

## Motivation letter

I hereby apply for the positions of Projektmitarbeiter/-in, Kennziffer 71/20107.

I am fluently using R and shiny to do my statistics, which allow reproducibility of the analysis (once new data is fed, only one click allow for a re-run of the analysis) and a good user experience (browser based interface), you might have a look at <https://colomb.shinyapps.io/Flystockcleaner/> to get an idea. Moving to jasperstudio, if necessary, should be easy.

I have been working at the university for years, as a research and teaching assistant. I am looking for a part time position, since it would allow me to continue my voluntary work in projects like the open science mooc and the march for science.

I am looking forward to meet you in person, Dr. Julien Colomb

Links:

March for science, orga team: <http://marchforscienceberlin.de/wer-wir-sind>

Scientific achievements: <http://orcid.org/0000-0002-3127-5520>

Referees:

Prof. Bjoern Brembs, [bjoern@brembs.net](mailto:bjoern@brembs.net)

## Curriculum Vitae

**Julien COLOMB, PhD** in Biology  
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<http://orcid.org/0000-0002-3127-5520>

**Birth: 9 April 1979 in Sion (CH)**  
**Married, two children**  
**Swiss**



### *Summary*

After 12 years spent on fundamental research (neuro-genetics) in which I gathered skills in experimental design, team leading and student teaching, I got most interested in open science and research reproducibility as well as the digital tools helping scientists to achieve it. I would like to apply these novel knowledge while doing research and mentoring students.

### *Research activities*

- 2017 - present    Postdoctoral fellow, HU (**Berlin**, Germany), by Prof. Y. Winter  
Analysing mulitdimensional dataset: the homecagescan case.
- 2015 - 2016     Postdoctoral fellow, HU & Charité (**Berlin**, Germany), by Prof. Y. Winter  
Animal core facility director and project manager.
- 2014 - 2015     Postdoctoral fellow, HU & Charite (**Berlin**, Germany), by Prof. Y. Winter  
working on Phenobase.
- 2009 -2013     Postdoctoral fellow, FU (**Berlin**, Germany), by Prof. B. Brembs  
working on "the what and where of operant learning in *Drosophila*".
- 2007-2008     Postdoctoral fellow, ESPCI (**Paris**, France), by Dr. T. Preat  
working on "appetitive learning in *Drosophila*".

### *Commercial activities*

- 2016-present    Freelance scientist,  
Animal core facility (Charité): organisation lead, data analysis in R, Phenobase  
(Exist, HU): literature curation.
- 2012-present    Founder and CEO of Drososhare GmbH (Berlin, Germany), facilitating fruit fly  
transactions between scientists

### *Education*

- 2016             FELASA B. HU Berlin
- 2013             Moderation & management (Continuing Education), FU Berlin/Artop.
- 2006             PhD in Biology, University of Fribourg (**Fribourg**, Switzerland).  
PhD dissertation: "The chemosensory system of *Drosophila* larvae: neu-  
roanatomy and behaviour" Thesis director: Prof. R.F Stocker

2002            Diploma in Biology, University of Fribourg (**Fribourg**, Switzerland)  
1998            "Maturité fédérale type C" (scientific subsection), in the "Collège de la royale  
                  Abbaye de St. Maurice"

### ***Languages***

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

### ***Research output***

8 research papers (7 first author), 3 reviews, 1 Scienceopen collection, 3 Open source software  
(2 main author), Meeting Presentations > 25

<https://orcid.org/0000-0002-3127-5520>

<https://github.com/jcolomb>

### ***Supervision of student***

2010-2014        Co-supervisor of the PhD student Christine Damrau (with Dr. B.Brembs) on  
                  the role of octopamine in reward, motivation and motor control in *Drosophila*.  
2008            Co-supervisor of the PhD student Séverine Trannoy (with Dr. G. Isabel and  
                  Dr. N. Gervasi) on the role of dopamine in appetitive learning consolidation in  
                  *Drosophila*.  
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.

### ***Teaching experience***

2016            Animal models of neuropathy, (master student, 2x2h lecture, organisation)  
  
2012            Genetik (bachelor student, 2 x 3 h. lecture, 2x 1h. seminar)  
2012            Neurogenetik. (master student, 2 x 2 h. lecture, 2x 1h. seminar)  
2011            Practical course neurobiology. (7 x 4 h., Practical course supervision)  
2011            Entwicklung der Insekten [Insect development] (2 h. lecture)  
  
2006            Fluorescence and Confocal Microscopy (master student, 3h. lecture)  
2003-2006       Studying behavior. (master student, 2 h. lecture)  
2003-2005       Developmental- and Neurogenetics (master student, 2 h. lecture).

### ***Computer skills***

*Organisation:* Outlook, Access, labfolder; *Publishing:* L<sup>A</sup>T<sub>E</sub>X, Office; html, figshare; *Image processing:* Photoshop, Illustrator, Image J; *Programming and data analysis:* R, Rmarkdown, shiny, Git, Labview

### ***Other tasks***

Organisation of the Berlin Open Science meetup:  
Part of the march for science Berlin Orga team:  
Creation of the T. Preat's and R.F. Stocker's lab website.  
Co-director in the theater group "les apostrophes" in 2006

## RESEARCH PRODUCTS

### *Open source Software*

- (2011-2013) CeTrAn 1.4 to 4.0, developed on Github (<https://github.com/jcolomb/CeTrAn>). Used for more than three research papers.
- (2016) Viewer data concatenator (shiny app).
- (2013-2016) Collaborating on Rfigshare and Rflybase (<https://github.com/ropensci/rfigshare>).

### *Peer review publications*

#### Five most important publications:

- (2016). **Julien Colomb** and Björn Brembs.  
“PKC in motoneurons underlies self-learning, a form of motor learning in *Drosophila*”  
PeerJ (e1971).  
cited 3 times
- (2014). **Julien Colomb** and Björn Brembs.  
“Sub-strains of *Drosophila* Canton-S differ markedly in their locomotor behavior”.  
F1000RESEARCH (3:176).  
cited 15 times
- (2009). **Julien Colomb**, Laure Kaiser, Marie-Ange Chabaud, Thomas Preat.  
“Parametric and genetic analysis of *Drosophila* appetitive long-term memory and sugar motivation” Genes Brain and Behaviour (8 (4): 407-415).  
cited 52 times
- (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).  
cited 72 times
- (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).  
cited 13 times

#### Other Publications

- (In revision). Christine Damrau, Naoko Toshima, Teiichi Tanimura, Björn Brembs  
**Julien Colomb**.

"Octopamine and Tyramine contribute separately to the counter-regulatory response to sugar deficit in *Drosophila*." *Frontiers*

- (2014). Ezequiel Mendoza, **Julien Colomb**, Jürgen Rybak, Hans-Joachim Pflüger, Troy Zars, Constance Scharff, and Björn Brembs.  
"Drosophila FoxP mutants are deficient in operant self-learning". *Plos One* (9(6): e100648).
- (2012). **Julien Colomb**, Lutz Reiter, Jędrzej Blaszkiewicz, Jan Wessnitzer and Björn Brembs.  
"Open Source Tracking and Analysis of Adult *Drosophila* Locomotion in Buridan's Paradigm with and without Visual Targets". *Plos One* (7(8): e42247).
- (2010). **Julien Colomb**, Björn Brembs  
"biology of psychology: "simple conditioning"" *Communicative and Integrative Biology* (3 (2): 142-145).
- (2008). **Julien Colomb**  
"Discriminative learning, learning generalization and masking tests as three strategies to assess olfactory discrimination." *Animal Behaviour: New Research* 185-192
- (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.
- (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).

### *Meeting presentations (4 most representative)*

- 2016 Faster and more reproducible science: Open Science. ORAL PRESENTATION at the neurofly meeting, Creta, Greece.
- 2008 New insight into appetitive Long term memory in *Drosophila*. POSTER PRESENTATION at the FENS Forum, Geneva, Switzerland.
- 2006 Sub-regions in the primary taste center of *Drosophila* larvae. ORAL PRESENTATION at the 11th European *Drosophila* neurobiology Conference, Leuven, Belgium  
Learning by odor exposure in agar plate. ORAL PRESENTATION at the behavioural neurobiology of *Drosophila* larvae meeting, Würzburg, Germany.
- 2002 Functional studies of the chemosensory system of the *Drosophila* larva using a new tool: the GAL4 / UAS-shi<sup>ts</sup> system. ORAL PRESENTATION at the Swiss *Drosophila* meeting, Basel, Switzerland.