

Xabier Vázquez-Campos, PhD

Computational biologist | Environmental microbiologist

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EDUCATION

2015
|
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](#)

2008
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2007

- **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].

2007
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2002

- **Licenciate in Biology**
University of Vigo  Vigo, Spain

RESEARCH EXPERIENCE

Current
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2023

- **Senior research associate / Postdoctoral fellow**
School of Biotechnology and Biomolecular Sciences  The University of New South Wales

2023

- **Research assistant (casual)**
School of Biotechnology and Biomolecular Sciences  The University of New South Wales

2023

- **Bioinformatics scientist**
MINIMUM bio  Sydney, Australia

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

CONTACT

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-  [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 2025-12-02.

- 2017 | 2015
- **Research associate / Postdoctoral fellow**
BioGEMS group. Water Research Centre and School of Civil and Environmental Engineering
📍 The University of New South Wales
- 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.

- 2011
- **Long-read Data Analysis Workshop**
NSW Systems Biology Initiative.
• Organiser, trainer, facilitator.
 - **Hands on Zotero, a free alternative to EndNote**
Bioprocesses group.
• Organiser, sole trainer.

ⓘ Supervision

- Current | 2022
- **Julia Meltzer**
PhD. Role: Cosupervisor.
• University of New South Wales
Biology of Asgard Archaea viruses
- 2024 | 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 38 students across multiple levels (1 Course project, 16 Honours, 20 PhD, and 1 Practicum).

\$ GRANTS

- 2021 | 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
 - **UNSW Tuition fee scholarship**
• Graduate Research School at The University of New South Wales
• Tuition fees for PhD program

2015
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2011

- **Australian Postgraduate Award (Industry)**
📍 Australian Federal Government
 - AU\$27,651.00 per year for 3.5 years

2020

❖ AWARDS

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

PUBLICATIONS

2023

- **Cross-linking mass spectrometry discovers, evaluates, and corroborates structures and protein–protein interactions in the human cell**

Proceedings of the National Academy of Sciences 120(17), e2219418120. [doi](#)

T. K. Bartolec, X. Vázquez-Campos, A. Norman, C. Luong, M. Johnson, R. J. Payne, M. R. Wilkins, J. P. Mackay & J. K. Low.

Selected peer-reviewed publications (5 out of 25). For a full list of my publications, including pre-prints and manuscripts under review, please consult [my long-format CV](#).

- **Evidence for a putative isoprene reductase in *Acetobacterium wieringae***

mSystems 8(2), e00119-23. [doi](#)

M. Kronen*, X. Vázquez-Campos*, M. R. Wilkins, M. Lee & M. J. Manefield [* co-first authors].

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.

2015

- **Uranium binding mechanisms of the acid-tolerant fungus *Coniochaeta fodincola***

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

I have also contributed to 30 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](#).