

# Marius Poulain

**Nationality:** French

**Date of birth:** 03/11/1996

☎ (+33) 0626417786

✉ [marius.poulain@sfr.fr](mailto:marius.poulain@sfr.fr)

in [Marius Poulain](#)

📍 Paris, FRANCE

## ABOUT ME

**Doctor in Biology of Interactions** with three years of experience in a pest control consulting startup and over six years of **research on microbial interactions**. After a year of traveling across diverse regions worldwide, I am now **seeking to engage in stimulating and challenging research and innovation projects**. I bring a multidisciplinary mindset, a rigorous work ethic, and a strong ability to adapt and collaborate across cultures and disciplines. Proactive and creative, I value building partnerships and sharing scientific knowledge with both my team and the broader society.

## WORK EXPERIENCE

**Research Manager** - [12/2023 – 01/2024]

**French National Center for Scientific Research (CNRS)** | City: **Lyon** | Country: **France**

*Study of the interactions between Bed Bugs and their nutritional symbiont, Wolbachia*

Research Director: Dr. Natacha KREMER

- Publication of a scientific article: "[Marius Poulain et al. Development, feeding, and sex shape the relative quantity of the nutritional obligatory symbiont Wolbachia in bed bugs. Frontiers in Microbiology, 2024, 15, pp.1386458. ff10.3389/fmicb. 2024.1386458ff. fhal-04604432](#)".



**Research Manager** - [10/2020 – 10/2023]

**IZInnovation | CNRS | INRAE** | City: **Lyon** | Country: **France**

*PhD Thesis on the interactions between Bed Bugs and their microbiota*

Research Directors: Dr. Romain LASSEUR, Dr. Natacha KREMER, DR. Anna ZAIDMAN, and Dr. Fabrice VAVRE.

- Collaborative research between the laboratories of CNRS and INRAE, and the startup IZInnovation
- Management of a research project on the new Symbiotron experimental platform
- Statistical analysis and presentations of scientific results
- Devising protocols for molecular biology, cellular biology, microscopy, and insect breeding
- Writing and publication of scientific communication articles
- Training of collaborators
- Training of clients



**Internship** - [01/2019 – 07/2019]

**Max Planck Institute for Marine Microbiology (MPI)** | City: **Bremen** | Country: **Germany**

*Comparative and Functional Genomics of  $\delta$ -Proteobacterial Symbionts of Oligochaetes*

Symbiosis Department - Research Supervisor: Dr. Nicole DUBILIER



MAX-PLANCK-INSTITUT  
FÜR MARINE MIKROBIOLOGIE

**Internship** - [01/2018 – 07/2018]

**National Research Council of Canada (NRCC)** | City: **Montreal** | Country: **Canada**

*Characterization of the Rhizosphere Microbiome in Plants from Canadian Mining Sites*

Microbial Genomics Team - Research Supervisor: Dr. Charles GREER



**Internship** - [06/2017 – 07/2017]

**French National Center for Scientific Research (CNRS)** | City: **Gif-sur-Yvette** | Country: **France**

*Purification of the cellulose secretion complex for crystallography*

Biofilm Structural Biology Team – Research Supervisor: Dr. Petya KRASTEVA



**Internship** - [05/2016 – 06/2016]

**French Atomic Center (CEA)** | City: **Saclay** | Country: **France**

*In silico study of the cnidarian Nitric-Oxide synthase*













Oxidative Stress and Detoxification Team – Research Supervisor: Dr. Pierre DORLET



EDUCATION AND TRAINING

<b>PhD in Biology of Interactions (EQF level 8)</b> <i>Université Claude Bernard Lyon 1</i>	[ 10/2020 – 12/2023 ] City: <b>Lyon</b>   Country: <b>France</b>	
<b>Master of Fundamental Microbiology (EQF level 5)</b> <i>Université Paris-Saclay</i> <i>Université de Montréal</i>	[ 09/2017 – 07/2019 ] City: <b>Orsay</b>   Country: <b>France</b> City: <b>Montreal</b>   Country: <b>Canada</b>	
<b>Master of Biology (EQF level 5)</b> <i>Université Paris-Saclay</i> <i>Université de Montréal</i>	[ 09/2016 – 07/2019 ] City: <b>Orsay</b>   Country: <b>France</b> City: <b>Montreal</b>   Country: <b>Canada</b>	
<b>Bachelor of Biology and Health (EQF level 3)</b> <i>Université Paris-Saclay</i>	[ 09/2014 – 07/2017 ] City: <b>Orsay</b>   Country: <b>France</b>	

SKILLS & TOOLS

 Biostatistics & Data analysis (R, Bash, Python...)	 Project management
 Molecular biology (Molecular Extraction, qPCR, Sequencing...)	 Transdisciplinary collaboration
 Microbiology (Transformation, Biosynthesis, Cytometry...)	 Team management
 Microscopy (Electronic, Confocal, Fluorescence...)	 Research Methodology
 Animal breeding (Insects, Rodents...)	 Consulting & training
 Immunology (ELISA, Western Blotting, Immunochemistry...)	 Communication

LANGUAGE SKILLS

 <b>French:</b> Native	 <b>English:</b> C2 (1 year in Canada)	 <b>German:</b> A2 (6 months in Germany)
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MEMBERSHIPS

<b>International Symbiosis Society</b> - [07/2022 – 07/2023]
<b>PhD Industrial Agreements for training through Applied Research ALMUNI</b> - [10/2020 – Current]

HOBBIES AND INTERESTS

<b>Global Travel</b> - [04/2024-10/2024] Solo-traveled worldwide for 6 months: yoga retreat in India, exploration of East Asia (Japan, South Korea...), networking in the Americas (USA, Mexico, Brazil, Peru...).
<b>European Travel</b> - [06/2018-07/2018] Backpacked in several European countries (Spain, Italy, Greece, Bulgaria, Hungary, Serbia, Austria, Germany).
<b>Archaeological Excavation Volunteering</b> - [ 01/07/2016 – 31/07/2016 ] Excavation of a hypogeal necropolis in a Neolithic flint mine

<b>Sport and Activities</b> <ul style="list-style-type: none"><li>• Yoga [2020-Current]</li><li>• Climbing [2012-Current]</li><li>• Tennis [2002-2020]</li><li>• Member of the French Alpin Club (CAF) [2007 – 2014]</li></ul>
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PUBLICATIONS

Development, feeding, and sex shape the relative quantity of the nutritional obligatory symbiont Wolbachia in bed bugs - [2024]

**Poulain M**, Rosinski E, Henri H, Balmand S, Delignette-Muller ML, Heddi A, Lasseur R, Vavre F, Zaidman-Rémy A, Kremer N. Development, feeding, and sex shape the relative quantity of the nutritional obligatory symbiont Wolbachia in bed bugs. Front Microbiol. 2024 May 7;15:1386458. doi: [10.3389/fmicb.2024.1386458](https://doi.org/10.3389/fmicb.2024.1386458). PMID: 38774500; PMCID: PMC11106466.

Punaise de lit et agents pathogènes, qu'en est-il ? - [2021]

**Poulain M**, Rametti L, Lasseur R. La punaise des lits est-elle vectrice de maladies ? Hamelin. 2021 Décembre 19; [www.hamelin.info](http://www.hamelin.info)

Punaise de lit : ce que vous devez savoir - [2021]

**Poulain M**, Haberkorn C, Banse R, Lasseur R. Punaise de lit : ce que vous devez savoir. N&Pi. 2021 Mars-Avril; n°119; p16-18.

CONFERENCES AND SEMINARS

Regional Finalist of "My Thesis in 180 Seconds" - [ 23/03/2023 – 23/03/2023 ]

City: **Lyon** | Link: [https://www.youtube.com/watch?v=iJzlenWTeY&t=76s&ab\\_channel=UniversiteDeLyon](https://www.youtube.com/watch?v=iJzlenWTeY&t=76s&ab_channel=UniversiteDeLyon)  
Speaker in an international contest of scientific vulgarization.

Ecology of Sustainable Interaction Network Scientific Congress - [22/05/2023 – 26/05/2023]

City: **Poitiers** | Link: <https://ebi.labo.univ-poitiers.fr/reid-2023/>  
Speaker on "The Nutritional Interaction between the Bed Bug and its Obligatory Symbiont, *Wolbachia*".

Regional Research Group in Microbiology Conferences - [ 13/11/2023 – 17/11/2023 ]

City: **Lyon** | Link: <https://g-rremi.univ-lyon1.fr/spip.php?rubrique7>  
Speaker on "The Study of the Interaction between Bed Bugs and their Microbiota".

National Institute for Applied Science Seminar - [ 25/04/2023 – 25/04/2023 ]

City: **Lyon**  
Speaker on "The Localization of Wolbachia in Bed Bugs" and poster presenter.

Regional Research Group in Microbiology Conferences - [ 14/11/2022 – 18/11/2022 ]

City: **Lyon** | Link: <https://g-rremi.univ-lyon1.fr/spip.php?rubrique7>  
Poster presenter.

Symbiosis in the Anthropocene Era - [ 25/07/2022 – 29/07/2022 ]

City: **Lyon** | Link: <https://iss10holobiont3.sciencesconf.org/>  
Poster presenter at the 10<sup>th</sup> International Congress of the Symbiosis Society.

REFERENCES

**Fabrice VAVRE** – LBBE UMR CNR 5558 – Laboratory Director: [fabrice.vavre@cnrs.fr](mailto:fabrice.vavre@cnrs.fr)  
**Natacha KREMER** – LBBE UMR CNRS 5558 – Research Associate: [natacha.kremer@cnrs.fr](mailto:natacha.kremer@cnrs.fr)  
**Anna ZAIDMAN-REMY** – BF2I UMR INRAE 0203 – Professor: [annazaidman@insa-lyon.fr](mailto:annazaidman@insa-lyon.fr)  
**Federica CALEVRO** – BF2I UMR INRAE 0203 – Laboratory Director: [federica.calevro@insa-lyon.fr](mailto:federica.calevro@insa-lyon.fr)  
**Romain LASSEUR** – IZInnovation – CEO: [romain.lasseur@izinovation.com](mailto:romain.lasseur@izinovation.com)