

Florent Figon, Ph.D.

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Ph.D. Thesis

Photobiochemistry and Cell Biology of Ommochromes: Implications in Color Change

Defended on September 2, 2020; Supervisor: Prof. J. Casas.

Education

- Sep 2016 – Aug 2017* **Master of Science** (2nd year), Biology
Ecole normale supérieure de Lyon, Lyon, France
- Sep 2013 – Jul 2014* **Teacher Diploma** (Agrégation de SV-STU), Biology and Geology
Ecole normale supérieure de Lyon, Lyon, France
- Sep 2012 – Aug 2013* **Master of Science** (1st year), Biology
Ecole normale supérieure de Lyon, Lyon, France
- Sep 2011 – Aug 2012* **Bachelor of Science** (3rd year), Biology
Ecole normale supérieure de Lyon, Lyon, France
- Sep 2009 – Jun 2011* **Bachelor of Science** (1st and 2nd year), Biology and Geology
Lycée du Parc, Lyon, France

Research Experience

- Sep 2017 – Aug 2020* **Ph.D. Student** (Supervisor: Prof. J. Casas)
University of Tours, Insect Biology Research Institute, Tours, France
- Jan 2020 – Jun 2020* **Co-supervisor** (with Prof. J. Casas)
Laurène Chevallier – M2 internship: Study of the Map butterfly polyphenism
University of Tours, Insect Biology Research Institute, Tours, France
- Jan 2017 – Jul 2017* **Lab Intern** (Supervisor: Dr. C. Delevoye)
Curie Institute, UMR144 Cell Biology and Cancer, Paris, France
- Apr 2016 – Jul 2016* **Lab Intern** (Supervisor: Prof. J. Casas)
University of Tours, Insect Biology Research Institute, Tours, France
- Jan 2013 – Aug 2013* **Lab Intern** (Supervisor: Prof. E. Gaquerel)
Max Planck Institute for Chemical Ecology, Department of Molecular Ecology, Jena, Germany
- Jun 2012 – Aug 2012* **Lab Intern** (Supervisors: Prof. J. Casas and Dr. A. L. Llandres)
University of Tours, Insect Biology Research Institute, Tours, France

Teaching Experience

- Sep 2017 – present* **Teaching Assistant** (1st and 2nd year undergraduate students)
University of Tours, Genetics and Animal Biology Department,
Tours, France
Disciplines: Cell biology and Histology; Genetics

May 2017 – Jun 2017 **Oral Examiner**
Lycée du Parc, Classe préparatoire BCPST, Lyon, France

Sep 2014 – Jun 2015 **Oral Examiner**
Lycée du Parc, Classe préparatoire BCPST, Lyon, France

Non-academic Experience

Aug 2015 – Mar 2016 **Editor-in-chief**
Lelivrescolaire.fr (middle school publisher), Lyon France

Jun 2015 – Jul 2015 **Eco-volunteer**
Projects Abroad, Galapagos Islands, Ecuador

Sep 2014 – Jun 2015 **Editorial Intern**
Lelivrescolaire.fr (middle school publisher), Lyon France

Scholarships and In-kinds

May 2019 In-kinds: Nanoscopium beamline at Synchrotron SOLEIL (50,000 €)

May 2018 In-kinds: Nanoscopium beamline at Synchrotron SOLEIL (50,000 €)

Sep 2017 Doctoral scholarship (3 years): Contrat Doctoral Spécifique Normalien, école normale supérieure de Lyon (60,000 €)

Sep 2011 Scholarship (4 years): Contrat Normalien, école normale supérieure de Lyon (70,000 €)

Languages & Activities

Languages French, English, Spanish

Interests Guitar, Photography, Education, Management, Swimming

Journal Publications

Florent Fignon, Jérôme Casas, Ilaria Ciofini, Carlo Adamo (*In press*). *Electronic Coupling in the Reduced State Lies at the Origin of Color Changes of Ommochromes*. *Dyes and Pigments*. DOI:10.1016/j.dyepig.2020.108661

Florent Fignon, Thibaut Munsch, Cécile Croix, Marie-Claude Viaud-Massuard, Arnaud Lanoue, Jérôme Casas (2020). *Uncyclized xanthommatin is a key ommochrome intermediate in invertebrate coloration*. *Insect Biochemistry and Molecular Biology*; **124**:103403. DOI:10.1016/j.ibmb.2020.103403

Florent Fignon, Jérôme Casas (2019). *Ommochromes in invertebrates: Biochemistry and cell biology*. *Biological Reviews*; **94**(1):156-183. DOI:10.1111/brv.12441

Léa Ripoll, Xavier Heiligenstein, Ilse Hurbain, Lia Domingues, **Florent Fignon**, Karl J. Petersen, Megan K. Dennis, Anne Houdusse, Michael S. Marks, Graça Raposo, Cédric Delevoye (2018). *Myosin VI and branched actin filaments mediate membrane constriction and fission of melanosomal tubule carriers*. *The Journal of Cell Biology*; **217**(8):2709-2726. DOI:10.1083/jcb.201709055

Ana L Llandres, **Florent Fignon**, Jean-Philippe Christidès, Nicole Mandon, Jérôme Casas (2013). *Environmental and hormonal factors controlling reversible color change in crab spiders*. *Journal of Experimental Biology*; **216**(20):3886-95. DOI:10.1242/jeb.086470

Book Chapters

Florent Figon, Jérôme Casas (2018). *Morphological and Physiological Colour Changes in the Animal Kingdom*. eLS (eds: John Wiley & Sons, Ltd); Pages 1-11, ISBN: 9780470016176, DOI:10.1002/9780470015902.a0028065

Léa Ripoll, **Florent Figon**, Cédric Delevoye (2018). *Mécanismes inter- et intracellulaires contrôlant la pigmentation des mélanocytes de la peau*. Biologie cutanée CoBIP: fonctions normales et pathologiques de la barrière cutanée (ed: M Haftek); Lyon, France: Matrix; Pages 4-28.

Preprint

Florent Figon, Ian T. Baldwin, Emmanuel Gaquerel (2020). *Ethylene is a local modulator of jasmonate-dependent phenolamide accumulation during Manduca sexta herbivory in Nicotiana attenuata* bioRxiv. DOI:10.1101/2020.07.21.213371

Peer Review

Biomolécules (1) and Evolutionary Ecology (1)

Scientific Communications

Florent Figon*, Thibaut Munsch, Cécile Croix, Marie-Claude Viaud-Massuard, Arnaud Lanoue et Jérôme Casas (2019). *Identification de la xanthommatine non cyclisée, un intermédiaire clé de la biosynthèse pigmentaire des ommochromes chez les invertébrés*. 32nd Biotechnocentre symposium, Seillac, France. **Best oral communication award**.

Florent Figon*, Jérôme Casas (2019). *Color-changing Crab Spiders: Classical Ecological Model, New Cell Biology Tools*. UMR 144 Seminar, Institut Curie, Paris, France. **Oral communication**.

Florent Figon*, Teresita Insausti, Jérôme Casas (2018). *How the Ommochromasome Life Cycle of Colour-Changing Crab Spiders Can Enlighten Melanosome Catabolism*. 21st annual meeting of the European Society for Pigment Cell Research, Rennes, France. **Flash-talk and poster**.

Science Communication

Thibault Lorin, **Florent Figon** (2020). Fonctions adaptatives et évolution des couleurs des Animaux. <https://planet-vie.ens.fr/thematiques/ecologie/rerelations-interspecificques/fonctions-adaptatives-et-evolution-des-couleurs-des>. Planet-Vie (ENS).

Florent Figon, Thibault Lorin (2019). La coloration des Animaux : éléments de physique et de chimie. <https://planet-vie.ens.fr/thematiques/cellules-et-molecules/biophysique/la-coloration-des-animaux-elements-de-physique-et-de>. Planet-Vie (ENS).

Florent Figon (2019). *L'érosion, processus et conséquences*. Sciences de la vie et de la Terre 2nde, collection 2019 (eds: Lelivrescolaire.fr); Pages 163-178. <https://www.lelivrescolaire.fr/page/7184122>

Florent Figon (2019). *Erosion et activités humaines*. Sciences de la vie et de la Terre, lycée 2nde, collection 2019 (eds: Lelivrescolaire.fr); Pages 193-205. <https://www.lelivrescolaire.fr/page/7255496>

Florent Figon (2017). *L'évolution de la biodiversité*. Sciences de la vie et de la Terre, collège 3^e, collection 2017 (eds: Lelivrescolaire.fr); Pages 131-145. <https://www.lelivrescolaire.fr/manuel/1339497/svt-3e-2017/chapitre/1339647/l-evolution-de-la-biodiversite/page/1341398/l-evolution-de-la-biodiversite/lecon>

Florent Figon, Thibault Lorin (2017). *D'où viennent les iguanes des Galapagos ?* Espèces; **24**:12-19.
Repris sur [Planet-Terre](#) et [Planet-Vie](#).

Networks

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