

# **The Influence of Living Partners on the Stress Resistance and Lifespan of *Drosophila Melanogaster***

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Aging society and elderly population are growing rapidly worldwide. Studies have confirmed that multiple factors like mating, diet, stress, social interactions and others could affect our health and lifespan. Fruit fly, *Drosophila melanogaster*, has short life cycle and powerful genetic tools. It can perform basic activity to complex social communications making it an ideal organism for the study of aging mechanisms and social behavior. In this project we explored the influence of different strains or species of social partners influencing the lifespan of target fly. Our results indicate that target flies showed shorter lifespan after being cohoused with different strains of donor fly. Living with social partners with shorter lifespan decreased starvation and desiccation resistances. These results showed that social partners could have impacts on fly aging and physiology.

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