



Julia DESPRAT

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PhD in physiological ecology

Education

- 2012 – 2015 **PhD in Physiological ecology**, (PhD defended on the 18th of December 2015), University of Lyon 1, France
2013 **Animal experimentation Degree level 1** necessary to manipulate vertebrate animal species in France, University of Lyon 1
2012 **Master of Science Degree** in Integrative biology in extreme conditions, University of Lyon 1,
2011 **Maîtrise of Science** in functional, behavioural and evolutionary ecology, University of Rennes 1,
2007 – 2010 **Bachelor of Science Degree** in physiology and cellular biology, University of Strasbourg,
2006 **High-school Degree**, in sciences with ecology as speciality, agricultural high school of La Côte Saint André.

Research experiences

- 2015 – 2016 **Post doctorate Researcher ATER** (1 year). LEHNA laboratory, University of Lyon. Advisor: Nathalie MONDY. *Visual sexual signals as a clue of the health status of Hyla arborea males.*
2012 – 2015 **PhD** (3 years) LEHNA laboratory, University of Lyon. Advisor: Nathalie MONDY. *Are steroids mediators of the honesty of male sexual signals in Hyla arborea: mechanisms and ecological impacts?*
2012 **Second MSc Internship** (7 months) ECOBIO laboratory, University of Rennes 1. Advisor: Emilie LANCE. *Acclimation strategies of exposed gastropods to a biotic or man induced stress.*
2011 **First MSc Internship** (2 months) LEHNA laboratory, University of Lyon 1. Advisors: Thierry LENGAGNE and Loïc BREPSON. *Relationships between quality of visual sexual signals and quantity of carotenoids in the food of Hyla arborea males.*
2010 **Voluntary BSc Internship** (2 months). DEPE laboratory, University of Strasbourg. Advisors: Yan ROPERT-COUDERT. *Processing of computing data obtained on penguin movements and correlated with reproduction cycle (SPHENOTRON). And Implementation of a database of Antarctic publications.*
2010 **Voluntary BSc Internship** (2 months). DEPE laboratory, University of Strasbourg. Advisors: Jean-Patrice ROBIN. *Lipid dosages and identification as part of a study on digestive physiology in rats. And Protein dosages on chick penguins muscles.*

Teaching activities

- 2015 – 2016 **Contractual teacher (ATER)** at the University of Lyon 1 (Teaching duty of 92 hours per year)
2012 – 2015 **Teacher assistant** at the University of Lyon 1 (Teaching duty of 64 hours per year)
114h + 12h: Biology of organism (Practical work) first and second year of bachelor of biology
8h: Physiological ecology (Practical work) third year of bachelor of physiology and biology
58h: Sustainable development (tutorial work): second year of bachelor (all cursus)
Students' supervision
2013 (2 months) Supervision of 3 students in first year of Master, University of Rennes 1.
2014 (2 months) Supervision of 2 students in first year of Master, University of Rennes 1 and University of Montpellier 3.

Articles

- 2015 Immunocompetence handicap hypothesis in tree frog: trade-off between sexual signals and immunity?
Behavioural Ecology, 26 (4): 1138-1146. (doi: [10.1093/beheco/arv057](https://doi.org/10.1093/beheco/arv057), IF= 3.157)
Desprat J.L., Lengagne T., Dumet A., Desouhant E., Mondy N.
2015 A phytohaemagglutinin challenge test to assess immunocompetence of European tree frog *Hyla arborea*.
Amphibia-Reptilia, 36 (2): 111-118 (doi: [10.1163/15685381-00002983](https://doi.org/10.1163/15685381-00002983), IF= 1.138)
Jossierand R., Brepson L., Desprat J.L., Lengagne T., Mondy N.
Submitted Adaptive responses of the gastropod *Lymnaea stagnalis* to multiple environmental stressors (non-microcystin or microcystin-producing cyanobacteria and anthropogenic herbicide Roundup® Flash)
Lance E., Desprat J.L., Holbech B. F., Gérard C., Bormans M., Lawton L. A., Edwards C.
In prep Testosterone affects mitochondrial functioning and contractile properties of calling muscles in *Hyla arborea*
Desprat J.L., Teulier L., Puijalon S., Romestaing C., Dumet A., Lengagne T., Mondy N.
In prep Foraging behaviour and testosterone: When good males are best hunters.
Desprat J.L., Mondy N. and Lengagne T.
In prep Testosterone and bioavailability of carotenoids in the vocal sac of *Hyla arborea*.
Desprat J.L., Bellvert F., Lengagne T., Mondy N.

Conferences

- 2016 **President of the organisation committee** of the international Ecology and Behaviour meeting 2016, Lyon, France
Management of 20 people
Scientific reviewer for sexual selection session
<http://eb2016.sciencesconf.org/>
- Nov. 2015 2nd French meeting of animal ecophysiology (CEPA), La Rochelle, France,
Oral presentation. Testosterone effect on male trunk muscle in *Hyla arborea*: from acoustic performances to mitochondrial functioning.
Desprat J.L., Teulier L., Puijalon S., Romestaing C., Dumet A., Couchet M., Lengagne T., Mondy M.
- May 2015 11th international meeting of Ecology and Behaviour, Toulouse, France,
Poster. Testosterone enhances attractive sexual signals but no immunosuppression
Desprat J.L., Lengagne T., Dumet A., Desouhant E., Mondy N
- Avril 2015 French Society of animal behaviour (SFECA, French meeting), Strasbourg, France
Poster Sexual signals as a clue for the foraging ability of males in *Hyla arborea*
Desprat J.L., Mondy N., Cheynel L., Rubi G., Lengagne T
- Feb. 2014 FR41 BioEnviS, Lyon, France
Poster Testosterone and carotenoids: are they mediators of the honesty of sexual visual signals?
Desprat J.L., Bellvert F. Lengagne T., Dumet A., Mondy N.
- Nov. 2013 1st French meeting of animal ecophysiology (CEPA), Lyon, France,
Oral presentation. Testing the Immunocompetence handicap hypothesis in *Hyla arborea*.
Desprat J.L., Lengagne T., Dumet A., Rives A., Ducroix L., Mondy N
Poster. Muscular contraction and fatigability properties to explain quality of sexual acoustic signals in males *Hyla arborea*.
Desprat J.L., Teulier L., Dumet A., Couchet M., Puijalon S., Lengagne T., Mondy N.
- May 2012 Society of Environmental Toxicology and Chemistry (SETAC), Berlin, Germany
Poster. Acclimatization strategies in gastropods to environmental pollutants: comparison of a strong invasive to a declining endogenous species.
Lance E., Desprat J.L., Wiegand C.

Research skills

- Technical skills** Amphibian housing approved (EcoAquatron, University of Lyon 1)
Phenotypic engineering (hormonal manipulation)
Biochemical dosage: methods of EIA, TBARS, TROLOX, spectrometry, OROBOROS (mitochondrial respiratory metabolism)
Electrophysiology on muscle of frog,
Behavioural study: video tracking and acoustic broadcast, spectrometry on teguments
- Field skills** Chromatography HPLC-MSMS: extraction and identification of carotenoids.
Nocturnal capture of amphibians (*Hyla arborea* and *Bufo Bufo*)
Field acoustic broadcast
- Miscellaneous** Natural behavioural observations
- Language
French: native language
English: fluent, both written and spoken
- Informatics
Bibliographic software: Zotero and EndNote
Statistical analysis: software R, package « lme4 » and « ggml », parametric and non-parametric tests, ACP, AFC, ANOVA...
- Driving licence

Referees

Nathalie Mondy (MC), UMR 5023 LEHNA, team E2C, University of Lyon 1, nathalie.mondy@univ-lyon1.fr
Thierry Lengagne (CR CNRS), UMR 5023 LEHNA, team E2C, University of Lyon 1, thierry.lengagne@univ-lyon1.fr