



---

## Uploaded to the VFC Website

▶▶▶ 2017 ◀◀◀

---

This Document has been provided to you courtesy of Veterans-For-Change!

Feel free to pass to any veteran who might be able to use this information!

For thousands more files like this and hundreds of links to useful information, and hundreds of "Frequently Asked Questions, please go to:

[Veterans-For-Change](#)

---

*If Veterans don't help Veterans, who will?*

---

**Note:**

VFC is not liable for source information in this document, it is merely provided as a courtesy to our members & subscribers.



## Gut microbes influence severity of malaria

Published on February 9, 2016 at 12:08 AM

Microorganisms in the gut could play a role in reducing the severity of malaria, according to a new study co-authored by researchers at the University of Tennessee, Knoxville, and the University of Louisville.

Steven Wilhelm, the Kenneth and Blaire Mossman Professor in UT's Department of Microbiology, and Shawn Campagna, associate professor of chemistry at UT, partnered with Nathan Schmidt, assistant professor of microbiology and immunology at U of L, to examine the gut microbiomes of mice. They discovered that the severity of malaria is not only a function of the parasite or the host but also is influenced by the microbes in the infected organism.

The research could one day help scientists develop new treatments for malaria in humans.

The findings publish this week in the Proceedings of the National Academy of Sciences.

"Unfortunately, we are still years away from an effective and easily administered malaria vaccine, and drug resistance is a growing concern," Schmidt said.

Wilhelm added, "The research provides a potential new avenue to investigate factors that control the severity of malaria. With one million people dying each year, many of whom are young children, any approach that may save even a few lives is worth following up on."

Malaria is a mosquito-borne disease, and those with the illness often experience fever, chills and flu-like symptoms. It may be fatal if left untreated. Malaria transmissions typically occur in sub-Saharan Africa and South Asia.

During the study, the research team found that genetically similar mice acquired from different vendors showed significant differences in pathology after infection with malaria. The researchers measured the mice gut microbiomes—via DNA sequencing of the bacteria in the digestive tract—and noted significant differences within the different populations. Schmidt directly transferred the gut microbiomes to other mice and was able to show that the differences in disease severity were transferred.

The researchers observed an increased abundance of bacteria common in yogurt in the mice that exhibited reduced malaria pathology. When mice were fed a yogurt containing these bacteria the researchers discovered that the severity of malaria decreased.

"These results demonstrate the possibility of modifying the gut microbiome to prevent severe malaria," Schmidt said.

Wilhelm noted that while the research interventions lessened the severity of malaria in mice, it did not prevent or cure it.

The researchers are a long way from perfecting similar treatments in humans but are working on understanding the mechanism.

"A way to help people who are infected—and especially a simple and cheap way, as much of the infection occurs in the developing world—would be a great service to society," Wilhelm said.

---

Source:

University of Tennessee

---