

# **Applying to a MSCA IF Marie Skłodowska-Curie Actions**

**Louise Couton**

# CV overview: Research

Dec 2008	PhD Thesis defense, Université Pierre et Marie Curie. <i>Computational Neuroanatomy of Antennal Lobes</i>
Feb 2009	Research Associate, University of Cambridge, UK. <i>Regulation of central connectivity in Drosophila</i>
Jan 2010- Dec 2011	Fyssen PostDoctoral Fellowship
March-Aug 2010	Maternity leave
Jan 2012-Jul 2015	BBSRC funding
Jul-Oct 2012	Maternity leave
Oct 2015	Relocation to Geneva with family
June 2016	Maitre assistante, UniGE, department of Biochemistry
Sept 2016	Application for MSCA IF
March-Oct 2017	Maternity leave
Nov 2017	Start of MSCA IF project

# CV overview: Publications

- 2015 Couton L, Mauss AS, Yunusov T, Diegelman S, Evers JF, Landgraf M. Development of connectivity in a motor neuronal network in *Drosophila* larvae. Curr Biol. 25(5):568-76  
*Highlight by Sternberg and Wyart in Curr Biol. 25(5): 190-1.*
- 2013 Popescu A, Couton L, Almaas TJ, Rospars JP, Wright GA, Marion-Poll F, Anton S. Function and central projections of gustatory receptor neurons on the antenna of the noctuid moth *Spodoptera littoralis*. J Comp Physiol A. 199(5):403-16
- 2009 Couton L, Minoli SA, Kiêu K, Anton S, Rospars JP. Constancy and variability of identified glomeruli in the antennal lobes: Computational approach in *Spodoptera littoralis*. Cell Tissue Res. 337(3):491-511  
  
Varela N\*, Couton L\*, Anton S, Gemeno C, Avilla J, Rospars JP. Three-dimensional antennal lobe map of the oriental fruit moth *Cydia molesta*. Cell Tissue Res. 337(3):513-526
- 2008 Barrozo RB\*, Couton L\*, Lazzari CR, Insausti T, Minoli SA, Fresquet N, Rospars JP, Anton S. Antennal pathways in the central nervous system of a blood-sucking bug, *Rhodnius prolixus*. Arthropod Struct Dev 38(2): 101-110  
  
Bodin A, Barrozo RB, Couton L, Lazzari CR. Temporal modulation and adaptive control of the behavioural response to odours in *Rhodnius prolixus*. J Insect Physiology 54(9): 1343-1348
- 2006 Bonato O, Couton L, Fargues J. Feeding preference of *Macrolophus caliginosus* (Heteroptera: Miridae) on *Bemisia tabaci* and *Trialeurodes vaporariorum* (Homoptera: Aleyrodidae). J Econ Entomol 99(4): 1143-1151

\*Authors have equally contributed



# CV overview: Outreach and teaching

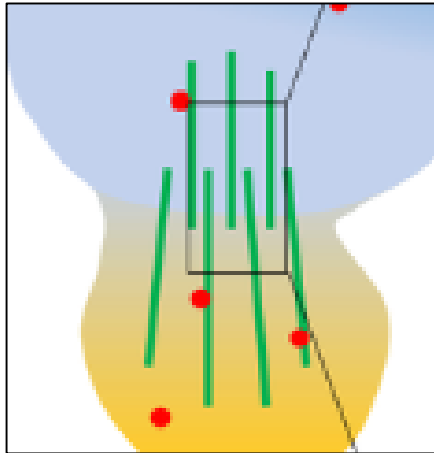
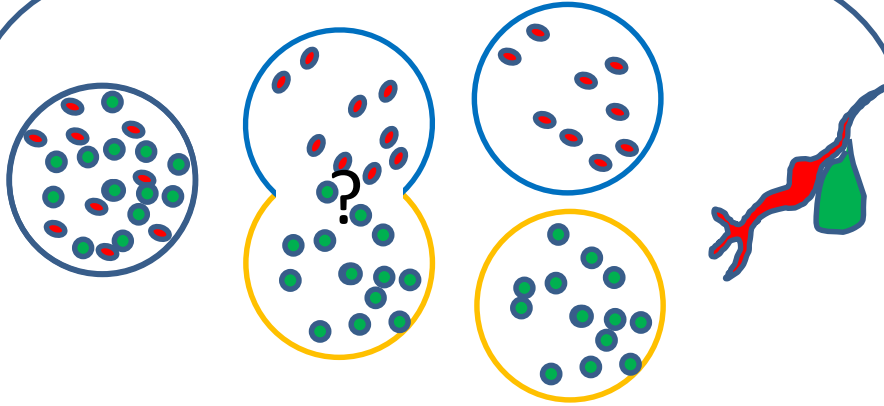
- Co-organised neuroscience workshops at Cambridge science Festival
- Sessions of small group tutoring for Biology students
- Supervision during practical courses
- Individual supervision of research projects for bachelor and master students
- Co-organisation of neuroscience 'taster' workshops for 1st year students



## *MSCA project: dissemination activities:*

- Participation to « Nuits de la Science »
- Organisation and teaching of practical course for 3rd year biochemistry students
- Planned interventions in primary schools, on site or through Bioscope workshops

# Project: Mechanisms of asymmetric cell division



## Better understanding of :

- Cell renewal
- Cell differentiation
- Cell proliferation

## Longer term impact:

- Regenerate defective cells in ageing & disease
- Tackle cell proliferation in cancer

## Mechanisms of endosome departure from the spindle?

- 1- Characterise wild type dynamics of endosomes
- 2- Identify molecular interactions triggering departure
- 3- Integrate previous into mathematical form
- 4- Test generalisation of proposed mechanisms to other model systems

# Project, Feedback received from evaluation panel

## Strengths

- Experience with outreach activities
- Interdisciplinarity
- Match between project, lab and applicant
- Supervisor an experienced group leader

## Weaknesses

- No obvious path towards autonomous line of research in longer term
- Contingency plan not precise enough

# My experience with the MSCA fellowship:

- Useful support from Euresearch team: proofread applications, point at pitfalls
- Country adjustment index not suited to Switzerland life costs (113.1%, vs. 120.3% in the UK)
  - No top-up allowed at UniGE
  - Important paycut compared to previous position ( 5131 CHF/ month before tax + 657 CHF mobility allowance + family allowance if applicable)
  - Participation towards research costs not as significant as in other countries
- Fellowship does give a degree of independence