



## Svjetlana (Lana) Vojvodic

Assistant Professor  
Biological Sciences

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### Education:

BS (Biology), University of South Alabama  
MS (Biology), University of South Alabama  
PhD (Biology), University of Copenhagen  
Postdoctoral (Biology), University of Arizona

### Research Expertise:

Host-parasite interactions | Gut microbiome | Social insects

I am interested in understanding a range of symbiotic interactions, from pathogens to beneficial gut microbes. I integrate approaches from microbiology, epidemiology, functional genomics, and behavior in social insect model systems to study these interactions. Social insects live in large societies, much like human society, in which thousands of highly genetically related individuals interact in close proximity, putting them at high risk for disease outbreaks. Consequently, honey bees and most ants have evolved different mechanisms of disease resistance such as: individual innate immune responses; collective colony-level immune response known as social immunity; and immune response generated by beneficial symbionts (e.g., mutualistic microbes) found in/on individuals. I am investigating the honey bee diversity and function of gut microbiome; co-evolution and interactions of mutualistic bacteria and pathogenic fungi and the effect they have on bee immunity and behavior. By using social insect networks I am investigating pathogen spread and social immunity within the ant *Temnothorax curvispinosus*.

### Member of:

Entomological Society of America (<http://www.entsoc.org>)  
International Union for the Study of Social Insects (<http://www.iussi.org>)  
Society for Invertebrate Pathology (<http://www.sipweb.org>)  
Society for the Study of Evolution (<http://www.evolutionsociety.org>)  
Animal Behavior Society (<http://www.animalbehaviorsociety.org/web/index.php>)

### Recent Publications:

Keiser CN, Vojvodic S, Butler I, Sartain E, Rudolf VHW, Saltz JB (2017) Queen presence mediates the relationship between collective behaviour and disease susceptibility in ant colonies. *J Anim Ecol.* (doi: 10.1111/1365-2656.12696)

Vojvodic S, Johnson BR, Harpur B, Kent C, Zayed A, Anderson KE, Linksvayer TA (2015) The genomic signature of social interactions regulating honey bee caste development. *Ecol Evol.* 5:4795-4807.

Klinger EG, Vojvodic S, DeGrandi-Hoffman G, Welker DL, James RR (2015) Mixed infections illustrate virulence differences in host-specific bee pathogens. *J Invertebr Pathol.* 129:28-35.

Pontieri L, Vojvodic S, Graham R, Pedersen JS, Linksvayer TA (2014) Ant colonies prefer infected over uninfected nest sites. *PLoS One.* 9:e111961.

Vojvodic S, Rehan S, Anderson KE (2013) Microbial gut diversity of africanized and european honey bee larval instars. *PLoS One.* 8:e72106.