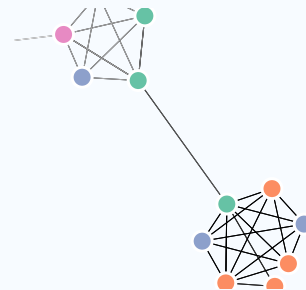


SERGIO RUIZ-CARMONA

I am currently a Research Officer and Bioinformatician at the [Baker Institute](#), under the supervision of professor [Mike Inouye](#). My research interests are broad and involve mainly the relationship between genetic variants and their effect on protein structures.

I carried out my MSc and PhD in Barcelona in the [Barril Lab](#), where I worked with different structure-based drug design methods with the aim to improve drug design for non-standard targets.



View this resume [online](#)



SELECTED EDUCATION

2017
|
2012



PhD in Biomedicine

Universitat de Barcelona

Barcelona, ES

- Virtual Screening for novel MoA: Apps. and method developments
- Development and application of **structure-based drug discovery** methods
- Awards: **Extraordinary prize** for PhD Thesis and **Ramon Margalef award** for best publication



SELECTED POSITIONS

Today
|
2019



Research Officer and Bioinformatician

Inouye Lab
Baker Heart and Diabetes Institute

Melbourne, AU

- I am working in a project that overlaps Structural Biology and Genomics, in collaboration with David Ascher's Lab. Mainly, I am trying to understand how rare missense variants alter protein structures and can induce disease

2019
|
2015



Associate Professor

Faculty of Pharmacy, Universitat de Barcelona

Barcelona, ES

- Classes in Pharmacy, Food Science and Nutrition degrees (total 400h)

2018
|
2017



Postdoctoral Researcher

Barril Lab, Universitat de Barcelona

Barcelona, ES

- After finishing my PhD, I worked in exciting collaborative projects in the field of epigenetics and cancer, where I carried out multidisciplinary research and learned new experimental skills

2017



EMBO Short-Term Fellow

Andreas Bender Lab, University of Cambridge

Cambridge, GB

- I spent 2 months in one of the main Pharmacogenomics groups in the world, where I used **gene-expression profiles** of different biological systems to study BRD4 and drug selectivity



SKILLS AND TRAINING



Computational Techniques

Computer-Aided Drug Discovery (SBDD), Machine Learning, Virtual Screening, Docking, Molecular Dynamics, Chemoinformatics, Quantum Chemistry, Bioinformatics Tools and Analysis



Programming

R, Python, Perl, C++, LaTeX, Bash, Java, MySQL, HTML and Android and Web Development



Management Skills

2021 EMBO Practical Course: Research to service: Planning and running a bioinformatics core facility

CONTACT

✉ sruizcarmona@gmail.com

🐦 [@RuizCSergio](https://twitter.com/RuizCSergio)

🔗 [sruizcarmona](https://sruizcarmona.com)

in [Sergio Ruiz](#)

🌐 ruizsergio.com

PROGRAMMING SKILLS

R
Bash
Python
Web Development
SQL

OTHER SKILLS

Highly experienced in:

Computational biology and drug design
Bioinformatics and biostatistics
Machine Learning
Data visualization
Experimental techniques

Motivated and **collaborative**, recently involved in **Machine Learning**, NGS data analysis, **UK Biobank** and genomics prediction

MORE INFO

See full CV at ruizsergio.com/cv for a complete list of positions, publications and more

Reference contact details provided upon request



Source code available in [github](#)
Last updated on Oct 8, 2021

OUTREACH AND OTHER ACTIVITIES

2021
|
2020

- **Australasian Leadership Computing Grants**
Story about NCI Computing Grant
 - Together with Mike Inouye, we were awarded a 1 year computing grant by the Australian National Computational Infrastructure to study COVID-19 proteins and possible drug treatments
- **Shiny App** development
Related to a project we published in the Journal *Circulation*
- **New tools for new medicines, The Conversation [article](#)**
Lay-summary of some of my work and opinion for The Conversation Spain
- **COVID-19 daily [dashboard](#), until Nov 2020**
Personal project to showcase COVID-19 evolution in Victoria during major lockdown in 2020

I have been involved in more than 10 collaborative projects in very different fields. I enjoy helping other researchers and collaborators to work in common scientific challenges

MAIN SCIENTIFIC OUTPUT

2021

- **Oxygen Pathway Limitations in Patients with Chronic Thromboembolic Pulmonary Hypertension**
Circulation
Read it [here](#)
 - Erin J Howden *, **Sergio Ruiz-Carmona** *, [...] Andre La Gerche, Marion Delcroix and Guido Claessen
 - Result of a Bioinformatics Core collaboration. [Shiny app](#) developed

My ultimate goal is to help patients: from drug discovery to precision medicine and hospital care data analysis

2021

- **The carbon footprint of bioinformatics**
bioRxiv
Read it [here](#)
 - Jason G Grealey, [...] **Sergio Ruiz Carmona** , Michael Inouye

2017

- **Dynamic undocking and the quasi-bound state as tools for drug discovery**
Nature Chemistry
Read it [here](#)
 - **Sergio Ruiz-Carmona**, P Schmidtke, [...] Rod Hubbard and Xavier Barril
 - Highlighted in its [issue cover](#)

2014

- **rDock: a fast, versatile and open source program for docking ligands to proteins and nucleic acids**
PLoS Computational Biology
Read it [here](#)
 - **Sergio Ruiz-Carmona**, Daniel Alvarez-Garcia, [...] Xavier Barril, Rod Hubbard and S David Morley