Motivation letter

I hereby apply for the Senior PostDoc Metaresearch position at the BIH.

Dear Prof. Dr. Dirnagl,

Metaresearch is a young field and so far, statisticians have been taking the lead. I believe that with my background as a professional researcher in Biology (and my absence of medical training) as well as my interest in scientific report quality, I can bring a different approach to the field and new perspectives to the BIH.

As you know, I have a strong background in fundamental research in neuro-genetics and behavioural biology. I have been designing experiments for years, with particular interest on control group design, doing experiment blind, in parallel and in a randomised order. I have been trained to find experimental design errors before the start of the experiment, and spot them while looking only at the raw data (obtained from students or other postdocs).

I also have the computing knowledge to perform quantitative analysis and text mining, although I used these skills in different contexts so far (reproducible data analysis, please have a look at my latest manuscript where I produced R shiny application to archive and analyse mice home cage monitoring data [1]). I am convinced that qualitative meta-analysis (reading the papers) is needed to get a real impression of what data is worth including in the meta-analysis, and I have the skills and knowledge to perform such analyses.

I have recently published one paper as a last author and one paper without PI, demonstrating my independent thinking and ability to supervise students. I would be happy to continue my journey in science, open science and quality insurance, and work in an environment that will bring more professionalisms and rigour in preclinical research. I am convinced that the field needs more inputs from senior biologists and I would be happy to have the opportunity to prove my point.

Julien Colomb, PhD in Biology

Referees:

- Prof. York Winter, Berlin, york.winter@charite.de
- Prof. Bjoern Brembs, Regensburg, bjoern@brembs.net

References

1 `https://www.overleaf.com/read/hxwpffyxfbzm`

Curriculum Vitae

Julien COLOMB, PhD in Biology
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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 to bring open science principles forward.

Research activities

2017 - 2018	Postdoctoral fellow, HU (**Berlin**, Germany), by Prof. Y. Winter
	R Shiny applications to analyse and archive behaviour sequence data.
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): preclinical 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: neuroanatomy 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

11 Research Papers (7 first author, 1 last author), 4 Reviews, 1 Scienceopen Collection
4 Open Source Software (3 main author),
3 Approved Grants
> 25 Meeting Presentations
see 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*: LaTeX, Office, overleaf, markdown, html, figshare; *Image processing*: Photoshop, Illustrator, Image J; *Programming and data analysis*: R, Rmarkdown, shiny, Git, Labview; *Collaborative working*: Github, redmine

Other tasks

Organisation of the Berlin Open Science meetup
Part of the march for science Berlin Orga team 2017
Creation of the T. Preat's and R.F. Stocker's lab website.
Co-director in the theater group "les apostrophes" in 2006