

Xabier Vázquez-Campos, PhD

Computational biologist | Environmental microbiologist

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EDUCATION

- 2015
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2011
- **PhD in Environmental Engineering**
The University of New South Wales
📍 Sydney, Australia
· Thesis: "Geomicrobiological aspects of the (bio)leaching of weathered low-grade uranium ore". [doi](#)
 - **MSc in Microbiology**
Autonomous University of Madrid
📍 Madrid, Spain
· Thesis: "Set-up of molecular ecology methodologies for the monitoring of microbial populations in an indirect reactor for the bioleaching of Zn from polymetallic sulfide concentrates" [in Spanish].
 - **Licenciante in Biology**
University of Vigo
📍 Vigo, Spain

RESEARCH EXPERIENCE

- Current
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2023
- **Bioinformatics scientist**
MINIMUM bio
📍 Sydney, Australia
- Current
|
2023
- **Research assistant (casual)**
School of Biotechnology and Biomolecular Sciences
📍 The University of New South Wales
- 2023
- **Visiting fellow**
School of Biotechnology and Biomolecular Sciences
📍 The University of New South Wales
- 2022
- **Senior research associate / Postdoctoral fellow**
NSW Systems Biology Initiative. School of Biotechnology and Biomolecular Sciences
📍 The University of New South Wales
- 2021
|
2017
- **Research associate / Postdoctoral fellow**
NSW Systems Biology Initiative. School of Biotechnology and Biomolecular Sciences
📍 The University of New South Wales
- 2017
|
2015
- **Research associate / Postdoctoral fellow**
BioGEMS group. Water Research Centre and School of Civil and Environmental Engineering
📍 The University of New South Wales

CONTACT

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🐦 [XabiVC](#)
🌐 [xvazquezc](#)
📺 [xvazquezc](#)
in [LinkedIn](#)
R[®] [ResearchGate](#)
🔍 [Google Scholar](#)
ID [0000-0003-1134-5058](#)
R [E-4772-2013](#)

COMPUTATIONAL BIOLOGY

- Amplicon data analysis (16S, 18S and ITS).
- Genome-based metagenomics.
- Phylogenetics and phylogenomics with maximum likelihood methods.
- Assembly and annotation of (meta)genomes, including eukaryotes.
- Experience with short and long read data.
- Structural modelling of proteins and protein complexes. Protein model evaluation.

CODING SKILLS

- Main languages: BASH and R. Some SQL and AWK.
- Reproducible reporting with Rmarkdown.
- Environment management with Conda.
- Experienced HPC user.
- Data visualisation and integration.

Made with the R package [pagedown](#).

The source code is available on my [datadrivencv-academic repository](#).

Last updated on 2023-05-05.

- 2011 • **Research assistant (casual)**
BioGEMS group, School of Civil and Environmental Engineering
📍 The University of New South Wales
- 2011 | 2010 • **Research assistant**
Bioprocesses Group, Faculty of Chemistry
📍 University of Vigo
- 2007 | 2006 • **Research assistant**
Bioprocesses Group, Faculty of Chemistry
📍 University of Vigo
- 2006 • **Teaching assistant**
Faculty of Biology
📍 University of Vigo



TEACHING EXPERIENCE



Courses

- 2020 • **CVEN9855 – Water & Wastewater Analysis**
School of Civil and Environmental Engineering.
📍 The University of New South Wales




Invited Lectures

- 2012 • **Uranium heap leaching: Microbiological aspects**
School of Civil and Environmental Engineering.
📍 The University of New South Wales




Workshops

- 2019 • **EMBL-ABR: Phylogenetic trees for beginners**
EMBL-ABR (Sydney node).
📍 The University of New South Wales
• Node organiser and facilitator.
- **EMBL-ABR: Implementing Scalable Bioinformatic Workflows in Snakemake & Nextflow**
EMBL-ABR (Sydney node).
📍 The University of New South Wales
• Facilitator.
- 2018 • **EMBL-ABR: 16S Metagenomics with Galaxy Australia**
EMBL-ABR (Sydney node).
📍 University of Sydney
• Facilitator.
- **Long-read Data Analysis Workshop**
NSW Systems Biology Initiative.
📍 The University of New South Wales
• Organiser, trainer, facilitator.







- 2011
- **Hands on Zotero, a free alternative to EndNote**
 Bioprocesses group.  University of Vigo
 • Organiser, sole trainer.

Supervision

- Current
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2019
- **Kevin Yonathan**
 PhD. Role: External supervisor.  University of Technology, Sydney
 Study of the response of microbial communities to silver nanoparticles through metagenomics.

I have also informally supervised, supported, mentored, or collaborated with a total of 21 students across multiple levels (1 Course project, 7 Honours, 12 PhD, and 1 Practicum).

GRANTS

- 2021
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2020
- **Bioplatforms Australia / NSW Department of Industry RAAP – NCRIS NSW Co-investment Support Shared Grant**
 School of Biotechnology and Biomolecular Sciences / Ramaciotti Centre for Genomics at The University of New South Wales
 • Total amount: AU\$600,000
- 2020
- **BABS sequencing grant**
 Investigation of a phage capable of species cross-infection
 School of Biotechnology and Biomolecular Sciences / Ramaciotti Centre for Genomics at The University of New South Wales
 • AU\$5,000 for sequencing
- 2020
|
2019
- **ResTech Support Scheme**
 OTUreporter pipeline coding project
 The University of New South Wales
 • AU\$15,000
- 2015
- **Postdoctoral writing Fellowship Grant**
 School of Civil and Environmental Engineering at The University of New South Wales
 • 0.4 FTE salary for 12 weeks
- 2015
|
2011
- **UNSW Tuition fee scholarship**
 Graduate Research School at The University of New South Wales
 • Tuition fees for PhD program
- 2015
|
2011
- **Australian Postgraduate Award (Industry)**
 Australian Federal Government
 • AU\$27,651.00 per year for 3.5 years

AWARDS

- 2020
- **SRAP Laureate 2020**
 Spanish Researchers in Australia-Pacific



PUBLICATIONS

- 2022 ● **Metaproteomics reveals methyltransferases implicated in dichloromethane and glycine betaine fermentation by ‘*Candidatus Formimonas warabiya*’ strain DCMF**
Frontiers in Microbiology 13, 1035247. [doi](#)
- S. I. Holland, X. Vázquez-Campos, E. Haluk, R. J. Edwards, M. J. Manefield & M. Lee.
- 2021 ● **Community-led, integrated, reproducible multi-omics with anvi'o**
Nature Microbiology 6(1), 3-6. [doi](#)
- A. M. Eren, E. Kiefl, A. Shaiber, I. Veseli, S. E. Miller, M. S. Schechter, I. Fink, J. N. Pan, M. Yousef, E. C. Fogarty, F. Trigodet, A. R. Watson, Ö. C. Esen, R. M. Moore, Q. Clayssen, M. D. Lee, V. Kivenson, E. D. Graham, B. D. Merrill, A. Karkman, D. Blankenberg, J. M. Eppley, A. Sjödin, J. J. Scott, X. Vázquez-Campos, L. J. McKay, E. A. McDaniel, S. L. Stevens, R. E. Anderson, J. Fuessel, A. Fernandez-Guerra, L. Maignien, T. O. Delmont & A. D. Willis.
- 2018 ● **Disentangling the drivers of functional complexity at the metagenomic level in Shark Bay microbial mat microbiomes**
The ISME Journal 12, 2619-2639. [doi](#)
- H. L. Wong, R. A. White III, P. T. Visscher, J. C. Charlesworth, X. Vázquez-Campos & B. P. Burns.
- 2015 ● **Uranium binding mechanisms of the acid-tolerant fungus *Coniochaeta fodinicola***
Environmental Science & Technology 49(14), 8487-8496. [doi](#)
- X. Vázquez-Campos, A. S. Kinsela, R. N. Collins, B. A. Neilan, N. Aoyagi & T. D. Waite.
- 2014 ● ***Fodinomyces uranophilus* gen. nov. sp. nov. and *Coniochaeta fodinicola* sp. nov., two uranium mine inhabiting Ascomycota fungi from northern Australia**
Mycologia 106(6), 1073-1089. [doi](#)
- X. Vázquez-Campos, A. S. Kinsela, T. D. Waite, R. N. Collins & B. A. Neilan.



CONFERENCE CONTRIBUTIONS

- 2019 ● **Unusual DPANN Archaea from a radioactive legacy site**
Australian Microbial Ecology Conference (AusME 2019). [doi](#)
📍 Perth, WA, Australia
- X. Vázquez-Campos, A. S. Kinsela, M. W. Bligh, M. R. Wilkins, T. E. Payne & T. D. Waite [oral presentation].

Selected peer-reviewed publications (5 out of 19). For a full list of my publications, including pre-prints and manuscripts under review, please consult [my long-format CV](#).

Selected abstracts presented at conferences (5 out of 10, including 3 oral presentation and 7 posters).

I have also contributed to 27 abstracts presented by co-authors at conferences.

2018

● **OTUreporter: an automated pipeline for the analysis and report of amplicon sequencing data**

ABACBS-2018 National Conference. [doi](#)

📍 Melbourne, VIC, Australia

X. Vázquez-Campos, A. Chilton, J. Koval, J. J. Tree & M. R. Wilkins [poster].

● **New Archaea lineages from a radioactive legacy site**

Molecular biology of archaea: From mechanisms to ecology (MoBA6). [doi](#)

📍 Vienna, Austria

X. Vázquez-Campos, A. S. Kinsela, M. W. Bligh, M. R. Wilkins, T. E. Payne & T. D. Waite [poster].

2017

● **Metagenomic and geochemical changes following rainfall at a legacy radionuclide waste disposal site**

Australian Microbial Ecology Conference (AusME 2017). [doi](#)

📍 Melbourne, VIC, Australia

X. Vázquez-Campos, A. S. Kinsela, T. E. Payne & T. D. Waite [oral presentation].

2016

● **Rainfall-mediated biogeochemical changes at a legacy radionuclide waste disposal site**

16th International Symposium on Microbial Ecology (ISME16). [doi](#)

📍 Montreal, Canada

X. Vázquez-Campos, A. S. Kinsela, J. J. Harrison, K. Wilsher, S. Thiruvoth, B. Rowling, T. E. Payne & T. D. Waite [poster].



SERVICE

● **Institutional Service**

· **University of New South Wales**

- Postgraduate student representative at the OH&S Committee of the School of Civil and Environmental Engineering (2013–2015).

● Professional Affiliations

- American Society for Microbiology
 - Regular member (2015–Current).
- Australian Bioinformatics and Computational Biology Society
 - Regular member (2018–Current).
- Australian Society for Microbiology
 - Regular member (2015–Current).
- International Society for Microbial Ecology
 - Regular member (2014–Current).
- Spanish Researchers in Australia-Pacific
 - Co-founder (2014).
 - Board member and web/IT coordinator (2014–2020).
 - Regular member (2021–Current).

● Conferences

- Australian Microbial Ecology conference 2022 (AusME2022)
 - Plenary chair and poster judge (2022).
- 6th Australia-Spain Research Forum: Big Data
 - Event registration (2020).
- 5th Australia-Spain Research Forum: 5 years Bridging Australia and Spain in Research and Academia
 - Website (2019).
- 4th Australia-Spain Research Forum: Earth
 - Website (2018).
- 3rd Australia-Spain Research Forum: Air
 - Website and event registration (2017).
- 2nd Australia-Spain Research Forum: Light
 - Website (2016).
- Australia-Spain Water Forum
 - Website and event photography (2015).

● Peer Reviews

Reviewer for >10 different journals since 2016, including leading journals in their own fields, e.g., *Astrobiology*, *Environmental Science and Technology*, or *Microbiome*.

For a full record as reviewer, consult my public [ResearcherID profile](#).