

# Thomas Harrop

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I am a post-doctoral researcher with a background in bioinformatics, genetics and molecular biology and an interest in basic and applied research relating to agriculture. I have advanced programming skills in R, Python and shell scripting. I have experience working in molecular, plant, animal and medical laboratories and installing, maintaining and using computers running Unix, Linux and MacOS.

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## Personal information

Date of birth	25 December 1982
Nationalities	Australian and British
Languages	English (native), German (TELC Level B2) and French (TELC Level B1)

## Education

2006–2012	<b>Doctor of Philosophy</b> , Department of Genetics, the University of Melbourne, Victoria, Australia. <u>Thesis</u> : The functions of cytochrome P450s in <i>Drosophila</i> . During my Ph.D. I used classical genetics and modern molecular biology, including transgenic manipulation of gene expression and comparative studies of gene function, to investigate the functions of cytochrome P450 genes in the <i>Drosophila</i> genus.
2002–2005	<b>Bachelor of Science with Honours (first class)</b> , the University of Melbourne, Victoria, Australia.

## Research positions

2014–Present	<b>Post-doctoral researcher</b> , UMR DIADE, Institut de Recherche pour le Développement (IRD), Montpellier, France. In my current project I am working on the development of inflorescence architecture in rice, which is related to grain yield potential. We used a precise laser microdissection and RNA sequencing approach to characterise molecular events that occur during the transitions between meristem types in the developing inflorescence. We are now applying these results to study the
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effects of selection on gene expression during the parallel domestications of African and Asian rice. Working on this project allowed me to expand my skills in bioinformatic analysis and statistics and my knowledge of plant biology and agronomy.

**2013–2014**      **Post-doctoral researcher**, Department of Plant Breeding and Genetics, Max Planck Institute for Plant Breeding Research, Cologne, Germany.  
During my stay at the Max Planck Institute I worked on a short project to compare the transcriptional response of several different land plants to UV-B exposure, which acts as a developmental signal. This position provided my first hands-on experience with plant biology and allowed me to expand my programming and bioinformatic skills.

## Teaching experience

**2007–2011**      **3<sup>rd</sup> Year Genetics**, Department of Genetics, The University of Melbourne, Victoria, Australia.

**2006–2009**      **High School Biology**, Department of Genetics, The University of Melbourne, Victoria, Australia.

**2006–2008**      **High School Biology**, Gene Technology Access Centre, The University High School, Victoria, Australia.

**2005–2008**      **1<sup>st</sup> Year Genetics**, The University of Melbourne, Victoria, Australia.

## Professional experience

**2004–2007**      **Medical scientist**, Network Pathology, the Austin Hospital, Victoria, Australia.

**2001–2004**      **Laboratory assistant**, Network Pathology, the Austin Hospital, Victoria, Australia.

## Students supervised

**Swarit Jaisal**      **Master of Science**, Life Science Informatics, Universität Bonn, Germany.

**Axel Verdier**      **Master of Science**, Sciences et Technologies de l'Information et de la Communication pour la Santé, Université de Montpellier, France.

## Publications

**Harrop, T.W.R.<sup>§</sup>, Ud Din, I.<sup>§</sup>, Gregis, V., Osnato, M., Jouannic, S., Adam, H. and Kater, M. (2016).** Gene expression profiling of reproductive meristem types in early rice inflorescences by laser microdissection\*. The Plant Journal (accepted manuscript). [doi:10.1111/tpj.13147](https://doi.org/10.1111/tpj.13147).

**Harrop, T.W.R.**<sup>§</sup>, Pearce, S.L.<sup>§</sup>, Daborn, P.J. and Batterham, P. (2014). Whole-genome expression analysis in the third instar larval midgut of *Drosophila melanogaster*. *G3 (Bethesda)* 4, 2197–2205. [doi:10.1534/g3.114.013870](https://doi.org/10.1534/g3.114.013870).

**Harrop, T.W.R.**, Sztal, T., Lumb, C., Good, R.T., Daborn, P.J., Batterham, P. and Chung, H. (2014). Evolutionary changes in gene expression, coding sequence and copy-number at the *Cyp6g1* locus contribute to resistance to multiple insecticides in *Drosophila*. *Plos One* 9, e84879. [doi:10.1371/journal.pone.0084879](https://doi.org/10.1371/journal.pone.0084879).

Daborn, P.J., Lumb, C., **Harrop, T.W.R.**, Blasetti, A., Pasricha, S., Morin, S., Mitchell, S.N., Donnelly, M.J., Müller, P. and Batterham, P., (2012). Using *Drosophila melanogaster* to validate metabolism-based insecticide resistance from insect pests. *Insect Biochemistry and Molecular Biology* 42, 918–924. [doi:10.1016/j.ibmb.2012.09.003](https://doi.org/10.1016/j.ibmb.2012.09.003).

<sup>§</sup> Equal contribution

## Conference presentations

## Technical Experience

<b>My Cool Side Project</b>	<p>For items which don't have a clear time ordering, a definition list can be used to have named items.</p> <ul style="list-style-type: none"><li>• These items can also contain lists, but you need to mind the indentation levels in the markdown source.</li><li>• Second item.</li></ul>
<b>Open Source</b>	<p>List open source contributions here, perhaps placing emphasis on the project names, for example the <b>Linux Kernel</b>, where you implemented multithreading over a long weekend, or <b>node.js</b> (with <a href="#">link</a>) which was actually totally your idea...</p>
<b>Programming Languages</b>	<p><b>first-lang:</b> Here, we have an itemization, where we only want to add descriptions to the first few items, but still want to mention some others together at the end. A format that works well here is a description list where the first few items have their first word emphasized, and the last item contains the final few emphasized terms. Notice the reasonably nice page break in the pdf version, which wouldn't happen if we generated the pdf via html.</p> <p><b>second-lang:</b> Description of your experience with second-lang, perhaps again including a <a href="#">link</a>, this time placing the url reference elsewhere in the document to reduce clutter (see source file).</p> <p><b>obscure-but-impressive-lang:</b> We both know this one's pushing it.</p> <p>Basic knowledge of <b>C</b>, <b>x86 assembly</b>, <b>forth</b>, <b>Common Lisp</b></p>

## Extra Section, Call it Whatever You Want

- Human Languages:

- English (native speaker)
- ???
- This is what a nested list looks like.
- Random tidbit
- Other sort of impressive-sounding thing you did

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Contact: [twharrop@gmail.com](mailto:twharrop@gmail.com) · [GitHub](#) · [stackoverflow](#)  
Castelnau-le-Lez, Hérault, FRANCE