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## **Sarah Budischak Receives National Science Foundation Grant to Study “Superspreaders” and the Transmission of Infectious Disease**

### **Research in Finland Will Include Hands-On Opportunities for U.S. College Students and High School Teachers**

**CLAREMONT, CA** (4 September 2019)—W.M. Keck Science Department Assistant Professor of Biology Sarah Budischak received a National Science Foundation grant from the Ecology and Evolution of Infectious Diseases program to study how disease-carrying individuals can affect the health of populations and landscapes. The study seeks to better understand the role of “superspreaders,” or hosts that transmit illnesses at a higher rate than average infected individuals. Budischak is a co-principal investigator on the project, which will focus on wild bank voles infected with a strain of hantavirus, a disease that can spread from rodents to humans and cause respiratory issues and hemorrhagic fever.

“You probably know some people who are always catching colds and others who never get sick,” Budischak says. “Some individuals and environments are bigger spreaders of disease. A big missing link is how variation among individuals scales up to populations.”

Budischak will use field experiments, lab studies, and mathematical models to study the factors that drive individual infections and how those factors affect the way disease is spread at the population level and across landscapes. She will work alongside co-principal investigators Kris Forbes from the University of Arkansas, Clay Cressler from the University of Nebraska, and Richard Hall from the University of Georgia.

The principal investigator team will be joined in Finland by Scripps College and other science department students as well as high school teachers from each of the principal investigators’ local areas, including Los Angeles. Students and teachers will have the opportunity to pursue hands-on fieldwork. Students will design their own independent projects while also facilitating a large-scale international field project, working collaboratively with graduate and post-doctoral students from Finland and the U.S. The teachers will catch voles, record data, and assist in parasite counts and bacterial killing assays.

“I’m really excited to have high school teachers join us in Finland and experience how science really is a teamwork process,” Budischak says. “They’ll come back with firsthand knowledge that will hopefully inspire their students to go into—or at least better appreciate—the STEM fields.”



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