

Sergio Castillo-Lara

Bioinformatician



CONTACT

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Date of birth October 27th, 1992
Nationality Spanish

EXPERIENCE

Feb. 2017 - Present **Ph.D. Student**

Computational Genomics Lab, University of Barcelona

- Development of tools to integrate protein-protein interactions, sequence annotations, and gene expression data for the planaria *Schmidtea mediterranea* at the Computational Genomics Lab.
- Assistant teacher of the course "Introduction to Algorithmics" in the MSc Bioinformatics for Health Sciences at Pompeu Fabra University.
- Assistant teacher of the course "Bioinformatics" in the Bsc Biochemistry at University of Barcelona.

Jun. 2014 – Feb. 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
GPA: 9.35/10

2010 - 2015 **BSc Biology**
Universitat de Barcelona, Barcelona, Spain
GPA: 8.7/10

PROFESSIONAL SKILLS

Programming Languages **Perl, Python, R**, Javascript,, Bash
Databases **Neo4j**, Cypher Query Language, SQL
Data Science **ggplot2**, scikit-learn, R caret (& R tidyverse)
Web **HTML5, CSS, Django**, jQuery, Bootstrap, Cytoscape.js
Other **Linux, git**, LaTeX

LANGUAGES

Mother tongue Spanish, Catalan
Foreign languages English – Fluent

PUBLICATIONS

PlanNET: Homology-based predicted interactome for multiple planarian transcriptomes

Castillo-Lara, S., Abril JF. (2018)
Bioinformatics, 34(6): pp. 1016-1023

Distilling a visual network of retinitis pigmentosa gene-protein interactions to uncover new disease candidates

Boloc D., **Castillo-Lara S.**, Marfany G., González-Duarte R., Abril JF. (2015)
PLOS ONE, 10(8): e0135307

POSTERS AND COMMUNICATIONS

Understanding the anterior and the posterior signaling centers in planarians

XXIX Developmental Biology Meeting (2017)

Pascual-Carreras E., Marín-Barba M., **Castillo-Lara S.**, Sureda-Gómez M., Rodríguez-Esteban G., Heyn H., Abril JF., Saló E., Adell T.

A human-planarian interologs network to annotate planarian transcriptomes: PlanNET

15th International Workshop RECOMB Comparative Genomics (2017)

Castillo-Lara, S., Abril JF.

Distilling a network of interactions to uncover genes involved in Retinitis Pigmentosa disease

II Jornada de Bioinformàtica i Biologia Computacional (2014)

Castillo-Lara S., Boloc D., Marfany G., González-Duarte R., Abril JF.

SCHOLARSHIPS

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