

Part A. PERSONAL INFORMATION

CV date

10/06/2021

First and Family name	Clara Ruiz González		
Social Security, Passport, ID number	72730854R	Age	39
Researcher codes	WoS Researcher ID (*)		
	SCOPUS Author ID(*)	K-7782-2017	
	Open Researcher and Contributor ID (ORCID) **	0000-0003-3568-4943	

(*) At least one of these is mandatory

(**) Mandatory

A.1. Current position

Name of University/Institution	Instituto de Ciencias del Mar (ICM-CSIC)		
Department	Biología Marina y Oceanografía		
Address and Country	Paseo Marítimo de la Barceloneta 37-49, 08003, Barcelona, Spain		
Phone number	93 2309500	E-mail	clararg@icm.csic.es
Current position	Post-doctoral researcher (Ramon y Cajal fellow)	From	16/09/2019
Key words	Microbiology, Environmental biology, Connectivity, Dispersal, Oceanography, Limnology, Metacommunities		

A.2. Education

PhD	University	Year
PhD in Biology (Microbial Oceanography)	Universidad de las Palmas de Gran Canaria	2011
B. Sc. in Biological Science	Universidad Autónoma de Madrid	2005

A.3. JCR articles, h Index, thesis supervised...

I started publishing in 2012 and since then I have published 39 scientific papers (18 as a first author, 38 in Q1) in high impact journals (e.g. 1 PNAS, 4 in ISME J., 2 in Ecology Letters, 1 FEMS Microbiol. Reviews). My **h-index is 16/19** (Scopus/Scholar), and the **total number of citations is 819/1140** (with an average of 94 cites per year over the postdoctoral period) although the articles from the past three years are increasing their cite numbers fast, i.e., from 65/87 in 2016 to 221/326 in 2020. During my postdoctoral stay in Canada (2013-2015) I co-supervised two PhD theses and an undergraduate honors thesis project (<http://bit.ly/2LWuK2t>), and at the ICM (Barcelona) I have supervised two undergraduate projects and a Master thesis (<https://bit.ly/3oCE7XJ>). Currently I am supervising two Master students and a JAE-Intro fellow, and starting in summer 2021 I will co-supervise two PhD students (FPI fellows associated to the ICM's Severo Ochoa excellence accreditation).

Part B. CV SUMMARY (max. 3500 characters, including spaces)

I am interested in understanding the links between prokaryotic diversity and function in aquatic ecosystems, as well as in exploring how microbial connectivity and dispersal between communities influence such links. In order to address these questions, I use different methods and approaches, such as single-cell techniques or high throughput sequencing, and I have worked in ecosystems as different as rivers, lakes, soils, estuaries and the ocean.

I did my PhD at the Institut de Ciències del Mar (ICM-CSIC) in Barcelona (2006-2011), during which I explored functional responses of specific marine bacterial groups to solar radiation using microscopic techniques. This resulted in **6 first-author scientific papers and a literature review** that were successfully published during 2012-2013. I moved then my focus to the study of freshwater bacterial communities through high throughput DNA sequencing technologies, first at the Univ. of Girona (2011-2012), where I investigated the effects of dams on riverine bacteria (publishing **3 papers**), and then across boreal aquatic networks at the Univ. du Québec à Montréal (Canada, 2013-2015). I feel it was during this period when my research underwent an important change and moved from a local and descriptive science to a more conceptual and interpretative exploration of the processes that structure aquatic microbial communities across complex landscapes. This period was highly productive and



enriching, a fact that is reflected by the number (**15 already published**) and quality of the scientific publications (e.g. 2 Ecol. Lett., 3 ISME J.).

Currently, I am back at the ICM working on the biogeography of marine bacteria, yet trying to approach its study within some of the conceptual frameworks developed for freshwater communities. For example, applying to a global marine dataset the analyses used in Ruiz-González et al. (2015, Ecol. Lett.) we have published one PNAS paper (Mestre et al. 2018) that has been awarded the '*Landmark Paper Award for 2018*' by the Deep-Sea Biology Society. Building on my prior research on microbial ecology at the terrestrial-aquatic interface, I have initiated a line on the influence of groundwater discharge in the Mediterranean leading my own 3-year project (Project GRAMMI, RTI2018-099740-J-I00), and I have recently obtained a Ramon y Cajal contract. I have been awarded the '*Premi IEC de la Secció de Ciències Biològiques Pius Font i Quer de Ciències de la Vida*' 2020 award from the Institut d'Estudis Catalans (IEC) for my research on microbial metacommunities, which has involved writing a review on the topic (<https://bit.ly/35uSXba>). I have contributed multiple presentations in international meetings or as an invited speaker in different occasions (e.g., a plenary talk at AIOL meeting in Cagliari, the closing plenary at the 1st SIBECOL meeting), and I have organized two special sessions on microbial dispersal (ASLO summer meeting 2018) and microbial ecology (1st SIBECOL meeting 2019). I am largely involved in mentoring PhD, master or undergraduate students. Since my first paper in 2012, I have already published 39 papers (ca.50% as first author), two of which are literature reviews (see ** below). Overall, my scientific experience has been consolidating between research fields that not always communicate, such as limnology, oceanography and theoretical ecology. This trajectory has provided me with a useful balance between these disciplines that I try to maintain in my current research.

Part C. RELEVANT MERITS

C.1. Publications (including books) **Full list in:** <https://clararuizgonzalez.weebly.com/>

C.1.1. Scientific papers (**10 selected out of 39, 18 first-authored, 10 second-authored, ** reviews**)

- 1 **Ruiz-González C**, Rodellas V, Garcia-Orellana J. 2021. The microbial dimension of submarine groundwater discharge: current challenges and future directions. *FEMS Microbiol. Rev.* fuab010**
- 2 **Ruiz-González C**, Mestre M, Estrada M, Sebastián M, Agustí S, Moreno-Ostos E, Reche I, Álvarez-Salgado XA, Morán XAG, Duarte CM, Sala MM, Gasol JM. 2020. Major imprint of surface plankton on deep ocean prokaryotic structure and activity. *Molecular Ecology* 29:1820–1838
- 3 Mestre M, **Ruiz-González C**, Logares R, Duarte CM, Gasol JM, Sala MM. 2018. Sinking particles promote vertical connectivity in the ocean microbiome, *PNAS* 115:E6799-E6807
- 4 **Ruiz-González C**, Niño-García JP, Kembel SW, del Giorgio PA. 2017. Identifying the core seed bank of a complex boreal bacterial metacommunity *The ISME Journal* 11:2012–2021
- 5 Niño-García JP, **Ruiz-González C**, PA del Giorgio. 2016. Interactions between hydrology and water chemistry shape bacterioplankton biogeography across boreal freshwater networks *The ISME Journal*. 10:1755-1766.
- 6 Niño-García JP, **Ruiz-González C**, del Giorgio PA. 2016. Landscape-scale spatial abundance distributions discriminate core from random components of boreal lake bacterioplankton *Ecology Letters*. 19:1506-1515
- 7 **Ruiz-González C**, Niño-García JP, del Giorgio PA. 2015. Terrestrial origin of bacterial communities in complex boreal freshwater networks *Ecology Letters*. 18:1198-1206.
- 8 **Ruiz-González C**, Niño-García JP, Lapierre JF, del Giorgio. 2015. The quality of organic matter shapes the functional biogeography of bacterioplankton across boreal freshwater ecosystems *Global Ecol. Biogeogr.* 24:1487-1498.
- 9 **Ruiz-González C**, Simó R, Sommaruga R, Gasol JM. 2013. Away from darkness: a review on the effects of solar radiation on heterotrophic bacterioplankton activity *Front. in Microbiology*. 4:131.**
- 10 **Ruiz-González C**, et al. (5/1) 2012. Sunlight modulates the relative importance of heterotrophic bacteria and picophytoplankton in DMSP-sulphur uptake. *The ISME Journal*. 6:650-659.

C.1.2. Book chapters

- Gasol JM *et al.* (6/4). 2012. Invisibles con efectos muy visibles: microorganismos en las aguas y sus efectos biogeoquímicos *Microbios en acción: Biodiversidad invisible con efectos muy visibles*. Los Libros de la Catarata/CSIC. pp.57-71. ISBN 978-84-00-09469-0. (<https://bit.ly/2Xya8nV>)
- Ruiz-González C**. 2020. Microbial metacommunities: Dispersal and connectivity as key drivers of the diversity and function of aquatic microorganisms. *Premis de la Secció de Ciències Biològiques* 1: 1-42. Ed. Institut d'Estudis Catalans (IEC). ISBN 9788499655727 (<https://bit.ly/3qi1C91>)



C.1.3. International conferences and invited seminars (4 examples selected out of 45)

1. **Invited closing plenary talk** at the 1st SIBECOL meeting, 4-7 Feb 2019, Barcelona (<https://bit.ly/3i8ndhm>)
2. **Invited plenary talk** at the XXIII Congress of the Italian Assoc. of Oceanology and Limnology, 26-29 Sept 2017, Cagliari (Italy).
3. **Invited expert** for the Science Forum with the awardee of Ramon Margalef Prize in Ecology 2017, 23 Oct, Barcelona. Links to roundtable and presentation: <https://bit.ly/35wwOJq>
4. **Invited lecturer**, Ramon Margalef Summer Colloquia, 10-15 Jul 2016, Barcelona.

C.2. Research projects and grants

1. GRAMMI-Groundwater discharge to the Mediterranean Sea from a microbial perspective: Diversity, functioning and connectivity at the terrestrial-marine interface (RTI2018-099740-J-I00) Retos-Investigación-JIN, Agencia Estatal de Investigación. 203,280€. 9/2019-9/2022. PI: C. Ruiz-González
 2. Beatriu de Pinós post-doctoral project (2014 BP_B 00116) from the Marie-Curie COFUND program and the Catalan Government. 91,022 €. 10/2015-09/2017. PI: C. Ruiz-González
- Participation as the **researcher in charge for the microbial part** in the following projects:*
3. MICROSUB: Diversidad microbiana y biogeoquímica oculta en las aguas subterráneas costeras de los parques nacionales marítimos. SPIP2020-02595. Proyectos de investigación científica en la red de parques nacionales 2020. Ministerio para la Transición Ecológica y el Reto Demográfico. 2020-2023. PI: J.M. Gasol (ICM) 106,000€.
 4. MERTERMAR: Role of submarine groundwater discharge on Mercury cycling: unveiling the link between Terrestrial and Marine systems in a changing world. PID2019-11722RJ-I00. PI: A.G. Bravo (ICM). 217,800€.
 5. MEDISTRAES III: Mixing and dispersion in the transport of energy and solutes. PID2019-110212RB-C22. Retos-Investigación, Agencia Estatal de Investigación. 1/1/2020-31/12/2022. PI: A. Folch (UPC). 186,340€.
 6. OPAL: Pathways delivering solutes into coastal lagoons: overlooked drivers or ecosystem degradation. PID2019-110311RB-C21. Retos-Investigación, Agencia Estatal de Investigación 1/6/2020-1/6/2023. PI: J. García-Orellana (UAB). 160,100€.

C.3. Contracts

1. **May 2021-May 2026** Ramon y Cajal postdoctoral position at the Dept. of Marine Biology and Oceanography, Institut de Ciències del Mar (ICM-CSIC), Barcelona, Spain.
2. **Sept 2019-April 2021** Postdoctoral position (as P.I. of the GRAMMI project) at the Dept. of Marine Biology and Oceanography, Institut de Ciències del Mar (ICM-CSIC), Barcelona, Spain.
3. **Sept 2017-Ago 2019** Postdoctoral position (Juan de la Cierva-Incorporación) at the Dept. of Marine Biology and Oceanography, Institut de Ciències del Mar (ICM-CSIC), Barcelona (PI: JM. Gasol)
4. **Oct 2015-Sept 2017** Postdoctoral position (Beatriu de Pinós program) at the Dept. of Marine Biology and Oceanography (ICM-CSIC), Barcelona, Spain (PI: JM. Gasol).
5. **Jan 2013-Sept 2015** Postdoctoral position at the Département des Sciences Biologiques, Université du Québec à Montréal (UQAM), Montréal (Québec), Canada. (PI: PA del Giorgio)
6. **Jun 2012 - Dec 2012** Postdoctoral position at the Department of Marine Biology and Oceanography, Institut de Ciències del Mar (ICM-CSIC), Barcelona, Spain (PI: R. Simó)
7. **Mar 2011 - May 2012** Postdoctoral position at the Institute of Aquatic Ecology, Department of Environmental Sciences, University of Girona, Spain (PI: S. Sabater)
8. **Nov 2006 - Nov 2010** FPI research fellowship of the Spanish Ministry of Science and Innovation for the research project: 'MÓDIVUS' (Ref. CTM2005-04795) at the Dept of Marine Biology and Oceanography (ICM-CSIC), Barcelona, Spain (PI: JM. Gasol).
9. **Sep 2005 - Nov 2006** Research assistant at the Department of Environmental Biology at the Centro de Investigaciones Biológicas (CIB-CSIC), Madrid, Spain. I3P fellowship for the project: 'Sustainable Introduction of GMOs into European Agriculture' (EU, FP6-502981, PI: P. Castañera)

C.5. Supervision of PhD, Msc and undergraduate thesis projects (3 selected)

- Sept 2018-Alena Maister. Univ. Pais Vasco, Spain. Msc thesis: *Effects of submarine groundwater discharge on coastal bacterioplankton communities from the NW Mediterranean* (<https://bit.ly/3oCE7XJ>)
- Aug 2016-Juan Pablo Niño. Université du Québec à Montréal, Canada. PhD thesis title: *Bacterial*



biogeography across boreal lakes of Québec: Large-scale drivers of bacterial dominance and rarity.

Co-supervisor: P.A. del Giorgio (<http://bit.ly/2LWuK2t>)

Mar 2016-Carolina García-Chaves. Université du Québec à Montréal, Canada. PhD Thesis title: *Towards an understanding of the regulation and the ecology of aerobic anoxygenic phototrophic bacteria in lakes.* Co-supervisor: P. A. del Giorgio (<http://bit.ly/2LWuK2t>)

C.6. Science expedition experience

C.6.1. Field sampling campaigns

· Intensive field samplings at the boreal region La Côte-Nord (N Quebec, Canada) during 1 month in July 2013, and 2 months in June 2015, sampling lakes, rivers, soils and soil pore waters.

C.6.2. Oceanographic cruises

- R/V Kilo Moana (USA) NW Pacific Ocean. 22 – 30 Jun, 2009. PI: M J. Church (Univ. of Hawaii)
- R/V Hespérides (Spain) Southern Ocean. 24 Jan – 2 Mar, 2009. PI: Jordi Dachs (IDAEA-CSIC)
- R/V García del Cid (Spain) NW Mediterranean. 18 – 26 Sep, 2007. PI: Josep M. Gasol (ICM-CSIC)
- R/V Hespérides (Spain) Arctic Ocean. 27 Jun – 28 Jul, 2007. PI: Carlos M. Duarte (IMEDEA-CSIC)

C.7. Outreach scientific activities or workshops (5 selected)

1. Member since 2018 of the outreach group of SIBECOL (Soc. Ibérica de Ecología). In charge of maintenance and contents of the public webpage (sibecol.org). (<http://bit.ly/2M78ep5>)
2. Outreach communications as part of the *Pius Font i Quer 2020* Award: Review article in English and Catalan (<https://bit.ly/3ovOZGI>), YouTube conference (<https://bit.ly/3bxd4JN>)
3. 'Puertas Abiertas' days at ICM-CSIC (Barcelona) as part of the Week of Science (<https://bit.ly/3qdQREB>) Nov 2017, 2019.
4. Invited expert for the Science Forum at the Faculty of Biology with Sandra Díaz, awardee of Ramon Margalef Prize in Ecology 2017, 23 Oct 2017, Barcelona. Links to roundtable and presentation: <https://bit.ly/35wwOJq>
5. Teacher at the Ramon Margalef Summer Colloquia workshop (<http://www.acoio.org/margalef-summer-colloquia/>) at the Institut de Ciències del Mar (ICM-CSIC). 10-15th Jul 2016, Barcelona

C.8. Organization of special sessions in international meetings

2019 Organizer of the Special Session TS22: Unveiling the diversity and function of macro- and microorganisms through a molecular lens. 1st SIBECOL meeting, 4-7 Feb 2019, Barcelona (<https://bit.ly/3nEeRik>)

2018 Organizer of the Special Session SS41: How microbial dispersal and shape determine the local structure and functioning of aquatic assemblages. ASLO Summer meeting, 10-15 Jun, 2018, Victoria, Canada (<https://bit.ly/3oESTgu>)

C.9. Reviews and evaluation committees

1. Evaluation committee of the PhD. Thesis '*Microbial community assembly and biogeography in the Pyrenean lacustrine district*' by R.Ortiz-Alvarez at the Univ. of Girona 18 may 2018 (Girona)
2. Evaluation committee of the Ms. Thesis '*Interannual seasonal dynamics of aerobic anoxygenic photoheterotrophs in the NW Mediterranean*' by A. Auladell at the ICM-CSIC, 6Jun 2017, Bcn.
3. Evaluation committee of the PhD Thesis proposal '*Análisis del impacto de los contaminantes orgánicos sobre las comunidades microbianas marinas*' by Elena Cerro Galvez at the Instituto de Diagnóstico Ambiental y Estudios del Agua (IDAEA-CSIC), 29 Jun 2016, Barcelona, Spain.
4. Evaluation committee of the Ms. Thesis '*Diseño de una métrica para la evaluación de la capacidad fotoheterótrofa in situ de bacterias Fotótrofas Anoxigénicas Aerobias (AAP)*' by Ana Carolina García Mesa at the Univ. Nacional de Colombia (12-Nov-2014, Medellín, Colombia)
5. Reviewer for Science, Environ Microbiol, Front. Microb. Ecol., AME, FEMS Microbiology Ecology, J Plankton Research, J of Soils and Sediments, Freshwater Biology, and Hydrobiologia

C.10. Awards

'Premi IEC 2020 de la Secció de Ciències Biològiques Pius Font i Quer de Ciències de la Vida' by the Institut d'Estudis Catalans (IEC) (<https://bit.ly/3q88FAO>). Link to Review: (<https://bit.ly/3ovOZGI>)

'Landmark Paper Award 2018' by the Deep-Sea Biology Society (<https://bit.ly/2XvkDIG>)

'Best talk by a young scientist' award at the SAME 14 meeting, 23-28 Aug 2015, Uppsala, Sweden.