

Accepted Manuscript

Male accessory gland proteins affect differentially female sexual receptivity and remating in closely related *Drosophila* species

Béatrice Denis, Gaëlle Claisse, Arnaud Le Rouzic, Claude Wicker-Thomas, Gildas Lepennetier, Dominique Joly

PII: S0022-1910(16)30423-1

DOI: <http://dx.doi.org/10.1016/j.jinsphys.2017.03.008>

Reference: IP 3627

To appear in: *Journal of Insect Physiology*

Received Date: 1 December 2016

Revised Date: 17 March 2017

Accepted Date: 18 March 2017

Please cite this article as: Denis, B., Claisse, G., Rouzic, A.L., Wicker-Thomas, C., Lepennetier, G., Joly, D., Male accessory gland proteins affect differentially female sexual receptivity and remating in closely related *Drosophila* species, *Journal of Insect Physiology* (2017), doi: <http://dx.doi.org/10.1016/j.jinsphys.2017.03.008>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.



Male accessory gland proteins affect differentially female sexual receptivity and remating in closely related *Drosophila* species

Béatrice Denis*, Gaëlle Claisse*, Arnaud Le Rouzic, Claude Wicker-Thomas, Gildas Lepennetier[§] and Dominique Joly[#]

* *The first two authors contributed equally and must be considered as first authors*

Laboratoire Evolution, Génomes, Comportements, Ecologie, UMR 9191, CNRS, IRD, Université Paris-Sud and Université Paris-Saclay, 91198 Gif-sur-Yvette Cedex, France

[§]Present address: Institute for Evolution and Biodiversity, Evolutionary Cell Biology, Kavaliershäuschen, Schlossplatz 6, D-48149 Münster

[#]Corresponding author: Dominique.Joly@egce.cnrs-gif.fr

List of authors'e-mails

Beatrice.Denis@egce.cnrs-gif.fr

Gaelle.Claisse@egce.cnrs-gif.fr

Arnaud.Le-Rouzic@egce.cnrs-gif.fr

Claude.Wicker-Thomas@egce.cnrs-gif.fr

glepe_01@uni-muenster.de

Running title: Female receptivity in *Drosophila*

Abstract: In sexual species, mating success depends on the male's capacity to find sexual partners and on female receptivity to mating. Mating is under evolutionary constraints to prevent interspecific mating and to maximize the reproductive success of both sexes. In *Drosophila melanogaster*, female receptivity to mating is mainly controlled by Sex peptide (SP, *i.e.* Acp70A) produced by the male accessory glands with other proteins (Acps). The transfer of SP during copulation dramatically reduces female receptivity to mating and prevents remating with other males. To date, female postmating responses are well-known in *D. melanogaster* but have been barely investigated in closely-related species or strains exhibiting different mating systems (monoandrous *versus* polyandrous). Here, we describe the diversity of mating systems in two strains of *D. melanogaster* and the three species of the *yakuba* complex. Remating delay and sexual receptivity were measured in cross-experiments following SP orthologs or Acp injections within females. Interestingly, we discovered strong differences between the two strains of *D. melanogaster* as well as among the three species of the *yakuba* complex. These results suggest that reproductive behavior is

Download English Version:

<https://daneshyari.com/en/article/5593206>

Download Persian Version:

<https://daneshyari.com/article/5593206>

[Daneshyari.com](https://daneshyari.com)