

Putting all their eggs in the same basket: the social dimension of egg laying in *Drosophila*

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While being part of a group can be beneficial to an individual, joining groups that are too big or too small imposes costs through resource over-exploitation or vulnerability to natural enemies, respectively. This makes the ability to determine group size prior to joining, and to adapt to the group once in it, of vital importance. To understand these processes, we have developed group behavior assays in *Drosophila melanogaster* based on their natural tendency to lay eggs communally, and used the genetic tractability of this organism to dissect the mechanisms that allow individuals to choose and respond to their social context. In this lecture, I will present mechanisms that allow female fruit flies to join groups of flies that are neither too small nor too large to lay their eggs, as well as mechanisms used by females to modulate their physiology and behavior once they have joined a group. These findings in a species considered solitary illustrate the ubiquity and impact of social living for all of life and may be the basis for uncovering mechanisms regulating behavior and physiology in species with more complex sociality.