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Title: Time period in which mated Nasonia vitripennis females can lay maximum number of female progenies

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Keywords: Nasonia vitripennis

alphaproteobacteria feminization

Issue Apr-2020

Date:

Publisher: IISERM

Abstract:

Wolbachia is an endosymbiotic bacteria that infects terrestrial arthropods and nematodes. It belongs to the class of gram negative alphaproteobacteria. Since it is a maternally inherited bacteria, it tries to increase the number of infected females in the host population by introducing different reproductive alterations in the host such as parthenogenesis, feminization of genetic females, cytoplasmic incompatibility (CI) and male killing. According to recent studies, Wolbachia have been divided into 18 supergroup (A-R). Out of these, supergroup A and B are commonly found in arthropods. Nasonia vitripennis (a parasitoid wasp species, which is infected with both Wobachia A and B supergroup) was the model system of this study. A mated N. vitripennis female can lay both fertilized and unfertilized eggs. Primary investigation of this work was to figure out a time period (time window) to host the mated females to get maximum number of female progenies. In future work, this time period will be used to collect the different female developmental stages to study the dynamics of different Wolbachia supergroup across female development. This study also aims to figure out the fecundity of mated N. vitripennis females of all the four infection types (A, B, AB and Cured) by hosting it at different time periods. The wide goal of this study is to understand the existence of multiple infections (supergroup A and B) in same Nasonia vitripennis host and why such infection type is more prevalent in natural environment than single infections.

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