

PEDRO CERMENO

Date of birth: May 3rd, 1975 Place: Zaragoza, Spain

CURRENT ADDRESS

Environmental Biophysics and Molecular Ecology Program
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EDUCATIONAL BACKGROUND

B.S. Biology, University of Salamanca, Spain (1998).
B.S. Marine Sciences, University of Vigo, Spain (2000).
M.Sc. Paleoceanography (2001).
Ph.D. Biological Oceanography, University of Vigo, Spain (March 2006).
Post-Doctoral Associate, Institute of Marine & Coastal Sciences, Rutgers University,
NJ, USA (from Oct 2006-present)

FELLOWSHIPS AND FUNDING

1999. PhD fellowship from the Xunta de Galicia, Spain.
2001-2005. PhD fellowship (PFPI) from the Spanish Ministry of Science and
Technology (MCYT)
2002. MCYT aid to carry out a stay at Universidad de Málaga, Spain.
2003. MCYT aid to carry out a stay at Southampton Oceanography Centre,
University of Southampton, UK.
2005. MCYT aid to carry out a stay at Lamont-Doherty Earth Observatory, Columbia
University, NY, USA.
2006. Research contract. Universidad de Vigo (Spain).
Oct 2006-March 2007 MEC/Fulbright Postdoctoral Research Fellowship.
April 2007-present Marie Curie Outgoing International Fellowship, 6th European
Community framework Program.

PROFESSIONAL EXPERIENCE

Participation in research projects

1999-2001. Effects of abiotic factors on the growth efficiency of commercial shellfish.
(Xunta de Galicia).
2001-2003. Size structure, Production and Respiration of microbial plankton in the
Ría de Vigo (TPR). Spanish Ministry of Science and Technology (MCYT).

2002-2003. Carbon fluxes in the Subtropical North Atlantic (FLUCANOS), Spanish Ministry of Science and Technology (MCYT).

2003. Evaluación del impacto en las comunidades y especies de interés comercial y ecológico en las zonas costeras. Periodo primaveral. Acción Urgente Prestige-Recursos Naturales, Spanish Ministry of Science and Technology (MCYT).

2005-2007. Plankton-mediated fluxes in oligotrophic subtropical environments: a lagrangian approach (CARPOS), Spanish Ministry of Science and Technology (MCYT).

2006-2009. *Trichodesmium* spp. and N₂ fixation in the tropical Atlantic (TRYNITROP), Spanish Ministry of Science and Technology (MCYT)

2007-2010. Phytoplankton distribution in the ocean. (TASIO) Marie Curie Actions. 6th European Community framework Program.

Participation in oceanographic cruises

2000. Economic Exclusive Zone, ZEE 00, on board R/V Hesperides, NW Iberian Peninsula.

2001-2001 TPR-Full annual cycle at a time series station at Ría de Vigo, R/V Mytilus.

2002. TPR-II Intensive samplings at a time series station at Ría de Vigo, R/V Mytilus.

2003. Evalupre'03 on board R/V Mytilus, NW Iberian Peninsula.

2003. JR98 on board R/V James Clark Ross (British Antarctic Survey), Celtic Sea.

2006. CARPOS, North East Atlantic Ocean, R/V Hesperides.

2007. TRYNITROP, Atlantic Ocean, R/V Hesperides.

STAYS AT FOREIGN INSTITUTIONS

2002. Universidad de Málaga, Málaga, Spain. Dr. Jaime Rodríguez.

2002. Instituto de Investigaciones Marinas, Vigo (CSIC), Spain. Carmen G. Castro.

2003. Southampton Oceanographic Centre, University Southampton, Southampton, UK. Dr. Patrick M. Holligan.

2005. Lamont-Doherty Earth Observatory, Columbia University, New York, USA. Dr. John Marra.

2006. Institute of Marine & Coastal Sciences, Rutgers University, New Brunswick, NJ, USA Dr. Paul G. Falkowski.

2008. Massachusetts Institute of Technology, Cambridge, MA, USA. Drs. Mick Follows & Stephanie Dutkiewicz.

2008. Scripps Institution of Oceanography, UCSD, La Jolla, CA, USA. Dr. Julia Uitz.

MANUSCRIPTS IN PREPARATION

-**Cermeño P**, Baek-Lee J, Uitz, J. Schofield O, Falkowski PG. Nutrient control of marine diatom success and atmospheric CO₂.

-**Cermeño P**, Falkowski PG. Low geographic restrictions to global dispersal of marine diatoms.

-**Cermeño P**, Dutkiewicz S, Harris RP, Follows M, Schofield O, Falkowski PG. The role of nutricline depth in regulating the ocean carbon cycle. *Proceedings of the National Academy of Sciences of USA*.

PEER-REVIEWED PUBLICATIONS

1. **Cermeño P**, Figueiras FG. (2008) Species richness and cell-size distribution: the size structure of phytoplankton communities. *Marine Ecology Progress Series* 357, 79-85.
2. **Cermeño P**, Marañón E, Harbour DS, Figueiras FG, Crespo BG, Huete M, Varela M., Harris RP. (2008) Resource levels, allometric scaling of phytoplankton abundance and marine phytoplankton diversity. *Limnology and Oceanography* 53, 312-318.
3. Marañón, E., **Cermeño P**, Rodríguez, J, Zubkov M, Harris, R. (2007) Scaling phytoplankton photosynthesis in the ocean. *Limnology and Oceanography* 52, 2190-2198.
4. Estévez-Blanco P, **Cermeño P**, Espiñeira M, Fernández E. Phytoplankton photosynthetic efficiency and primary production rates estimated from Fast Repetition Rate (FRR) fluorometry at coastal embayments affected by upwelling (Rías Baixas; NW of Spain). *Journal of Plankton Research* 2006 28(12):1153-1165.
5. **Cermeño P**, Marañón E, Harbour D, Harris R. (2006) Invariant scaling of phytoplankton abundance and cell size in contrasting marine environments. *Ecology Letters* 9(11): 1210-1215.
6. **Cermeño P**, Marañón E, Pérez V, Serret P, Fernández E, Castro CG. (2006) Phytoplankton size structure, primary production and net community metabolism in a coastal ecosystem (Ría de Vigo, NW-Spain): seasonal and short-time scale variability. *Estuarine, Coastal and Shelf Science* 67(2): 251-266.
7. **Cermeño P**, Estévez-Blanco P, Marañón E, Fernández E. (2005) Maximum photosynthetic efficiency of size-fractionated phytoplankton assessed by ¹⁴C-uptake and fast repetition rate fluorometry. *Limnology and Oceanography*, 50:1438-1446.
8. Marañón E, **Cermeño P**, Pérez V. (2005) Photosynthetic production of dissolved organic carbon during summer oligotrophic conditions in the Celtic Sea. *Marine Ecology Progress Series*, 299:7-17.
9. **Cermeño P**, Marañón E, Rodríguez J, Fernández E. (2005) Large-sized phytoplankton sustain higher carbon-specific photosynthesis than smaller cells in a coastal eutrophic ecosystem. *Marine Ecology Progress Series*, 297:51-60.
10. **Cermeño P**, Marañón E, Rodríguez J, Fernández E. (2005) Size dependence of coastal phytoplankton photosynthesis under vertical mixing conditions. *Journal of Plankton Research*, 27(5): 473-483.
11. Marañón E, **Cermeño P**, Fernández E, Rodríguez J, Zabala L. (2004) Significance and mechanisms of photosynthetic production of dissolved organic carbon in a coastal eutrophic ecosystem. *Limnology and Oceanography* 49(5): 1652-1666.

OTHER PUBLICATIONS

- Cermeño P**, Nombela MA, Costas S, Vilas F. (2003) Qualitative analysis of pigments in recent sediments of the middle-inner Ría de Arosa (NW Spain): diagenetic and environmental assessments. *Thalassas* 19(1): 27-37.

TALKS AND SEMINARS

- Marañón E, **Cermeño P**, Fernández E, Zabala L, Rodríguez J. Microbial production of dissolved organic carbon in a coastal embayment (Ría de Vigo, NW Spain): is there a relationship with plankton size structure? IGS/AGU Nize 2002.
- Cermeño P**, Marañón E, Fernández E, Pérez V, Serret P. Size fractionated phytoplankton primary production in the Ría de Vigo: seasonal and short term variability. Iberian Atlantic Continental Margin, Vigo 2003.
- Marañón E, **Cermeño P**, Fernández E, Zabala L, Rodríguez J. Significance of dissolved organic carbon production by microbial plankton in the Ría de Vigo. Iberian Atlantic Continental Margin, Vigo 2003.
- Pérez V, **Cermeño P**, Marañón E, Fernández E, Serret P. Seasonal dynamics of microplankton oxygen metabolism in the Ría de Vigo. Iberian Atlantic Continental Margin, Vigo 2003.
- Cermeño P**, Nombela MA. Pigments in recent sediments of the Ría de Arosa. Iberian Atlantic Continental Margin, Vigo 2003.
- Cermeño P**, Marañón E, Rodríguez J, Fernández E. Positive Allometry in Phytoplankton Biomass-specific Photosynthesis in a Coastal Ecosystem. ASLO summer meeting, Savannah June 2004.
- Marañón E, **Cermeño P**, Fernández E, Rodríguez J, Zabala L. Significance of dissolved organic carbon production by microbial communities in a coastal eutrophic ecosystem. ASLO summer meeting, Savannah June 2004.
- Cermeño P**, Estévez-Blanco P, Marañón E, Fernández E. Large sized phytoplankton have higher photosynthetic efficiency than smaller cells under favourable growth conditions. Challenger Conference, Liverpool'04.
- Cermeño P**, Marañón E, Rodríguez J, Fernández E, Zabala L, Jiménez F. Size scaling deviation in phytoplankton photosynthesis and the energy flow through a coastal ecosystem. ICES meeting, Vigo'04.
- Estévez-Blanco P, Fernández E, **Cermeño P**, Espiñeira M, Lorenzo J. Significant relationship between C-14 based and FRRF derived primary production estimates in coastal waters off NW-Spain. ASLO meeting, Salt Lake City '05.
- Marañón E, **Cermeño P**, Pérez V. Continuity in the production of dissolved organic carbon. European Geophysical Union, Vienna 2005.
- Pérez V, **Cermeño P**, Serret P, Fernández E, Marañón E. Seasonal variability of microbial oxygen metabolism in a coastal ecosystem (Ría de Vigo, NW-Spain). Workshop on respiration, Vigo'05.
- Cermeño P**, Marañón E, Harbour D, Harris R. Invariant size scaling of phytoplankton abundance in contrasting marine environments. ASLO summer meeting Santiago de Compostela 2005.

- Gonzalez J, Fernández E, Perez V, **Cermeño P**, Marañón E. Spatial variability of the size-fractionated production/chl a ratio in the ocean. ASLO summer meeting Santiago de Compostela 2005.
- Marañón E, **Cermeño P**, Rodríguez J. Size scaling of phytoplankton photosynthesis in eutrophic and oligotrophic marine ecosystems. IMBER symposium, Valencia 2007.
- Cermeño P**, Schofield O, Harbour DS, Harris RP, Falkowski PG. Phytoplankton community composition and nutricline depth in the ocean. Ocean Carbon Biogeochemistry, Woods Hole, USA, 2007
- Marañón, E., **Cermeño P**, Rodríguez J. Phytoplankton metabolism and the $3/4$ -power rule. IV Conference of the European Phycological Society, Oviedo (Spain), 2007.
- Cermeño P**. The balance between diatoms and coccolithophorids in the ocean. Invited talk, Massachusetts Institute of Technology, USA, 2008
- Cermeño P**, Dutkiewicz, S, Harris RP, Follows M, Schofield O, Falkowski PG. The role of nutricline depth in regulating the ocean carbon cycle. ASLO/AGU/TOS Orlando, USA, 2008