Adrian Marchetti

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Education:

2005	Ph.D, Department of Botany, University of British Columbia, Vancouver, BC Canada Thesis title: Ecophysiological aspects of iron nutrition and domoic acid production in oceanic and coastal diatoms of the genus *Pseudo-nitzschia*.
1998	B.Sc. Honors Biology, Environmental Studies Minor, McGill University, Montreal, PQ Canada

Professional Experience:

2018 –	Associate Professor, Marine Sciences Department, University of North Carolina - Chapel Hill
2012 –	Faculty member, Bioinformatics and Computational Biology Curriculum, University of North Carolina - Chapel Hill
2012 –	Adjunct Assistant Professor, Curriculum for the Environment & Ecology, University of North Carolina - Chapel Hill
2011 – 2018	Assistant Professor, Marine Sciences Department, University of North Carolina - Chapel Hill
2009 – 2010	Research Scientist, School of Oceanography, University of Washington
2005 – 2009	Post-doctoral Fellow, School of Oceanography, University of Washington
2005	Post-doctoral Fellow, Department of Botany, University of British Columbia

Publications:

Selected publications (since 2015): *graduate student coauthor **undergraduate student coauthor

2018 Lampe RH*, Mann EL, Cohen NR*, Till CP, Thamatrakoln K, Brzezinski MA, Bruland KW, Twining BS and **Marchetti A**. Different iron storage strategies among bloom-forming diatoms. *Proceedings of the National Academy of Science* 115 (52) E12275-E12284. doi.org/10.1073/pnas.1805243115

2018 Daniels CJ, Poulton AJ, et al. A global compilation of coccolithophore calcification rates. *Earth System Science Data.* doi.org/10.5194/essd-10-1859-2018.

2018 Cohen NR*, Gong W*, Saito M and **Marchetti A**. Transcriptomic and proteomic responses of an oceanic diatom *Pseudo-nitzschia granii* to iron limitation. *Environmental Microbiology*. doi.org/10.1111/1462-2920.14386.

2018 Till CP, Solomon JR, Cohen NR*, Lampe RH*, **Marchetti A**, Coale TH and Bruland KW. The iron limitation mosaic in the California Current System: factors governing Fe availability. *Limnology and Oceanography.* doi.org/10.1002/lno.11022.

2018 Lampe RH*, Cohen NR*, Ellis K*, Bruland KW, Maldonado MT, Peterson TD, Till CP, Brzezinski MA, Bargu S, Thamatrakoln K, Kuzminov FI, Twining BS and **Marchetti A.** Divergent gene expression among phytoplankton taxa in response to upwelling. *Environmental Microbiology.* doi.org/10.1111/1462-2920.14361.

2018 Collins JR, Fredricks HF, Bowman JS, Ward CP, Moreno C*, Longnecker K, **Marchetti A**, Hansel CM, Ducklow HW, Van Mooy BAS. The molecular products and biogeochemical significance of lipid photooxidation in West Antarctic surface waters. *Geochimica et Cosmochimica Acta* doi.org/10.1016/j.gca.2018.04.030.

2018 Davies SW, Ries JB, **Marchetti A**, and Castillo KD. Symbiodinium functional diversity in the coral *Siderastrea siderea* is influenced by thermal stress and reef environment, but not ocean acidification. *Frontiers in Marine Sciences*. doi: 10.3389/fmars.2018.00150.

2018 Cohen NR*, Mann E, Stemple BP**, Moreno CM*, Rauschenberg S, Jacquot JE, Sunda WG, Twining BT and **Marchetti A**. Iron storage capacities and evidence for multiple functional roles of ferritin in marine diatoms. *Limnology and Oceanography*. doi.org/10.1002/lno.10800

2018 Gong W*, Schruth D, Paerl H, and **Marchetti A**. Eukaryotic phytoplankton community spatiotemporal dynamics as identified through gene expression within a eutrophic estuary. *Environmental Microbiology*. doi: 10.1111/1462-2920.14049.

2017 Moreno CM*, Lin Y, Davies S, Bureau E, Cassar N and **Marchetti A.** Examination of gene repertoires and physiological responses to iron and light limitation in Southern Ocean diatoms. *Polar Biology*. doi.org/10.1007/s00300-017-2228-7.

2017 Cohen NR*, Ellis KA*, Lampe RH*, McNair H, Twining BS, Maldonado MT, Brzezinski MA, Kuzminov FI, Thamatrakoln K, Till CP, Bruland KW, Sunda W, Bargu S, **Marchetti A**. Diatom transcriptional and physiological responses to changes in iron bioavailability across ocean provinces. *Frontiers in Marine Science*. doi: 10.3389/fmars.2017.00360.

2017 Lin Y, Cassar N, **Marchetti A**, Moreno CM*, Ducklow H and Li Z. Specific eukaryotic plankton are good predictors of net community production in the Western Antarctic Peninsula. *Scientific Reports*. 7: 14845. doi:10.1038/s41598-017-14109-1

2017 **Marchetti A**, Moreno CM*, Cohen NR*, Oleinikov I, Delong K**, Twining BS, Armbrust EV and Lampe RH. Development of a molecular-based index for assessing iron status in bloom-forming pennate diatoms. *Journal of Phycology*. doi: 10.1111/jpy.12539

2017 Cohen NR*, Ellis K*, Burns WG**, Lampe R*, Schuback N, Johnson Z, Sanudo-Wilhelmy S, and **Marchetti A**. Iron and vitamin interactions in marine diatom isolates and natural assemblages of the Northeast Pacific Ocean. *Limnology and Oceanography*. doi: 10.1002/lno.10552.

2017 Schnetzer A, Lampe RH, Benitez-Nelson CR, **Marchetti A**, Osburn CL and Tatter AO. Marine snow formation by the toxin-producing diatom, *Pseudo-nitzschia australis*. *Harmful Algae*. 61. 23-30.

2017 Gong W*, Browne J, Hall N, Schruth D, Paerl H, and **Marchetti A**. Molecular insights into a dinoflagellate bloom. *ISME Journal*. 11, 439-452. doi:10.1038/ismej.2016.129.

2016 Ellis KA*, Cohen NR*, Moreno CM* and **Marchetti A.** Cobalamin-independent methionine synthase distribution and influence on vitamin B_{12} growth requirements in marine diatoms. *Protist*. doi.org/10.1016/j.protis.2016.10.007

2016 Davies S, **Marchetti A**, Ries JB and Castillo DK. (2016) Thermal and pCO2 stress elicit divergent transcriptomic responses in a resilient coral. *Frontiers in Marine Science*. 3. doi: 10.3389/fmars.2016.00112.

2015 **Marchetti A**, Catlett D**, Hopkinson B, Ellis K* and Cassar N (2015) Marine diatom proteorhodopsins and their potential role in coping with low iron availability. *ISME Journal*. doi:10.1038/ismej.2015.74

Book Chapters:

2016 **Marchetti A** and Maldonado MT (2016). Iron, In: Borowitzka MA, Beardell J and Raven J (ed.) Microalgal Physiology. Springer Publishing.

Software:

2012 Schruth D and **Marchetti A**. Microbial Assemblage Normalized Transcript Analysis (manta). R package. Bioconductor 2.10.

Supervisory Activities:

Post-doctoral fellows = 1 (co-supervisor)
Graduate students = 9
Undergraduate students = 29 (including 3 Honors theses)
