CURRICULUM VITAE (CVA)

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CV date	06/04/2022

Part A. PERSONAL INFORMATION

First name	JOSÉ LUIS		
Family name	BALCÁZAR ROJAS		
Gender	Male	Birth date	23/12/1978
ID number	41671765C	e-mail	jlbalcazar@icra.cat
Open Research and Contributor ID (ORCID)		0000-0002-6866-9347	

A.1. Current position

Position	Research Scientist (permanent position)		
Initial date	01/01/2016		
Institution	Fundació Institut Català de Recerca del'Aigua (ICRA)		
Department/Center	Water Quality Area		
Country	Spain	Phone no.	+34 972183380
Keywords	Microbial Ecology; Bioinformatics; Antimicrobial Resistance		

A.2. Previous positions (research activity interruptions, art. 45.2.c)

Period	Position/Institution/Country/
2011-2015	"Ramón y Cajal" Research Fellow / ICRA / Spain
2009-2010	Junior Researcher / ICRA / Spain
2007-2009	Postdoctoral Fellow / IIM-CSIC / Spain

A.3. Education

PhD	University/Country	Year
Animal Pathology	University of Zaragoza / Spain	2006

Part B. CV SUMMARY *(max. 5000 characters, including spaces)*

Dr. José Luis Balcázar is a Research Scientist at the Catalan Institute for Water Research (ICRA), Spain. He received his Ph.D. in Animal Pathology from the University of Zaragoza in 2006 and completed his postdoctoral training in the Institute of Marine Research at the Spanish National Research Council (CSIC) in 2009. Moreover, he has carried out research stays at internationally renowned institutions such as Technical University of Munich (Germany); University of Maryland Center for Environmental Science (USA); Rollins School of Public Health, Emory University (USA); and École Centrale de Lyon (France). In 2011, Dr. Balcázar was awarded a **"Ramon y Cajal" research fellowship** to start an independent career and was then promoted to a permanent position as a Research Scientist in 2016. His research interests are focused on how anthropogenic stressors affect microbial communities and to what extent such stressors contribute to the acquisition and spread of antibiotic resistance in environmental settings. During the last years, his research interests have been broadened to

include the contribution of bacteriophages to bacterial evolution and ecology. As a result of his investigations, he has published more than 120 scientific articles in high impact journals (SCOPUS total citations: 8427; ***h*-index: 47**), resulting in international recognition in the field. Moreover, he has received recognition for his research work, including the Excellence Ph.D. Award (University of Zaragoza), the International Award on Animal Health (Laboratorios SYVA), Ramon y Cajal Fellowship from the Spanish Government, New Lecturer Research Award from the Society for Applied Microbiology (SfAM, United Kingdom), and the **Jaime Ferran Prize** as recognition for his outstanding achievements in microbiology, which is awarded every two years by the Spanish Society for Microbiology.

In addition to his research contributions, Dr. Balcázar has been involved in several research projects, and has participated in several national and international conferences. He also serves on several editorial and advisory boards for reputable journals, such as the *Journal of Applied Microbiology* (Wiley), *Letters in Applied Microbiology* (Wiley), *Environmental Science and Pollution Research* (Springer), *Annals of Microbiology* (Springer), and *Frontiers in Microbiology* (Frontiers Media). He has also served as an advisory member and scientific reviewer for national and international funding agencies (more than 30 proposals) and peer-reviewed journals (more than 150 articles), further demonstrating his international renown and his commitment to providing back into the scientific community.

Selection committee and reviewer for national and international funding agencies (selected): Consolidator Grants, European Research Council (ERC); French National Research Agency (ANR, France); International Foundation for Science (IFS, Sweden); Spanish Ministry of Economy and Competitiveness (MINECO, Spain); Croatian Science Foundation (HRZZ, Croatia); Medical Research Council (MRC, UK); UK Research & Innovation (NERC, UK); Japan Society for the Promotion of Science (JSPS, Japan); Swiss National Science Foundation (SNSF, Switzerland); Health and Medical Research Fund (HMRF, Hong Kong); National Research Council (CNCS, Romania); South African Medical Research Council (SAMRC, South Africa); United States-Israel Binational Science Foundation.

Reviewer for peer-reviewed journals (selected): Applied and Environmental Microbiology; Critical Reviews in Microbiology; Environmental Microbiology; Environmental Pollution; Environmental Science & Technology; FEMS Microbiology Ecology; Food Microbiology; ISME Journal; Journal of Applied Microbiology; Microbial Ecology; Molecular Ecology; Preventive Veterinary Medicine; Science of the Total Environment; Veterinary Microbiology; and Water Research.

Dr. Balcázar is actively involved in the supervision and training of undergraduate students, graduate students, and postdoctoral fellows. In fact, he has supervised graduate students and postdoctoral fellows from different countries, such as Brazil, Colombia, Ecuador, Germany, Greece, Mexico, Nicaragua, Poland, Portugal, Spain, The Philippines, Tunisia, and Turkey. He has also served as thesis chair and committee member for several graduate students. Moreover, Dr. Balcázar is currently a member of the Committee for Gender Equality at the Catalan Institute for Water Research (ICRA).

It should be noted that Dr. Balcázar has supervised 5 PhD students (4 of them already completed) and has the I3 Program Certificate from the Spanish National Evaluation and Foresight Agency (ANEP) and the **Accreditation of Advanced Research (Full Professor level)** from the Catalan University Quality Assurance Agency (AQU Catalunya). Dr. Balcázar is a member of the Spanish Society for Microbiology since 2007, and the Society for Applied Microbiology (UK) since 2017.

Part C. RELEVANT MERITS *(sorted by typology)*

C.1. Publications

SCOPUS citations: 8427; *h*-index: 47; Google Scholar citation: 12405, *h*-index: 53
https://www.scopus.com/authid/detail.uri?authorId=35606765900

- Zheng X., Jahn M., Sun M., Friman V.P., **Balcázar J.L.**, Wang J., Shi Y., Gong X., Hu F., Zhu Y.G. 2022. Organochlorine contamination enriches virus-encoded metabolism and pesticide degradation associated auxiliary genes in soil microbiomes. *ISME Journal* in press [IF=10.30]

- Aydin S., Can K., Çalışkan M., **Balcázar J.L.** 2022. Bacteriophage cocktail as a promising bio-enhancer for methanogenic activities in anaerobic membrane bioreactors. *Science of the Total Environment* in press [IF=7.96]
- Calero-Cáceres W., Tadesse D., Jaramillo K., Villavicencio X., Mero E., Lalaleo L., Welsh C., Villacís J.E., Quentin E., Parra H., Ramirez M.S., Harries A.D., **Balcázar J.L.** 2022. Characterization of the genetic structure of *mcr-1* gene among *Escherichia coli* isolates recovered from surface waters and sediments from Ecuador. *Science of the Total Environment* 806, 150566. [IF=7.96]
- Maganha de Almeida Kumlien A.C., Pérez-Vega C., González-Villalobos E., Borrego C.M., **Balcázar J.L.** 2022. Genome analysis of a new *Escherichia* phage vB_EcoM_C2-3 with lytic activity against multidrug-resistant *Escherichia coli*. *Virus Research* 307, 198623. [IF=3.30]
- Maganha de Almeida Kumlien A.C., González-Villalobos E., **Balcázar J.L.** 2021. Making waves: How does the emergence of antimicrobial resistance affect policymaking? *Water Research* 206, 117772. [IF=11.24]
- Maganha de Almeida Kumlien A.C., Borrego C.M., **Balcázar J.L.** 2021. Antimicrobial resistance and bacteriophages: An overlooked intersection in water disinfection. *Trends in Microbiology* 29, 517–527. [IF=17.08]
- Rodríguez E.A., Ramirez D., **Balcázar J.L.**, Jiménez J.N. 2021. Metagenomic analysis of urban wastewater resistome and mobilome: A support for antimicrobial resistance surveillance in an endemic country. *Environmental Pollution* 276, 116736. [IF=8.07]
- Gionchetta G., Fillol M., Sànchez-Melsió A., Gutiérrez O., **Balcázar J.L.**, Borrego C.M. 2021. Side effects of free nitrous acid on the sewer resistome and mobilome. *Chemical Engineering Journal* 405, 126657. [IF=13.27]
- Bogler A., Packman A., Furman A., *et al*. 2020. Rethinking wastewater risks and monitoring in light of the COVID-19 pandemic. *Nature Sustainability* 3, 981-990. [IF=19.35]
- Calero-Cáceres W., Ye M., **Balcázar J.L.** 2019. Bacteriophages as environmental reservoirs of antibiotic resistance. *Trends in Microbiology* 27, 570-577. [IF=17.08]
- Romero F., Sabater S., Font C., **Balcázar J.L.**, Acuña V. 2019. Desiccation events change the microbial response to gradients of wastewater effluent pollution. *Water Research* 151, 371-380. [IF=11.24]
- Pérez-Sánchez T., Mora-Sánchez B., **Balcázar J.L.** 2018. Biological approaches for disease control in aquaculture: Advantages, limitations and challenges. *Trends in Microbiology* 26, 896-903. [IF=17.08]
- Lekunberri I., Subirats J., Borrego C., **Balcázar J.L.** 2017. Exploring the contribution of bacteriophages to antibiotic resistance. *Environmental Pollution* 220, 981-984. [IF=8.07] (This article was featured in the Scientist Magazine).
- Proia L., von Schiller D., Sànchez-Melsió A., Sabater S., Borrego C.M., Rodríguez-Mozaz S., **Balcázar J.L.** 2016. Occurrence and persistence of antibiotic resistance genes in river biofilms after wastewater inputs in small rivers. *Environmental Pollution* 210, 121-128. [IF=8.07]
- Rodriguez-Mozaz S., Chamorro S., Marti E., Huerta B., Gros M., Sanchez-Melsio A., Borrego C.M., Barcelo D., **Balcázar J.L.** 2015. Occurrence of antibiotics and antibiotic resistance genes in hospital and urban wastewaters and their impact on the receiving river. *Water Research* 69, 234-242. [IF=11.24]
- Marti E., Huerta B., Rodríguez-Mozaz S., Barceló D., Jofre J., **Balcázar J.L.** 2014. Characterization of ciprofloxacin-resistant isolates from a wastewater treatment plant and its receiving river. *Water Research* 61, 67-76. [IF=11.24]
- Marti E., Variatza E., Balcázar J.L. 2014. The role of aquatic ecosystems as reservoirs of antibiotic resistance. *Trends in Microbiology* 22, 36-41. [IF=17.08]

C.2. Research projects

- Dissemination of antibiotic resistance by aquatic birds: disentangling the contribution of microbes, bird ecology and anthropogenic pollution (DARABi). Spanish Ministry of Science, Innovation and Universities. 2020-2023. 159,720€. PIs: C.M. Borrego and J.L. Balcázar
- Antibiotic resistance and pathogenic signature in marine and freshwater aquaculture systems (ARENA). AquaticPollutants Joint Transnational Programme. 2021-2024. 150,000€. PI: S. Rodriguez-Mozaz.
- Exploring the mechanisms that promote antibiotic resistance in the environment. Society for Applied Microbiology (SfAM), UK. 2021-2022. 10,850€. PI: J.L. Balcázar
- Exploring the contribution of bacteriophages to the emergence and spread of antibiotic resistance in environmental settings. European Commission - Horizon 2020. 2019-2021. 170,121€. PI: J.L. Balcázar
- Accumulation, spread and removal of antibiotic resistance in sewer systems (SEWAGENE). Spanish Ministry of Economy and Competitiveness. 2017-2019. 128,000€. PIs: C.M. Borrego and J.L. Balcázar
- Tracking and assessing the risk from antibiotic resistant genes using chip technology in surface water ecosystems (TRACE). Water JPI Programme. 2014-2016. 150,000€. PI: C.M. Borrego. J.L. Balcazar participated in several WPs.