

Part A. PERSONAL INFORMATION		CV date	December 2020
First and Family name	Alfonso Corzo Rodríguez		
Social Security, Passport, ID	24888026W	Age	60
Research codes	Researcher ID	L-9669-2015	
	Orcid	0000-0003-3718-941X	

A.1. Current position

University/Institute	Universidad de Cádiz		
Dpt./Centre	Departament of Biology		
Address	CASEM, Avda. República Saharaui /n		
Telephone	correo electrónico	Alfonso.corzo@uca.es	
Current position	Full profesor (Catedrático)	Fecha inicio	18/5/2010
Espec. cód. UNESCO	241705		
Keywords	Microbial ecology, selective microsensors, biofilms, microbenthic communities, flow cytometry, microbial mats, carbon and nitrogen cycles, geomicrobiology, microbial biogeochemistry, sediment.		

A.2. Education

PhD, Licensed, Graduate	University	Year
BSc. Biological Sciences	Universidad de Málaga	1981
PhD Biological Sciences	Universidad de Málaga	1988

A.3. General indicators of quality of scientific production

- Sexenios de investigación: 5 national + 5 regional research periods
- PhD theses directed (last 10 yrs): 7 PhD theses in process: 2 .
- Citations: 2327 totales, 1010 since 2015 (*Google Scholar*)
- Average citations/year (last 5 years): 187 (*Google Scholar*)
- Publications in Q1: 37
- H-index: 19 (total) (*Scopus*)
- H-index: 25 (total), 17 since 2015, i10-index: 37, 27 since 2015 (*Google Scholar*)

Parte B. CV Summary

Alfonso Corzo Rodríguez (born 27-11-1959), Full Professor (since 2010). Bachelor in Biological Sciences (1981) and Doctor in Biological Sciences (1988), University of Málaga. POSTS TAKEN: Fellowship holder (CAICYT), University of Málaga, 1985-88. Postdoctoral Scholarship Holder (MEC), T.H. D. Darmstadt (D), 1988-89. Postdoctoral Scholarship (MEC), University of York (U.K.), 1989-90. Post-doctoral Fellowship (MEC), University of Malaga, 1990-93. Interim Fellow, University of Cadiz, 1993-95. University Professor, 1995-2010. RESEARCH: My research career has been characterized by a constant evolution in the topics for which I have been interested. From Biochemistry and Plant Ecophysiology during my doctoral thesis, to Microbial Ecology and Microbial Biogeochemistry, during the two years of postdoc. Presently, I coordinate the research group in Microbial Ecology and Biogeochemistry at the University of Cadiz (microbentos.uca.es/alfonso-corzo) working from the community level to the ecosystem. Currently my research covers a wide variety of aquatic ecosystems: temperate and tropical estuarine zones, acid lakes, and biofilms in wastewater. In my laboratory, we study processes in both the water column and sediments, but we are particularly interested in the biogeochemical and microbial processes that occur at the sediment-water interface and on other microbial surfaces such as biofilms and microbial mats. We are the only national group with a long experience in the use of microsensors to measure at the micro-scale concentrations of O₂, pH and H₂S, etc, which allows us to study microbial activities at the um spatial scale. These measurements are complemented with a wide range of other microbial ecology and geochemical techniques: stable isotopes, inorganic and organic nutrients and iron and sulphur speciation, etc. Our experimental approaches combine laboratory experimentation in microcosms or mesocosms under highly controlled conditions, in situ experiments, and field studies. I have participated in 26 research projects, national

and international, being principal investigator in 10 of them in the last 10 years, contributing as PI to my university with > 1.500.000 Euros. I have published 54 articles in international ISI journals, 5 book chapters and another 18 publications in national journals or of more restricted outreach and more than 100 presentations in international and national congresses. I have directed or co-directed 8 doctoral theses, 20 honour's and master's projects. I am currently co-directing another 2 doctoral theses. I have participated in infrastructure, scholarship and project evaluation committees at a regional, national, European and international level. I have participated in organizing committees of international congresses. I have reviewed scientific articles for many top-level journals and projects for ANEP, MINECO and foreign agencies (NSF, USA). I have made stays of different duration in foreign research centers (Germany, United Kingdom and Denmark). Positive evaluation of 5 research periods (sexenios) of research until 2016. Positive evaluation of 5 research periods by the Andalusian Quality Agency.

Parte C. RELEVANT MERITS (ordenados por tipología)

C.1. Publications (10 mostly relevant in last 3 years)

1. Jiménez-Arias, J. L., Morris, E., Rubio-de-Inglés, M.J., Peralta, G., García-Robledo, E. **Corzo, A.**, Papaspyrou, S. 2020. Tidal elevation is the key factor modulating burial rates and composition of organic matter in a coastal wetland with multiple habitats. *Science of the total environment*. **Science of the Total Environment** 724 (2020) 138205. <https://doi.org/10.1016/j.scitotenv.2020.138205>
2. Soria-Píriz, S., Lara, M., Jiménez-Arias, J.L., Papaspyrou, S., Úbeda, B., García-Robledo, E., Bohórquez, J., Gálvez J.Á., Revsbech, N.P., **Corzo A.** 2020. What supports the deep chlorophyll maximum in acidic lakes? The role of the bacterial CO₂ production in the hypolimnion. **Limnol. & Oceanogr.** 65, 1318-1335. doi: 10.1002/lno.11391.
3. Haro, S., Bohórquez, J., Lara, M., García-Robledo, E., González. C. J., Crespo, J. M., Papaspyrou, S., **Corzo. A.** 2019. Diel patterns of microphytobenthic primary production in intertidal sediments: the role of photoperiod on the vertical migration circadian rhythm. **Scientific Reports** 9:13376 | <https://doi.org/10.1038/s41598-019-49971-8>.
4. Bohórquez, J. Calenti, D., García-Robledo, E., Papaspyrou, S., Jiménez-Arias, J., Gómez-Ramírez, E. H., **Corzo. A.** 2019. Water column dissolved silica concentration limits microphytobenthic primary production in intertidal sediments. **J. Phycol.** 55: 625-636. DOI: 10.1111/jpy.12838.
5. Mayayo, m. J., Yuste, A., Luzón, A., Corzo, A., Muñoz, A., Pérez, A., Sorinao, A. 2019. Fe-rich microspheres pseudomorphs after pyrite frambooids in Holocene fluvial deposits from NE Spain: Relationship with environmental conditions and bacterial activity. **Sedimentary Geology** 386:103–117.
6. Gómez-Ramírez, Corzo, A., García-Robledo, Bohórquez, J., Agúera-Jaquement, A., Bibbó-Sánchez, F., Soria-Píriz, S., Jiménez-Arias, J. L., Morales, A., Papaspyrou, S. 2019. Benthic-pelagic coupling of carbon and nitrogen along a tropical estuarine gradient (Gulf of Nicoya, Costa Rica). **Estuar. Coast Shelf Sci.** 228: 106362. <https://doi.org/10.1016/j.ecss.2019.106362>.
7. Haro, S., Brodersen, K. E., Bohórquez, J., Papaspyrou, S., **Corzo, A.**, Köhl, M. (2019). Radiative energy budgets in a microbial mat under different irradiance and tidal conditions. **Microbial Ecology** 77:852-865.
8. **Corzo, A.**, Jiménez-Arias. J. L. Torres. E., García-Robledo. E., Lara, M., Papaspyrou, S. (2018) Biogeochemical changes at the sediment–water interface during redox transitions in an acidic reservoir: exchange of protons, acidity and electron donors and acceptors. **Biogeochemistry**,139:241-260. doi:10.1007/s10533-018-0465-7.
9. Burgos, M., Ortega, T., Bohórquez, J., **Corzo A.**, Rabouille, C. and Forja, J.M., 2018. Seasonal variation of early diagenesis and greenhouse gas production in coastal sediments of Cadiz Bay: influence of anthropogenic activities. **Estuarine, Coastal and Shelf Science**, 200: 99-115.
10. Soria-Píriz, S., García-Robledo, E., Papaspyrou, S., Aguilar, V., Seguro, I., Acuña, J., Morales, A., **Corzo, A.** (2017). Size fractionated phytoplankton biomass and net metabolism along a tropical estuarine gradient. **Limnol. & Oceanogr.** 62: S309-S326. doi: 10.1002/lno.10562.

C.2. Projects (last 5 projects as PI)

1. Ecología microbiana y biogeoquímica de los sedimentos intermareales: Efectos del forzamiento físico de las mareas, el fotoperiodo y los eventos climáticos extremos (CTM2017-82274-R). **A. Corzo & L. M. Mariscal**. Ministerio de Economía y Competitividad (2018-2020), 199.650 Euros.
2. Microecología y biogeoquímica de los sedimentos intermareales de la Bahía de Cádiz: Forzamiento físico por el ciclo mareal y el fotoperiodo (CTM2013-43857-R). **A. Corzo & L. Mariscal** Ministerio de Economía y Competitividad (2014-2017), 217.800 Eur.
3. Interacción de los procesos microbianos y geoquímicos en la atenuación natural de la contaminación por drenaje ácido de minas en embalses y estuarios (P11-RNM-7199). **A. Corzo**, Proyecto Excelencia Junta de Andalucía, (2013-2017), 214.220 Eur.
4. Desarrollo y consolidación de la investigación en ecología microbiana y biogeoquímica marina en Costa Rica (D/031020/10, A1/037457/11). **A. Corzo**, Acción Integrada AECID. (2011-2013), 134.286 + 148.900 Eur.
5. Nitrogen removal in coastal sediments: molecular microbial ecology of nitrate reducing bacteria (PERG04-GA-2008-235005). **A. Corzo**, European Union (2011-2012), 35.209 Eur.

C.4. Patents

1. García-Robledo, E., Corzo, A., Papaspyrou, S. *Method for the sequential determination of nitrite and nitrate. Procedimiento para la determinación secuencial de nitrito y nitrato*. N. de solicitud: 201300841, País de prioridad: España, Fecha de prioridad: 18/09/2013, Entidad titular: Universidad de Cádiz

C.5. PhD thesis directed

1. Juan García de Lomas Latín (2007). Control de la producción de sulfuro en aguas residuales mediante la adición de nitrato. Combinación de técnicas moleculares y microelectrodos. Universidad de Cádiz. Directores: A. Corzo y J. González.
2. Emilio García-Robledo (2011). *Ecological responses of the microbenthos to the accumulation and degradation of macroalgae*. Universidad de Cádiz. Director: A. Corzo. Premio Extraordinario de Doctorado.
3. Desirée Villahermosa Caballero (2015). *Biotechnology of the microbial consortium formed by sulfate reducing bacteria and hydrogen sulfide oxidizing and nitrate reducing bacteria*. Universidad de Cádiz. Directores: A. Corzo, J. González.
4. Eddy Gómez Ramírez (2017). *Net metabolism and nutrient fluxes at the sediment-water interface in the Gulf of Nicoya, Costa Rica*. Universidad de Cádiz. Directores: A. Corzo, S. Papaspyrou
5. Julio Bohórquez Ferrando (2017). *Ecology of microphytobenthos in intertidal sediments: biological and biogeochemical interactions*. Universidad de Cádiz. Directores: A. Corzo, E. Garcia-Robledo
6. Juan Luis Jiménez-Arias (2017). *The role of Fe and S in sediment biogeochemistry in aquatic ecosystems*. Universidad de Cádiz. Directores: A. Corzo, S. Papaspyrou
7. Sara Haro Páez (2019). *Primary production of intertidal microphytobenthos: effects of photoperiod and tides*. Universidad de Cádiz. Directores: A. Corzo, S. Papaspyrou.
8. Sara Soria Píriz (2020). *Study of the microbial interactions of planktonic communities in environmental gradients*. Universidad de Cádiz. Directores: A. Corzo, S. Papaspyrou.

C.6 Master theses projects since 2010

1. Meiofauna en sedimentos intermareales de la Bahía de Cádiz. Efecto de las floraciones de macroalgas. Julio Bohórquez Ferrando, Universidad de Cádiz, Facultad de Ciencias del Mar y Ambientales, 2010.
2. Monitorización de floraciones de macroalgas verdes en la Bahía de Cádiz mediante técnicas ópticas. Maria Teresa Camarena Gómez, Universidad de Cádiz, Facultad de Ciencias del Mar y Ambientales, 2010.
3. Estructura de la comunidad macrobentónica en la playa del Parque Metropolitano de los Toruños, Cádiz: efecto de un gradiente de presión antropogénica. Elisabeth Arévalo Carrillo, Universidad de Cádiz, Facultad de Ciencias del Mar y Ambientales, 2010.

3. Silicate limitation of microphytobenthos primary production. Diany Shi, Universidad de Cádiz, Facultad de Ciencias del Mar y Ambientales, 2010.
4. Determination of organic matter burial rate in the inner Cadiz bay: contribution of different habitats and possible sources of organic matter. María Jesús Rubio de Ingles, Universidad de Cádiz, Facultad de Ciencias del Mar y Ambientales, 2010.
5. Effects of macroalgae bloom (*Ulva* sp.) on macrofauna assemblages associated with seagrasses meadows in a mesocosm experiment. Maria Patsalidou, College of Natural Sciences, Bangor University, 2010.
6. The effects of temperature on survival of a bloom forming green macroalga (*Ulva* sp.) with emphasis on net production and dark respiration rates: a mesocosm experiment. Christina Maria Diamanti, College of Natural Sciences, Bangor University, 2010.
7. Oxygen and nutrients distribution and diffusive fluxes in the sediment-water interface in the Gulf of Nicoya. Florencia Bibbó Sánchez, Universidad de Cádiz, 2011.
8. Metabolismo neto de la comunidad pelágica del Golfo de Nicoya, Costa Rica. Sara Soria Píriz, Universidad de Cádiz, 2011.
9. Caracterización del fitoplancton y bacterioplancton del Golfo de Nicoya (Costa Rica) mediante citometría de flujo. Virginia Aguilar Barquero, Universidad de Cádiz, 2012.

C.7. Participation in committees and international fora

1. Participation in the evaluation committees of (ANEP y MINECO) for infrastructure, fellowships and post doctoral contracts, reintegration grants, Juan de la Cierva and national projects.
2. Evaluation committee of projects in the V EU Framework Programme. Sustainable Marine Ecosystems. European Commission (1999-2002).
3. Evaluation committee of projects (Marie Curie) V EU Framework Programme. Sustainable Marine Ecosystems. European Commission (April 2002).
4. Local organising committee of ASLO Aquatic Science Meeting, Granada 2015. Association for the Science of Limnology and Oceanography. International Congress (February 2015).
5. Member of national and international scientific societies (SIBECOL, SEM, ASLO). Founding member and member of board of SIBECOL.

C 8. Other merits

1. Acting as referee for peer reviewed journals: Australian Journal of Plant Physiology, Marine Biology, Journal of Phycology, Marine Ecology Progress Series, Limnology & Oceanography, Scientia Marina, Staff review of Marine Ecology Progress Series 2002-2004, Science of Total Environment, Applied Microbiology and Biotechnology, Environmental Pollution, etc.
2. Evaluation of research projects for foreign research agencies.
3. Translation of scientific texts. Co. translator for Pearson Educación, from English of the book "Microbial Ecology. Fundamentals and applications". R. M. Atlas y R. Bartha.