Reproductive division of labor is a group level trait that can be regulated using many different mechanisms (behavior, genetics, epigenetic, environment, etc.). Decisions about who is allowed to reproduce and who altruistically gives up its reproductive capacity lays at the heart of many evolutionary transitions, e.g. single to multicellularity or solitary to social live.

I am interested in both proximate and ultimate mechanisms that regulate reproductive division of labor. I will present three different projects where we asked questions about:

1. How/Why this decision is made during ontogeny (genetic caste determination in *Pogonomyrmex barbarous*)?
2. How/Why this decision is made between adults with the same reproductive capacity (primary polygyny in *P. californicus*)?
3. How/Why this decision is made over evolutionary times (Social parasitism - inquilines)?