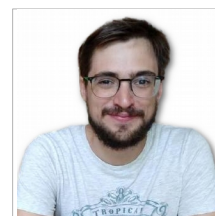


# Sergio Castillo Lara

Bioinformatician



## CONTACT

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Email ✉ s.cast.lara@gmail.com  
Github ○ github.com/scastlara  
Date of birth October 27th, 1992  
Nationality Spanish

## EXPERIENCE

2017 - Present

### Ph.D. Fellow

*Computational Genomics Lab, University of Barcelona*

- Development of web-based tools to integrate protein-protein interactions, sequence annotations, and gene expression data for the planaria *Schmidtea mediterranea*.
- Analysis of RNA-seq data for *Schmidtea mediterranea*.
- Development of tools that utilize machine-learning for predicting and retrieving protein-protein interactions.
- Assistant teacher of the courses:
  - “Introduction to Algorithmics”: Msc. Bioinformatics for Health Sciences at UPF.
  - “Bioinformatics”: BSc. Biochemistry at UB.
  - “Computational Genomics”: BSc. Bioinformatics at UPF/UPC/UB.

2014 - 2017

### Research Intern

*Computational Genomics Lab, University of Barcelona*

- Prediction of an interactions network of planarian genes and proteins using sequence homology information and machine learning.
- Implementation of a pipeline to retrieve protein-protein interactions from scientific literature using natural language processing.

## EDUCATION

2015 - 2017

### MSc Bioinformatics for health sciences

*Universitat Pompeu Fabra, Barcelona, Spain*

2010 - 2015

### BSc Biology

*Universitat de Barcelona, Barcelona, Spain*

## PROFESSIONAL SKILLS

Programming Languages **Python, Perl, R**, JavaScript, Bash  
Databases **Neo4j**, Cypher Query Language, SQL  
Data Science **ggplot2**, scikit-learn, R caret  
Web **HTML5, CSS, Django**, jQuery, Bootstrap, Cytoscape.js  
Other **Statistics, Machine-Learning, RNA-seq**, Linux, git, LaTeX

## PUBLICATIONS

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- S. Castillo-Lara**, J.F. Abril (2018)  
**PPaxe: easy extraction of protein occurrence and interactions from the scientific literature.** *Bioinformatics*, AOP. [doi:10.1093/bioinformatics/bty988](https://doi.org/10.1093/bioinformatics/bty988)
- S. Castillo-Lara**., J.F. Abril (2018)  
**PlanNET: Homology-based predicted interactome for multiple planarian transcriptomes.** *Bioinformatics*, 34(6): pp. 1016-1023. [doi:10.1093/bioinformatics/btx738](https://doi.org/10.1093/bioinformatics/btx738)
- D. Boloc, **S. Castillo-Lara**, G. Marfany, R. González-Duarte, J.F. Abril (2015)  
**Distilling a visual network of retinitis pigmentosa gene-protein interactions to uncover new disease candidates.** *PLOS ONE*, 10(8): e0135307. [doi:10.1371/journal.pone.0135307](https://doi.org/10.1371/journal.pone.0135307)

## POSTERS AND COMMUNICATIONS

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- S. Castillo-Lara**, J.F. Abril (2018)  
**PPaxe facilitates human-curation of protein-protein interactions filtered from the scientific literature.** VI Jornada de Bioinformàtica i Genòmica, Barcelona.
- R. Arenas-Galnares, **S. Castillo-Lara**, V. Toulis, G. Marfany, R. González-Duarte, J.F. Abril (2018)  
**RPGeNet v2.0 Enhanced navigation through the retinitis pigmentosa interaction network**  
VI Jornada de Bioinformàtica i Genòmica, Barcelona.
- E. Pascual-Carreras, M. Marín-Barba, **S. Castillo-Lara**, M. Sureda-Gómez, G. Rodríguez-Esteban, H. Heyn, J.F. Abril, E. Saló, T. Adell (2017)  
**Understanding the anterior and the posterior signaling centers in planarians.** XXIX *Developmental Biology Meeting*, Barcelona.
- S. Castillo-Lara**, J.F. Abril (2017)  
**A human-planarian interologs network to annotate planarian transcriptomes: PlanNET**  
15th International Workshop RECOMB Comparative Genomics, Barcelona.
- S. Castillo-Lara**, D. Boloc, G. Marfany, R. González-Duarte, J.F. Abril (2015)  
**Distilling a network of interactions to uncover genes involved in Retinitis Pigmentosa disease.** II Jornada de Bioinformàtica i Biologia Computacional, Barcelona.

## SCHOLARSHIPS

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2017	Grant for the recruitment of early-stage research staff (FI) <i>Agència de Gestió d'Ajuts Universitaris i de Recerca</i>
2016	Beca de colaboración con departamentos (Collaboration Scholarship) <i>Ministerio de Educación Cultura y Deporte</i>
2014	Summer Research in Genetics <i>University of Barcelona</i>