

Marion Picard, *PhD student*

« Host-Pathogen-Environment Interactions » laboratory (IHPE)

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Keywords

Sex determination, Gonadal differentiation, Development, Sex chromosomes evolution, Dosage compensation, Chromatin mechanisms, Dioecious parasites, *Schistosoma mansoni*, Neglected tropical disease, RNA-sequencing, Chromatin Immunoprecipitation (ChIP)-sequencing

Education

- 2010 / 2011 **Master 2nd year**, Biomedicine, Specialization in Neurobiology and Endocrinology.
Montpellier 2 University, France.
4th rank in GPA (out of 74 students), *Magna cum laude*.
- 2009 / 2010 **Master 1st year**, Molecular Biology and Biomedicine.
Montpellier 2 University, France / University of the Basque Country, Bilbao, Spain
(Erasmus exchange student).
5th rank in GPA (out of 165 students), *Magna cum laude*.
- 2007 / 2009 **Bachelor**, Animal Physiology and Neurosciences.
Montpellier 2 University, France.
4th rank in GPA (out of 70 students), *Cum laude*.
- 2005 / 2007 **Medical Studies**.
Montpellier 1 University, France.
- 2005 **High School Diploma**, Specialization in Physics and Chemistry.
Magna cum laude.

Laboratory experiences

- Oct. 2014 /
Aug. 2015 **PhD Student and Temporary research assistant**,
UMR 5244, IHPE Laboratory, Perpignan University, France.
- Oct. 2011 /
Oct. 2014 **PhD Student**, « Molecular bases of sex determination of a female heterogametic
species ZZ/ZW : *Schistosoma mansoni*. »
Under the supervision of Jérôme Boissier and Céline Cosseau.
UMR 5244, IHPE Laboratory, Perpignan University, France.
Ministerial financing, First laureate 2011 of Perpignan Graduate School ED305.
- Oct. 2010 /
June 2011 **Internship**, « Survival of Motor Neuron (SMN) protein function in axonal
localization of messenger RNAs. »
Under the supervision of Florence Rage.
UMR 5535, Institute of Molecular Genetics of Montpellier, France.
- Feb. 2010 /
June 2010 **Internship**, « Analysis of Alzheimer's disease brain deposits by glucidic radical
staining. »
Under the supervision of José Vicente Lafuente Sanchez.
Neurosciences Department, University of the Basque Country, Bilbao, Spain.

Laboratory expertises

2013 **Animal experimentation training**, level one.

Animal experimentation: Complex parasite life cycle maintenance and sampling (*Schistosoma mansoni*), dissection, tissue sampling and perfusion on *Mus musculus* model.

In vitro cultivation: Larval and adult stages of *S. mansoni*, immortal cells, primary motor neurons.

Histology: Tissue fixation, paraffin wax inclusion, microtome slicing, tissue array, histochemistry, immunohistochemistry, immunofluorescence, *in situ* hybridization.

Imaging: Confocal, fluorescence and optical microscopy, images analyses (*Metamorph*, *ImageJ*).

Molecular biology: Preparation of nucleic acids, reverse transcription, PCR, quantitative PCR, Western blot, RNA interference (dsRNA and siRNA).

Whole genome approaches: RNA-sequencing, Chromatin immunoprecipitation-sequencing: sampling, data processing and bioinformatic analysis.

Statements

- August 2013 **XIV Congress of the European Society for Evolutionary Biology**, Lisbon, Portugal.
POSTER: « Genetic/epigenetic mechanisms to trigger off separate sexes appearance. Example of intriguing dioecious parasites: *Schistosomatidae*. »
Picard M. AL., Rognon A., Duval D., Mouahid G., Grunau C., Cosseau C. & Boissier J.
- June 2013 **Workshop Schistosomiasis**, Perpignan, France.
TALK: “The intriguing W heterochromosome of *Schistosoma mansoni*. Genetic/epigenetic mechanisms to trigger off separate sex appearance?”
Picard M. AL.
- May 2013 **Jacques Monod Conference « Recent advances on the evolution of sex and genetic systems »**, Roscoff, Brittany, France.
POSTER : « Genetic/epigenetic mechanisms to trigger off separate sexes appearance. Example of intriguing dioecious parasites: *Schistosomatidae*. »
Picard M. AL., Rognon A., Duval D., Mouahid G., Grunau C., Cosseau C. & Boissier J.
- May 2013 **2nd Pluridisciplinary Congress of the Perpignan University PhD students**, France.
TALK : « A parasitic worm with a very complex sex. »
Picard M. AL., Duval D., Mouahid G., Arancibia N., Grunau C., Cosseau C. & Boissier J.
Silver medal for best talk.
- August 2012 **34th Petit Pois Dérivé Congress** (Population genetics and biology French Group Meeting), Avignon, France.
POSTER: « How do we make sex in *Schistosoma mansoni* ? »
Picard M. AL., Cosseau C., Duval D., Grunau C., Boissier J.
- June 2012 **1st Pluridisciplinary Congress of the Perpignan University PhD students**, France.
POSTER: « Sex determination and differentiation in *Schistosoma mansoni*. »
Picard M. AL., Boissier J.
Bronze medal for best poster.

Collaboration

- Avril 2014 /
Mai 2014 **Invited visiting student**
Conor Caffrey research team.
Center for Discovery and Innovation in Parasitic Diseases, Department of Pathology, University of California San Francisco, United States of America.
Burroughs Wellcome Schistosome Toolbox award.

Teaching

- 2014 / 2015 **Lectures** (Bachelor, 21H) Cell biology.
Practical works (Bachelor, 59H) Cell biology, Immunology, Reproduction and development.
- 2013 / 2014 **Supervision of bachelor student** (Internship, 1 week) « Study of chromatin modifications at different developmental stages of *S. mansoni*. »
- 2012 / 2013 **Practical works** (Bachelor, 32H) Reproduction and development, Molecular biology techniques.
- 2011 / 2012 **Supervision of master student** (Internship, 3 months) « Sex determination and differentiation in *Schistosoma mansoni* : a multiscale analysis. »
Lecture (Master degree, 1H) « Diversity of sex determination system and sperm competition across animal kingdom. »
Practical works (Bachelor, 16H) Endocrinology.

Scientific animation

- Oct. 2013 **Design of educational posters** (Primary and Secondary School).
Perpignan Sciences Fair.
- Oct. 2012 **Lecture and educational games** (Primary and Secondary School).
& Oct. 2011 Perpignan Sciences Fair.
- Nov. 2012 **Lecture and debate** (College).
& Nov. 2011 Perpignan University Student's day and Wangary day (Women&Sciences fair).
- June 2012 **Organization of Congress.**
1st Pluridisciplinary Congress of the Perpignan University PhD students, France.

Collective responsibilities

IHPE laboratory committee member.

Membership

European Society for Evolutionary Biology (ESEB) member.

Languages

French (Maternal), Spanish, English.