sexually transmitted disease that affects millions of people. Their work just received a second round of funding from the National Institutes of Health. The latest NIH grant of \$442,000 brings the total to almost \$860,000 since 2014 for the research. (Photo by Russell Bailey)

September 07, 2018

NIH grant funds chlamydia research

by Tim Crosby

CARBONDALE, Ill. -- The scourge of chlamydia is well known. The sexually transmitted disease typically wreaks havoc on younger people in the prime of their lives, resulting in infertility and in some cases life-threatening conditions.

A record high of 1.7 million cases were reported to the [Centers for Disease Control and Prevention](#) in 2017, making it the leading reported bacterial sexually transmitted infection. Still, about two-thirds of those carrying it are not aware of it, meaning it is often left untreated and spreads easily.

Drug treatment is available, but reinfection is common, leading the CDC to recommend post-treatment testing. The large scope of the public health problem has led the research community to actively pursue improved treatment approaches and vaccines.

For all its ferocity, however, [Chlamydia trachomatis](#) cannot live on its own. It needs to hijack a healthy mammalian cell, which it then manipulates into feeding and sheltering it. Two researchers at [Southern Illinois University Carbondale](#) are investigating how chlamydia survives within host cells.

SIU researchers team up for answers

[Derek Fisher](#), associate professor of [microbiology](#), and [Kyle Plunkett](#), associate professor of [chemistry and biochemistry](#), have teamed up on the research, which just received a second round of funding from the [National Institutes of Health](#). The latest NIH grant of \$442,000 brings the total to almost \$860,000 since 2014 for the research.

Fisher and Plunkett, along with graduate and undergraduate student researchers, are looking at a certain enzyme that that "flags" proteins by adding a phosphate molecule to them, as well as an enzyme that takes that molecule away. Such interactions – called phosphorylation – if better understood, could potentially lead to new drug therapies or vaccines that would prevent or better treat the disease.

Fisher and Plunkett aim to find a chemical means of interrupting this process, which relies on the lock-and-key relationships between certain proteins and enzymes. The researchers are looking at how the bacterium first infects a healthy cell, as well as how it replicates after doing so, and how it transitions back and forth between its two forms.

Media Contact

[Tim Crosby](#), public information coordinator, 618/453-5308

Upcoming Events

LGBTQ+ History Month Speaker

10/19/2023 5:00 PM - 7:00 PM

[VIEW DESCRIPTION](#)

LGBTQ+ History Month Speaker

10/19/2023 5:00 PM - 7:00 PM

[VIEW DESCRIPTION](#)

\$2 Billiards

10/19/2023

6:00 PM - 9:00 PM

[VIEW DESCRIPTION](#)

[VIEW ALL EVENTS](#)