

University of Groningen

## Evolutionary genomics of the immune response against parasitoids in *Drosophila*

Salazar Jaramillo, Laura

**IMPORTANT NOTE: You are advised to consult the publisher's version (publisher's PDF) if you wish to cite from it. Please check the document version below.**

*Document Version*

Publisher's PDF, also known as Version of record

*Publication date:*

2014

[Link to publication in University of Groningen/UMCG research database](#)

*Citation for published version (APA):*

Salazar Jaramillo, L. (2014). *Evolutionary genomics of the immune response against parasitoids in Drosophila*. [Thesis fully internal (DIV), University of Groningen]. [S.n.].

### Copyright

Other than for strictly personal use, it is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), unless the work is under an open content license (like Creative Commons).

The publication may also be distributed here under the terms of Article 25fa of the Dutch Copyright Act, indicated by the "Taverne" license. More information can be found on the University of Groningen website: <https://www.rug.nl/library/open-access/self-archiving-pure/taverne-amendment>.

### Take-down policy

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

Downloaded from the University of Groningen/UMCG research database (Pure): <http://www.rug.nl/research/portal>. For technical reasons the number of authors shown on this cover page is limited to 10 maximum.

# Evolutionary genomics of the immune response against parasitoids in *Drosophila*

by

Laura Salazar Jaramillo

1) The parasitoid resistance mechanism of melanotic encapsulation found in *D. melanogaster* evolved in a subgroup of *Drosophila* species and involves duplicated genes, as well as the differentiation of hemocytes into a new type of blood cell (This thesis, Chapter 2)

2) Within-species variation in resistance against parasitoids results from the modulation of the immune response by changing the number of circulating hemocytes and the differential expression of transcript isoforms. (This thesis, Chapter 3 and Chapter 4).

3) The specialization of *Drosophila sechellia* on noni fruit may have protected it from attack by parasitoid wasps, resulting in the loss of its ability to encapsulate parasitoid eggs (This thesis, Chapter 5).

4) Working with a model organism can be both a blessing and a curse: a broad range of tools are available for functional characterization, but this also increases the burden of proof.

5) Redundancy creates evolutionary innovations, while natural selection merely modifies (Susumu Ohno, 1970<sup>1</sup>). Accordingly, knock-down functionality can mostly assess essentiality, while functional redundancy may be more fundamental for evolvability

6) *Masterpieces are not single solitary births; they are the outcome of many years of thinking in common, of thinking by the body of the people, so the experience of the mass is behind the single voice* (Virginia Woolf<sup>2</sup>)

7) *Science is not a heartless pursuit of objective information; it is a creative human activity its geniuses acting more as artists than as information processors* (Stephen Jay Gould<sup>3</sup>)

8) The best way for scientists to contribute to the public interest is by ensuring that their work is freely available for any purpose in any place of the world.

---

1 Susumu Ohno (1970). *Evolution by gene duplication*. Springer-Verlag

2 Virginia Woolf (1989). *A room of one's own*. Harcourt Brace & Co.

3 Stephen Jay Gould (1979). *Ever since Darwin: Reflections in Natural History*. W. W. Norton & Company