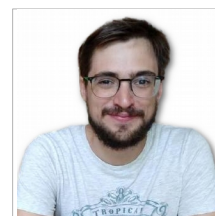


Sergio Castillo Lara

Bioinformatician & Data Scientist



PERSONAL INFORMATION

| | | | |
|---------------|--------------------|---------|--|
| Address | Barcelona, Spain | Email | ✉ s.cast.lara@gmail.com |
| Telephone | ☎ +34 93 403 13 05 | Website | 🌐 scastlara.github.io |
| Date of birth | October 27th, 1992 | Github | 🐙 github.com/scastlara |

EXPERIENCE

2017 - Present

Ph.D. Fellow

Computational Genomics Lab, University of Barcelona

Supervised by: Josep F. Abril (jabril@ub.edu)

- Development of web-based tools to integrate protein-protein interactions, sequence annotations, and gene expression data for planarians and humans.
- Analysis of RNA-seq, ATAC-seq and ChIP-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

R. Arenas-Galnares[†], **S. Castillo-Lara**[†], V. Toulis, D. Boloc, R. González-Duarte, G. Marfany, J.F. Abril (2019)

[RPGeNet v2.0: expanding the universe of retinal disease gene interactions network.](#)
Database, In Press.

[†] Contributed equally

S. Castillo-Lara, E. Pascual-Carreras, J.F. Abril (2019)

[PlanExp: intuitive integration of complex RNA-seq datasets with planarian omics resources.](#)
Bioinformatics, AOP.

S. Castillo-Lara, J.F. Abril (2018)

[PPaxe: easy extraction of protein occurrence and interactions from the scientific literature.](#)
Bioinformatics, 35(14): pp. 2523-2524.

S. Castillo-Lara, J.F. Abril (2017)

[PlanNET: Homology-based predicted interactome for multiple planarian transcriptomes.](#)
Bioinformatics, 34(6): pp. 1016-1023.

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.

POSTERS

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

| | |
|------|---|
| 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> |