

# Sylvain Pulicani, PhD

## Bioinformatician

### Location

Paris, France

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### Statistics

Experiments modelling  
Relationship extraction  
Results validation  
Knowledge of Machine  
Learning

### Bioinformatics

NGS analysis  
Set up of databases  
Sequence analysis  
Phylogeny  
Biological networks

### Programming

Python ★★★★★  
Bash ★★★★★  
Perl ★★★★★  
SQL ★★★★★  
Java ★★★★★  
C ★★★★★  
Rust ★★★★★  
R ★★★★★  
JavaScript ★★★★★

### Computing

GNU/Linux  
Computing clusters  
SQLite, MySQL  
Neo4J, Dgraph, CouchDB,  
InfluxDB

Biologist by formation, I made a PhD thesis on the modelling of chromosomal rearrangements using the chromatin structure. This allowed me to learn a lot of computer science and modeling material.

Now, I'm looking forward to apply that knowledge on biological questions.

## Experience

Since 04/21 **Bioinformatician** Cellestis, Paris, France  
Analysis of internally generated biological data - Integration of public datasets  
- Design of analysis pipelines - Bibliography.

04/19 - 03/21 **Computer engineer** IT-med, Marseille, France  
Different missions.

- 10/20 - 03/21: Set up on an ERP system for internal use (installation, configuration and additional developments).
- 03/20 - 05/20: Set up of a computational environment supervision for a customer.
- 08/19 - 11/19: Set up of an computational environment supervision for a customer.
- 04/19 - 06/19: Development of a real-time supervision application for a data warehouse (monitoring of I/O, latency, etc.).

10/15 - 11/18 **PhD Student** LIRMM UMR 5506 & IGH UMR 9002, Montpellier, France  
Thesis title: *Linking Large Scale Chromosomal Rearrangement with Chromatin Structure in the Drosophila*.

Duties included modelling of biological phenomena and experiments, analysis of biological data, including NGS data (especially Hi-C), use and set up of biological databases and scientific communication (both talks and publications).

10/16 - 03/18 **Teaching Fellow** DESciRE, Montpellier, France  
As part of the MathC2+ project, I set up a bioinformatics workshop to help high schools students discovering the scientific methodology. In total, around 100 students participated in small groups.

I also talked at the French "journées de la science" (a few days annually dedicated to the introduction of high school students to the scientific research).

09/17 - 01/18 **Teaching Fellow** Montpellier University, France  
Introduction to Python programming and application to scientific computing for bioinformatics Master's students.

Duties included supervision of computer lab works, conception of exercises and correction of examinations.

## Languages

French ★★★★★

English ★★★★★

## Personal Skills

Curious

Adaptive

Autonomous

Problem solving

Willingness to learn

Teamwork

## Hobbies

Reading

Watching movies

Climbing

## Other Info

French nationality

Holder of a French driving licence

References available upon request

### 09/16 - 02/17 Teaching Fellow

[Montpellier University, France](#)

Introduction to algorithmic and programming for computer science first year students.

Duties included supervision of tutorials, supervision of computer lab works and correction of examinations.

### 01/15 - 06/15 Master's Thesis Work Experience

[Inmed U901, Marseille, France](#)

Thesis title: *Study of the link between Necdin and MageL2 genes.*

Duties included mice management, biological sampling, biological experiments (especially RT-qPCR), experimental results analysis, genomics and phylogenetics analysis.

### 03/14 - 06/14 Master's Thesis Work Experience

[Inmed U901, Marseille, France](#)

Thesis title: *Study of conserved patterns in the N-terminal part of MAGEL2.*

Duties included mice management, biological sampling, experimental results analysis, genomics and phylogenetics analysis.

## Education

### 2015 - 2018 PhD in Bioinformatics

[Montpellier University, France](#)

Linking Large Scale Chromosomal Rearrangement with Chromatin Structure in the Drosophila.

### 2013 - 2015 Master's Degree

[Aix-Marseille University, France](#)

Genomics (main subject), bioinformatics, genetics, phylogeny

### 2010 - 2013 Bachelor's Degree

[Aix-Marseille University, France](#)

Cellular Biology (main subject), genetics, neurobiology

## Publications

Oliva A., Pulicani S., Lefort V., Bréhélin L., Gascuel O., Guindon S.  
**Accounting for Ambiguity in Ancestral Sequence Reconstruction**  
*Bioinformatics, Volume 35, Issue 21, 1 November 2019, Pages 4290–4297*  
DOI: 10.1093/bioinformatics/btz249

Pulicani S.  
**Linking Large Scale Genome Rearrangement to Chromatin Structure in Drosophila**  
*Université de Montpellier, Novembre 2018, France*  
HAL: tel-02161932

Pulicani S., Simonaitis P., Rivals E., Swenson K. M.  
**Rearrangement Scenarios Guided by Chromatin Structure**  
*RECOMB-CG: Comparative Genomics, Oct 2017, Barcelona, Spain. pp.141-155*  
DOI: 10.1007/978-3-319-67979-2\_8