Curriculum Vitae

Julien COLOMB, PhD

rue Lacepede 49
75005 Paris
julien.colomb@espci.fr

Birth: 9 April 1979
Single
Swiss

Research activities

2007-present	Postdoctoral fellow ESPCI (France) working on "appetitive learning in Drosophila" Supervisor: Dr. T. Preat

Education

2006	PhD in Biology University of Fribourg (CH). PhD dissertation: “The chemosensory system of *Drosophila* larvae: neuroanatomy and behaviour” Thesis director: Prof. R.F Stocker
2002	Diploma in Biology University of Fribourg (CH) Subject: "Anatomical and functional studies of the chemosensory system of the *Drosophila* larva suggest the presence of a gustatory target area in the antennal lobe?"
1998	“Maturité fédérale type C” (scientific subsection), in the "Collège de la royale Abbaye de St. Maurice"

Teaching experience

2006	Fluorescence and Confocal Microscopy (lecture course to master student, 3 hours)
2003–2006	Studying behavior. (course during the practical course, 2 hours)
2003-2005	An introduction to learning and memory and their molecular mechanisms. (2 hours, part of the lecture course "Developmental- and Neurogenetics" given by R.F. Stocker).

Supervision

2005 Co-supervisor of the diploma work of Claire Huguenin (with Dr. A. Ramaekers) on the role of NO in olfactory discrimination in *Drosophila* larvae.

2008 Co-supervisor of the PhD student S/'everine Trannoy (with Dr. G. Isabel and Dr. N. Gervasi) on the role of dopamine in appetitive learning consolidation in *Drosophila*.

Organization of conferences

2004 Co-organizer of a PhD meeting, in Cerniat. (30 participants)

Other tasks

2007 Creation of the T. Preat's lab website.

2004. Creation of the R.F. Stocker's lab website.

Co-director in the theater group "les apostrophes" in 2006
Cashier of and actor in the theater group "les apostrophes" in 2002-2005.

Languages

French (mother tongue), English (fluent), German (good knowledge), Spanish (basics).

Computer skills

Publishing: TEX, Photoshop, Illustrator, Image J, HTML, Office

Publications

- (In prep.). **Julien Colomb**
"New insights into *Drosophila* appetitive LTM and sugar motivation: previous interpretations in question" In press: Book chapter for novapublisher group.

- (2008). **Julien Colomb**
"Discriminative learning, learning generalization and masking tests as three strategies to assess olfactory discrimination." In press: Book chapter for novapublisher group.

- (2007). **Julien Colomb**, Reinhard F. Stocker
"Combined rather than separate pathway for hedonic and sensory aspects of taste in *Drosophila* larvae." FLY (1 (4): 232-234).

- (2007). **Julien Colomb**, Nicola Grillenzoni, Reinhard F. Stocker, and Ariane Ramaekers.
"Complex behavioural changes after odour exposure in *Drosophila* larva". Anim. Behav. (73 (4): 579-85).

- (2007). **Julien Colomb**, Nicola Grillenzoni, Ariane Ramaekers, and Reinhard F. Stocker.
"Architecture of the primary taste center of *Drosophila melanogaster* larvae". J. comp. neurol. (502: 834-847).

- (2007). **Julien Colomb***, Rüdiger Bader*, Bettina Pankratz, Anne Schröck, Reinhard F. Stocker, and Michael J. Pankratz.
"Genetic dissection of a neural circuit underlying feeding behavior in *Drosophila*: distinct morphology of single *hugin* expressing neurons". J. comp. neurol. (502: 848-856).
* the two authors participated equally to this work.

Main meetings presentation

2008 New insight into appetitive Long term memory in *Drosophila*.
POSTER PRESENTATION at the FENS Forum, Geneva.

2007 Long term memory after appetitive learning in *Drosophila*.
ORAL PRESENTATION at the "rencontre du club de neurobiologie des invertébrés", Versailles.

2006 Sub-regions in the primary taste center of *Drosophila* larvae.
ORAL PRESENTATION at the 11th European Drosophila neurobiology Conference, Leuven, BE

2005 Neuroarchitecture of the larval gustatory system.
POSTER at the CSH neurobiology of Drosophila meeting, USA,(NY)

2004 Different sensory projections define subregions in the first gustatory center of *Drosophila* larval brain.
POSTER at the "Neurofly" meeting in Neuchâtel

2004 Learning by odor exposure in agar plate.
ORAL PRESENTATION at the behavioural neurobiology of *Drosophila* larvae meeting in Würzburg, Germany.

2002 Functional studies of the chemosensory system of the *Drosophila* larva using a new tool: the GAL4 / UAS-shi^{ts} system.
POSTER at the neurofly in Dijon, France.

2002 Functional studies of the chemosensory system of the *Drosophila* larva using a new tool: the GAL4 / UAS-shi^{ts} system.
ORAL PRESENTATION at the Swiss Drosophila meeting in Basel.

Research results: main achievements

My PhD thesis investigated the larval chemosensory system and focused on two different issues. The main work was directed on organizational aspects and tried to show that the *Drosophila* larva could serve as a gustatory model system of general importance. In the second issue, I studied unexpected effects of olfactory preexposure on further response to this odorant.

During my postdoctoral fellowship in Paris, I investigated the dynamic of appetitive learning in *Drosophila*. I developed a new test of sugar motivation, which is sensitive enough to measure differences in flies starved for 14 versus 21 hours. Using this test, I showed that *tequila*, a

neurotrypsin orthologue involved in aversive long term memory formation, was surprisingly involved in the response to sugar after starvation. Using the cycloheximide drug, I also proved that long lasting appetitive memory was dependent on protein synthesis, irrespective of the number and spacing of conditioning sessions, starvation length or US strength. This work will lead the way toward more reliable interpretation of appetitive memory data.

Project management and leadership skills

During my PhD thesis and my post-doctoral experience, I both developed and demonstrated the abilities of independent initiative and creative thinking. I had the opportunity to propose, develop and then bring to fruition my own projects. I also gained skills in presentation of results. I indeed presented my work in different congresses; in particular, I gave an oral presentation in the 2006 neurofly meeting, which gathered the whole community of neuroscientists working on *Drosophila*. I already took great part in the redaction of my papers of my thesis, but I recently became able to write a whole paper (or mini-review) with little help from my supervisors. Furthermore, I have been learning to elaborate long term and more integrated projects, thanks to my post-doctoral training. All these elements show that I have initiative and that I can manage a project from the beginning to the end.

I also took part in the supervision of a student, who worked on a related but different topic (olfactory discrimination). Moreover, as a co-director in the theatre group of the university, I also gained experience in the difficult task of group management.