



Guillem Salazar

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I use computational tools to understand how marine microbial communities are shaped and respond to environmental change.

Academic Information

Degree in Biological Sciences

UNIVERSITY OF VALENCIA

Valencia, SPAIN

2007

MSc in Biodiversity: Conservation and Evolution

UNIVERSITY OF VALENCIA

Valencia, SPAIN

2008

PhD. in Oceanography

POLYTECHNIC UNIVERSITY OF CATALONIA & MARINE SCIENCES INSTITUTE (ICM - CSIC)

Barcelona, SPAIN

2019

Postdoc

SUNAGAWA LAB, ETH ZÜRICH

Zürich, SWITZERLAND

current

Grants and Contracts

Introduction to Scientific Research Grant - Education and Science Ministry

UNIVERSITY OF VALENCIA AND CAVANILLES INSTITUTE FOR BIODIVERSITY AND EVOLUTIONARY BIOLOGY

Valencia, SPAIN

2007

Research Technician - Geronimo Forteza Programme

UNIVERSITY OF VALENCIA AND CAVANILLES INSTITUTE FOR BIODIVERSITY AND EVOLUTIONARY BIOLOGY

Valencia, SPAIN

2008

Grant for a stay at Dr. Fuhrman Lab

UNIVERSITY OF SOUTHERN CALIFORNIA (USC), LOS ANGELES, CA, USA

Valencia, SPAIN

2011

JAE Predoc (Phd Grant/Contract)

MARINE SCIENCES INSTITUTE (ICM), CSIC

Barcelona, SPAIN

2013

Research Technician Contract

MARINE SCIENCES INSTITUTE (ICM), CSIC

Barcelona, SPAIN

2014

Research Technician Contract

MARINE SCIENCES INSTITUTE (ICM), CSIC

Barcelona, SPAIN

2015

Courses

II Scientific Workshop of ICBiBE

CAVANILLES INSTITUTE FOR BIODIVERSITY AND EVOLUTIONARY BIOLOGY

Valencia, SPAIN

2006

International Course on Ecological Modelling

UNIVERSITY OF VALENCIA AND THE SPANISH SOCIETY FOR LIMNOLOGY AND THE SPANISH SOCIETY FOR TERRESTRIAL ECOLOGY

Valencia, SPAIN

2007

Socrates Intensive Programme Mathematics and Biology

UNIVERSIT- D'ORSAY PARIS XI Y AGROPARISTECH

Paris, FRANCE

2008

Famoso III Scientific Cruise (Barcelona - Barcelona, Spain)

2009

Citowork Cruise (Barcelona - Barcelona, Spain)

2010

Inter-calibration Scientific Cruise - Malspina 2010 Expedition (Las Palmas de Gran Canaria, Spain - Cartagena, Spain)

2010

Methods in Microbial Oceanography Course

MARINE SCIENCES INSTITUTE (ICM), CSIC

Barcelona, SPAIN

2010

Malaspina 2010 Scientific Cruise (Cadiz, Spain - Rio de Janeiro, Brazil)

2011

Bioinformatics for metagenomics and environmental sequencing

Oslo, NORWAY

MERG AND UNIVERSITY OF OSLO, DEPARTMENT OF BIOLOGY

2011

Tara Oceans Scientific Cruise (Bermudas - Açores, Portugal)

2012

Teaching

Practical applications to epidemiology

Valencia, SPAIN

VALENCIA'S SCHOOL FOR HEALTH STUDIES (EVES)

2013

Biostatistics for Doctors: practical applications

Valencia, SPAIN

VALENCIA'S SCHOOL FOR HEALTH STUDIES (EVES)

2014

Oral presentations in conferences

Constatación empírica de un modelo estocástico para predecir la extinción de especies en interacción

SALAZAR, G., ET AL.

II Congreso Nacional de Biodiversidad

2009

Biogeografía y diversidad de procariotas diazotrofos marinos mediante técnicas moleculares y genómicas

CORNEJO-CASTILLO, FM., SALAZAR, G., STAL, L., HINGAMP, P., GASOL, J.M., ACINAS, S.G.

IX Congreso de Microbiología del Medio Acuático

2012

Global beta-diversity patterns in deep-ocean bacterial communities

SALAZAR, G., CORNEJO-CASTILLO, FM., ACINAS, S.G., GASOL, J.M.

ASLO Aquatic Sciences Meeting

2012

Exploración de la diversidad microbiana en el océano profundo: primeros Resultados de la Expedición Malaspina 2010

GASOL, J.M., SALAZAR, G., CORNEJO-CASTILLO, FM., PERNICE, M., GOMES, A., MASSANA, R., MORÀN, X.G., ARRIETA, T., DUARTE, C., ACINAS, S.G.

IV Congreso de Biodiversidad

2013

Patrones de diversidad globales de procariotas y picoeucariotas en el océano fótico y afótico

SALAZAR G., LOGARES R., CORNEJO-CASTILLO F.M., SUNAGAWA S., BORK P., GASOL J.M. AND ACINAS S.G.

X Congreso de Microbiología del Medio Acuático

2014

A global ocean metagenomic survey reveals events of vertical connectivity in oceanic microbial communities

SALAZAR G., CORNEJO-CASTILLO F.M., LOGARES R., SUNAGAWA S., LUDICONE D., LIONEL G., STEMMANN L., LAXENAIRE R., SPEICH S., GASOL J.M., ACINAS S.G.

SAME 14

2015

Living on particles in the ocean surface and the bathypelagic: prokaryotic groups involved and phylogenetic conservation of the particle-association trait

MESTRE M., SALAZAR G., CORNEJO-CASTILLO F.M., SALA M.M., ACINAS S.G., GASOL J.M.

SAME 14

2015

Posters in conferences

El papel del canibalismo en copepodos dentro de una red trófica sencilla

SALAZAR, G., ET AL.

XI Conferencia Española y I Encuentro Iberoamericano de Biometría

2007

Un modelo nulo para la conectancia de redes de interacción planta-animal

SALAZAR, G., ET AL.

XI Conferencia Española y I Encuentro Iberoamericano de Biometría

2007

Diversity patterns of cultured marine bacteria using different organic matter sources as compared to single amplified genomes

SALAZAR, G., SARMENTO, H., DÍEZ-VIVES, C., FERRERA, I., GASOL, J.M., AND ACINAS, S.G.

SAME 12

2011

Exploración de la diversidad microbiana en distintos contextos ecológicos dentro de la expedición TARA Oceans

SALAZAR, G., LOGARES, R., CORNEJO-CASTILLO, FM., FERRERA, I., SARMENTO, H., GASOL, JM., ACINAS, S.G.

IV Congreso de Biodiversidad

2013

1. Ruiz-González, C, M Mestre, M Estrada, M Sebastián, G Salazar, S Agustí, E Moreno-Ostos, I Reche, XA Álvarez-Salgado, XAG Morán, CM Duarte, MM Sala, and JM Gasol (Apr. 2020). Major imprint of surface plankton on deep ocean prokaryotic structure and activity. *Molecular Ecology*.
2. Milanese, A, DR Mende, L Paoli, G Salazar, HJ Ruscheweyh, M Cuenca, P Hingamp, R Alves, PI Costea, LP Coelho, TSB Schmidt, A Almeida, AL Mitchell, RD Finn, J Huerta-Cepas, P Bork, G Zeller, and S Sunagawa (Mar. 2019). Microbial abundance, activity and population genomic profiling with mOTUs2. *Nature Communications* **10**(1).
3. Massoni, J, M Bortfeld-Miller, L Jardillier, G Salazar, S Sunagawa, and JA Vorholt (Oct. 2019). Consistent host and organ occupancy of phyllosphere bacteria in a community of wild herbaceous plant species. *The ISME Journal* **14**(1), 245–258.
4. Salazar, G, L Paoli, et al. (Nov. 2019). Gene Expression Changes and Community Turnover Differentially Shape the Global Ocean Metatranscriptome. *Cell* **179**(5), 1068–1083.e21.
5. Eguíluz, VM, G Salazar, J Fernández-Gracia, JK Pearman, JM Gasol, SG Acinas, S Sunagawa, X Irigoien, and CM Duarte (Dec. 2019). Scaling of species distribution explains the vast potential marine prokaryote diversity. *Scientific Reports* **9**(1).
6. Ibarbalz, FM et al. (Nov. 2019). Global Trends in Marine Plankton Diversity across Kingdoms of Life. *Cell* **179**(5), 1084–1097.e21.
7. Villarino, E et al. (Jan. 2018). Large-scale ocean connectivity and planktonic body size. *Nature Communications* **9**(1).
8. Salazar, G and S Sunagawa (June 2017). Marine microbial diversity. *Current Biology* **27**(11), R489–R494.
9. Royo-Llonch, M, I Ferrera, FM Cornejo-Castillo, P Sánchez, G Salazar, R Stepanauskas, JM González, ME Sieracki, S Speich, L Stemmann, C Pedrós-Alió, and SG Acinas (July 2017). Exploring Microdiversity in Novel Kordia sp. (Bacteroidetes) with Proteorhodopsin from the Tropical Indian Ocean via Single Amplified Genomes. *Frontiers in Microbiology* **8**.
10. Lara, E et al. (Sept. 2017). Unveiling the role and life strategies of viruses from the surface to the dark ocean. *Science Advances* **3**(9), e1602565.
11. Cornejo-Castillo, FM, AM Cabello, G Salazar, P Sánchez-Baracaldo, G Lima-Mendez, P Hingamp, A Alberti, S Sunagawa, P Bork, C de Vargas, J Raes, C Bowler, P Wincker, JP Zehr, JM Gasol, R Massana, and SG Acinas (Mar. 2016). Cyanobacterial symbionts diverged in the late Cretaceous towards lineage-specific nitrogen fixation factories in single-celled phytoplankton. *Nature Communications* **7**(1).
12. Lima-Mendez, G et al. (May 2015). Determinants of community structure in the global plankton interactome. *Science* **348**(6237), 1262073–1262073.
13. Sunagawa, S et al. (May 2015). Structure and function of the global ocean microbiome. *Science* **348**(6237), 1261359–1261359.
14. Baltar, F, J Palovaara, M Vila-Costa, G Salazar, E Calvo, C Pelejero, C Marrasé, JM Gasol, and J Pinhassi (June 2015). Response of rare, common and abundant bacterioplankton to anthropogenic perturbations in a Mediterranean coastal site. *FEMS Microbiology Ecology* **91**(6).
15. Agusti, S, JI González-Gordillo, D Vaqué, M Estrada, MI Cerezo, G Salazar, JM Gasol, and CM Duarte (July 2015). Ubiquitous healthy diatoms in the deep sea confirm deep carbon injection by the biological pump. *Nature Communications* **6**(1).
16. Salazar, G, FM Cornejo-Castillo, V Benítez-Barrios, E Fraile-Nuez, XA Álvarez-Salgado, CM Duarte, JM Gasol, and SG Acinas (Aug. 2015). Global diversity and biogeography of deep-sea pelagic prokaryotes. *The ISME Journal* **10**(3), 596–608.
17. Salazar, G, FM Cornejo-Castillo, E Borrull, C Díez-Vives, E Lara, D Vaqué, JM Arrieta, CM Duarte, JM Gasol, and SG Acinas (Nov. 2015). Particle-association lifestyle is a phylogenetically conserved trait in bathypelagic prokaryotes. *Molecular Ecology* **24**(22), 5692–5706.
18. Ruiz-González, C, G Salazar, R Logares, L Proia, JM Gasol, and S Sabater (Nov. 2015). Weak Coherence in Abundance Patterns Between Bacterial Classes and Their Constituent OTUs Along a Regulated River. *Frontiers in Microbiology* **6**.
19. Acinas, SG, I Ferrera, H Sarmento, C Díez-Vives, I Forn, C Ruiz-González, FM Cornejo-Castillo, G Salazar, and JM Gasol (July 2014). Validation of a new catalysed reporter deposition-fluorescence in situ hybridization probe for the accurate quantification of marine Bacteroidetes populations. *Environmental Microbiology* **17**(10), 3557–3569.
20. Logares, R, S Sunagawa, G Salazar, FM Cornejo-Castillo, I Ferrera, H Sarmento, P Hingamp, H Ogata, C de Vargas, G Lima-Mendez, J Raes, J Poulain, O Jaillon, P Wincker, S Kandels-Lewis, E Karsenti, P Bork, and SG Acinas (Sept. 2013). Metagenomic 16S rDNA Illumina tags are a powerful alternative to amplicon sequencing to explore diversity and structure of microbial communities. *Environmental Microbiology* **16**(9), 2659–2671.
21. Rodríguez-Martínez, R, G Rocap, G Salazar, and R Massana (Apr. 2013). Biogeography of the uncultured marine picoeukaryote MAST-4: temperature-driven distribution patterns. *The ISME Journal* **7**(8), 1531–1543.
22. Ferrera, I, CM Borrego, G Salazar, and JM Gasol (Oct. 2013). Marked seasonality of aerobic anoxygenic phototrophic bacteria in the coastal NW Mediterranean Sea as revealed by cell abundance, pigment concentration and pyrosequencing of pufM gene. *Environmental Microbiology* **16**(9), 2953–2965.
23. Salvadó, Z, FN Arroyo-López, JM Guillamón, G Salazar, A Querol, and E Barrio (Feb. 2011). Temperature Adaptation Markedly Determines Evolution within the Genus *Saccharomyces*. *Applied and Environmental Microbiology* **77**(7), 2292–2302.

24. Rojo, C and G Salazar (June 2010). Why are there so many kinds of planktonic consumers? The answer lies in the allometric diet breadth. *Hydrobiologia* **653**(1), 91–102.
25. Rojo, C, M Segura, MA Rodrigo, and G Salazar (Sept. 2008). Factors controlling the colonial structure of *Pediastrum tetras* (Chlorophyceae). *Hydrobiologia* **617**(1), 143–155.
26. Rojo, C, MA Rodrigo, G Salazar, and M Álvarez-Cobelas (2008). Nitrate uptake rates in freshwater plankton: the effect of food web structure. *Marine and Freshwater Research* **59**(8), 717.