



von Dassow, Peter

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Current Positions:

1. Associate Professor, Departamento de Ecología, Pontificia Universidad Católica de Chile, Facultad de Ciencias Biológicas
2. Associate Investigator, Instituto Milenio de Oceanografía de Chile, Concepción, Chile
3. Research Fellow, Stazione Zoologica Anton Dohrn, Napoli, Italy

Education:

B.Sc.: Cell and Molecular Biology, University of Washington, Seattle, USA, (1997).

Ph.D.: Oceanography, University of California San Diego, San Diego, USA (2003)

Personal statement:

I aim to understand how the physiology and life cycles of marine phytoplankton affects their ecological and oceanographic distributions, and what evolutionary potential in a changing ocean. For that, I do extensive culture-based work, isolating collections of strains from target species or genera that inhabit contrasting environments or environmental gradients, for example coastal upwelling versus offshore habitats, to be able to compare their phenotypes, genotypes/genomes, and physiologies in the lab. I use methodologies such as advanced flow cytometry for targeted cell sorting, electron microscopy, molecular phylogeny, and sometimes genomics and transcriptomics. Much of my research has targeted the cosmopolitan coccolithophore *Emiliana huxleyi* and its close relatives that have less widespread distributions. I have also led and collaborated in studies of dinoflagellates, diatoms, cyanobacteria, macroalgae, and even synthetic biology.

Positions and honors

Dates	Position/honor	Employer/host institution
2016-present	Associate Professor	Pontificia Universidad Católica de Chile
2010-2016	Assistant Professor	Pontificia Universidad Católica de Chile
2008-2010	Marie Curie Postdoctoral Fellow	CNRS, France
2007-2008	Postdoctoral Fellow	CNRS, France

2007	Postdoctoral Research Associate	University of Washington
2006	Instructor	University of Washington
2003-2006	NSF Postdoctoral Fellow	University of Washington

Contributions

Mentoring and supervision

Post-docs: 5 at 100% (2011-2013, 2014-2017, 2018-2019, 2020-, 2022-), 1 at 50% (2013-2015)

PhDs: 1 current (PUCCh), 2 graduated (U. Cat. de Chile y U de Concepción)

Masters (UPMC Sorbonne Université): 3 Master-1 completed, 2 Master-2 completed

Masters (U de Concepción): 1 graduated.

16 undergrad students

Publications

53 peer-reviewed articles in WoS journals, 4 non-WoS, 3 commissioned reports.

WoS: *h*-Index=24, 4460 total citations

ORCID ID: <https://orcid.org/0000-0002-1858-1953>

10 most relevant publications in last 10 years:

von Dassow, P. 2022. Voltage-gated proton channels and ocean biogeochemistry under climate change. *Proceedings of the National Academy of Sciences USA*. 119(25): e2206426119. <https://doi.org/10.1073/pnas.2206426119>

Díaz-Rosas, F., Alvez-de-Souza, C., Alarcón, E., Menschel, E., González, H. E., Torres, R., von Dassow, P. 2021. Abundances and morphotypes of the coccolithophore *Emiliania huxleyi* in southern Patagonia compared to neighboring oceans and northern-hemisphere fjords. *Biogeosciences*. 18: 5465–5489. <https://doi.org/10.5194/bg-18-5465-2021>

Pollak, B., Matute, T., Nuñez, I., Cerda, A., Lopez, C., Vargas, V., Kan, A., Bielinski, V., von Dassow, P., Dupont, C., Federici, F. 2020. Universal Loop assembly (uLoop): open, efficient, and species-agnostic DNA fabrication. *Synthetic Biology*. 5 (1) : 2020, ysa001. <https://doi.org/10.1093/synbio/ysaa001>

Aldunate, M., Henríquez-Castillo, C., Ji, Q., Lueders-Dumont, J., Mulholland, M., Ward, B., von Dassow, P., Ulloa, O. 2020. Nitrogen assimilation in picocyanobacteria inhabiting the oxygen deficient zones of the eastern tropical North and South Pacific. *Limnology and Oceanography*. <https://doi.org/10.1002/lno.11315>

Bendif, E.-M., Probert, I., Díaz-Rosas, F., Thomas, D., van den Engh, G. Young, J., von Dassow, P.. 2016. Recent reticulate evolution in the ecologically dominant lineage of coccolithophores. *Frontiers in Microbiology*. 7:784. <https://doi.org/10.3389/fmicb.2016.00784>

Rokitta, S. D., von Dassow, P., Rost, B., John, U. 2016. P- and N-starvation trigger the same cellular responses to promote senescence in eukaryotic phytoplankton. *Frontiers in Marine Science*. 3:109. <https://doi.org/10.3389/fmars.2016.00109>

von Dassow, P., John, U., Ogata, H., Probert, I., Bendif, E.-M., Kegel, J. U., Audic, S., Wincker, P., Da Silva, C., Claverie, J.-M., Doney, S., Glover, D. M., Mella Flores, D., Herrera, Y., Lescot, M., Garet-Delmas, M.-J., de Vargas, C. 2015. Life cycle modification in open oceans accounts for genome variability in a cosmopolitan phytoplankton. *ISME Journal* 9:1365-1377. <https://doi.org/10.1038/ismej.2014.221>

Patil, S., Moeys, S., von Dassow, P., Huysman, M. J. J., Mapleson, D., De Veylder, L., Sanges, R., Vyverman, W., Montresor, M., Ferrante, M. I. 2015. Identification of the meiotic toolkit in diatoms and exploration of meiosis-specific SPO11 and RAD51 homologs in the sexual species *Pseudo-nitzschia multistriata* and *Seminavis robusta*. *BMC Genomics*. 16:930. 10.1186/s12864-015-1983-5 <https://doi.org/10.1186/s12864-015-1983-5>

von Dassow, P., Collado, S. 2014. The biological oceanography, biogeochemical cycles, and pelagic ecosystem functioning of the east-central South Pacific Gyre: Focus on Easter Island and Sala-y-Gómez. *Latin American Journal of Aquatic Research*. 42(4): 703-742. doi: 10.3856/vol42-issue4-fulltext-4

von Dassow, P., Montresor, M. 2011. Unveiling the mysteries of phytoplankton life cycles: Patterns and opportunities behind complexity. *Journal of Plankton Research*. 33:3-12