




Albert Fradera Sola

Bioinformatician | Data Scientist | Proteomics & Genomics Scientist




I consider myself both collaborative and adaptable. I am always eager to take on new and diverse projects. I am very enthusiastic about sharing and continuously developing my data visualization skills as a means to enhance scientific communication. I am an open-minded person and enjoy fostering strong relationships with my colleagues.



Education

- Current | 2018
- **PhD Candidate in Quantitative Proteomics**
JGU University  Mainz, Germany
 - PhD thesis: Quantitative Mass Spectrometry-based Proteomics to Investigate RNA-protein Interactions
- 2017 | 2016
- **M.Sc. in Omics Data Analysis**
University of Vic  Barcelona, Spain
 - Master thesis: Soring function for finding *Lotium Perenne* DEGs
 - Erasmus + grant fellow
- 2016 | 2009
- **B.Sc. in Biochemistry**
University of Barcelona  Barcelona, Spain
 - Bachelor thesis: NMR studies on alpha-synuclein
 - Erasmus + grant fellow

Research Experience

- Current | 2023
- **Postdoctoral Researcher**
Friedrich Loeffler Institute  Greifswald, Germany
 - Postdoctoral researcher with Dr. Falk Butter (Falk.Butter@fli.de)
 - Publications: 1 first-author paper (in preparation), 1 co-author paper (in preparation)
- 2023 | 2018
- **PhD Candidate**
Institute of Molecular Biology  Mainz, Germany
 - PhD candidate with Dr. Falk Butter (Falk.Butter@fli.de)
 - Publications: 1 first-author paper, 6 co-author papers
- 2017
- **Master Student**
Institute of Biological, Environmental and Rural Sciences  Aberystwyth, UK
 - MSc student with Dr. Narcis Fernandez-Fuentes (naf4@aber.ac.uk)
 - Publications: 1 first-author paper, 1 co-author paper

Contact

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Language Skills

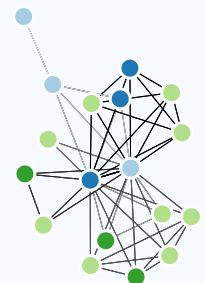
Catalan





Spanish

English

German

My CV as a network



Bullet points (for , , , and ) are interconnected by year. Interactive version [here](#)



Dry Lab Projects and Related Skills

• Network-based Assignment of RNA-Binding Proteins' Functionality

- Functionality was inferred from associations with annotations at the domain, molecular function, and pathway levels.
- Function-based networks were created from quantitative proteomics data and made accessible through an interactive, user-friendly web interface.
- **Keywords:** Network | Functional analysis | Pfam | GO | KEGG | R Shiny

• Infectome Profiling of Three *Leishmania* Species

- *M. musculus* proteome changes were investigated after infection with *Leishmania*.
- Protein orthologs between the *Leishmania* species were established.
- **Keywords:** Proteome | Differential expression | Protein orthology

• Embryonic Development Proteome Profiling of *Xenopus* Species

- Clustering (Self Organizing Maps) and dimensionality reduction techniques (Principal Component Analysis) were applied.
- **Keywords:** Proteome | Differential expression | SOM | PCA | Clustering

• Scoring Function for RNA-Seq Differential Expression Assessment

- A scoring function was developed around three RNA-Seq differential expression assessment R packages (DESeq2, edgeR, limma+voom)
- **Keywords:** NGS | RNA-Seq | Quality control | Differential expression

• ChIP-Seq Characterization of a Novel ATPase in *T. brucei*

- H2A.Z deposition was investigated and visualized with genome tracks
- **Keywords:** NGS | ChIP-Seq | Genome tracks



Wet Lab Projects and Related Skills

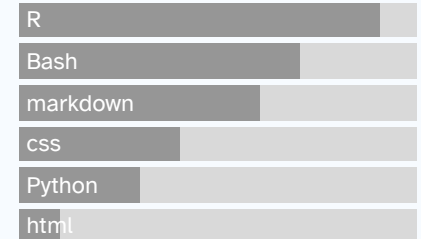
• Immunoprecipitation of RNA-binding Proteins in *S. cerevisiae*

- I was responsible for designing the experimental setup and generating the data for the RNA-binding protein interactome investigation.
- **Keywords:** Yeast | Protein Immunoprecipitation | Experimental design

• Mass Spectrometry Quantitative Proteomics

- I used chemical labeling (DML) and label-free mass spectrometry sample preparation protocols on several projects
- **Keyword:** Mass spectrometry | DML | LFQ | In-gel digestion

Coding Skills



Some R packages I have experience with:



Proteomics Software Skills



Genomics Software Skills

