**Genetic influences on social behaviour in fruit fly larvae**

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Group living is associated with a number of costs and benefits, all of which must be taken into account when deciding to join others. Fruit flies (*Drosophila melanogaster*) provide an excellent model system for studying both the proximate and ultimate mechanisms underlying social behaviour. Like their adult counterparts, fruit fly larvae exhibit robust social behaviour, which includes both attraction to conspecifics and learning from social experience. Furthermore, the propensity for larvae to form groups changes throughout development, and varies across environmental conditions. We assessed how genetic factors influenced larval aggregation behaviour, specifically how it varied amongst natural populations, and in larvae carrying different alleles of the foraging gene. The two foraging morphs showed differences in how aggregation behaviour changed throughout development. We also found that there were distinct patterns of aggregation between different wild caught isofemale lines. The differences between these lines were consistent across several consecutive generations. Our results suggest that larval social behaviour, specifically aggregation, shows heritable variation that extends beyond a single gene. Differences between spatially distinct natural populations may reflect adaptation to ecological conditions that favour either solitary or group living.