

Dr Javier Sánchez Utgés

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Education

PhD	University of Dundee , Structural Bioinformatics	Sept 2020 – Mar 2025
	<ul style="list-style-type: none"> Supervised 7 students across BSc, MSc and PhD degrees Student Representative of Computational Biology Division Thesis: <i>"Computational methods for the characterisation and evaluation of protein-ligand binding sites"</i> 	
MSc	Universitat Pompeu Fabra , Bioinformatics for Health Sciences	Sept 2018 – July 2020
	<ul style="list-style-type: none"> Grade: 9.3/10 9-month Internship at the Barton Group, University of Dundee Thesis: <i>"Ankyrin repeats in context with population variation"</i> 	
BSc	Universitat Autònoma de Barcelona , Genetics	Sept 2014 – July 2018
	<ul style="list-style-type: none"> Grade: 8.4/10 12-month Erasmus exchange at University of Dundee Dissertation: <i>"Methods for the detection and estimation of selection acting upon the genome"</i> 	

Experience

University of Dundee , Research assistant	Dundee, Scotland Mar 2025 – June 2025
The Association of the British Pharmaceutical Industry (ABPI) , Intern	London, England Aug 2022 – Nov 2022
<ul style="list-style-type: none"> Improved the Interactive Resources for Schools website of the ABPI 	
IBE-CSIC-UPF , Intern	Barcelona, Spain July 2017 – Sept 2017
<ul style="list-style-type: none"> Internship at the Calafell Lab on Forensic and Population Genetics 	

Publications

LIGYSIS-web: a resource for the analysis of protein-ligand binding sites	May 2025
Utgés JS , MacGowan SA, Barton GJ 10.1093/nar/gkaf411 (Nucleic Acids Research)	
Comparative evaluation of methods for the prediction of protein-ligand binding sites	Nov 2024
Utgés JS , Barton GJ 10.1186/s13321-024-00923-z (Journal of Cheminformatics)	
Classification of likely functional class for ligand binding sites identified from fragment screening	Mar 2024
Utgés JS , MacGowan SA, Ives CM, Barton GJ 10.1038/s42003-024-05970-8 (Communications Biology)	
Ankyrin repeats in context with human population variation	Aug 2021
Utgés JS , Tsenkov MI, Dietrich NJM, MacGowan SA, Barton GJ 10.1371/journal.pcbi.1009335 (PLOS Computational Biology)	

Projects

LIGYSIS-web

[LIGYSIS-web](#)

- A Python Flask Web Application to explore protein-ligand binding sites
- Tools: Python, JavaScript, HTML, CSS
- Packages: Flask, 3DMol.js, Chart.js

LBS-comparison

[LBS-comparison](#)

- The largest benchmark of ligand binding site prediction methods.
- Tools: Python, P2Rank, fpocket, IF-SitePred, POVME
- Packages: BioPython, Pandas, Sklearn

FRAGSYS

[FRAGSYS](#)

- A pipeline for the analysis of fragment screening-derived binding sites
- Tools: Python, Bash, Jalview, OC
- Packages: Matplotlib, Pandas, Seaborn

ANK-analysis

[ANK-analysis](#)

- The most comprehensive analysis of Ankyrin repeats
- Tools: Python, ClustalO, Chimera, AMPS, gnomAD
- Packages: ProIntVar, ProteoFAV, VarAlign

Conferences

ELIXIR 3DBioInfo Annual General Meeting | ISCB 3DSIG

Mar 2025

Talk: *"Computational methods for the characterisation and evaluation of protein-ligand binding sites"*

Barcelona, Spain

ISCB ISMB 2024

July 2024

Poster: *"LIGYSIS: a resource for the analysis of ligand binding sites"*

Montreal, Canada

3DBioInfo | ISCB 3DSIG | ELIXIR Czech Republic Community Meeting

Nov 2023

Poster: *"LIGYSIS: a resource for the analysis of ligand binding sites"*

Prague, Czech Republic

ISCB ECCB/ISMB 2023

July 2023

Poster: *"Characterising the human protein-ligand interactome"*

Lyon, France

EMBO VizBi 2023

Mar 2023

Poster + flash talk: *"Predicting function in ligand binding sites"*

Heidelberg, Germany

ISCB ECCB 2022

Sept 2022

Poster: *"Fragment screening in context with human population variation"*

Sitges, Spain

European Society for Evolutionary Biology Symposium

June 2021

Talk: *"Tandem Repeats: methods and roles in molecular evolution"*

Online

Assets

Languages: Python, Bash, R, JavaScript, HTML, CSS.

Software: Jalview, ChimeraX, PyMol, Clustal, HMMER.

Skills: Protein sequence and structure analysis, machine learning, web development, workflow generation, method benchmarking, version control, scientific writing, supervision, team work.

Languages

Spanish and Catalan: Mother tongue

English: Advanced level, C1 (Grade A, First Certificate in English)

German: Advanced level, B2 (5 years at Official Language School)

French: Basic level

References

PhD Supervisor: [Prof Geoff Barton](#) 

MSc Secondary Supervisor: [Dr Stuart MacGowan](#) 

PIPS Supervisor: [Dr Andrew Croydon](#) 

BSc Dissertation Supervisor: [Prof Antonio Barbadilla](#) 