

# CSU scientists bringing humans, guinea pigs together for TB tests

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Written by  
**Madeline Novey**

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In what CSU is calling the most realistic study of its kind, scientists are hoping to better understand how tuberculosis is transmitted, thanks in part to humans infected with the killer disease and hundreds of guinea pigs.

Supported by a \$1 million grant from the Bill and Melinda Gates Foundation, CSU researchers Diane Ordway, Randall Basaraba and Ian Orme will work out of the Airborne Infection Research facility near Pretoria, South Africa, one of the globe's tuberculosis hot spots. The trio works for CSU's renowned Mycobacteria Research Laboratories.

During the next several weeks, patients infected with TB will check into the research facility for treatment and will stay in a sealed ward. Air from the patients' rooms will be sucked into an animal exposure room, where 360 guinea pigs — some vaccinated against the disease and some not — will breathe air containing mycobacterium tuberculosis.

This test will illustrate what happens when the airborne pathogen is passed from person to person, a news release said. Some of the creatures will die, while some will stave off disease. Examining what happens on a genetic level, researchers hope to learn why some people are infected with TB and others aren't.

The guinea pig's pulmonary system is similar to the human system, making the animals ideal test models.

The results will be used to develop more effective vaccines and therapies to fight the disease that attacks the lungs and kills about 1.5 million people across the globe each year.