

Curriculum vitae

Francesco Bolinesi, Ph.D.

Department of Biology, University of Naples Federico II

University: University of Naples Federico II – 1st and 2nd degree “Biologia delle Produzioni marine” a.y. 2015
Ph.D in Biology “Effect of light, iron and vitamin B₁₂ co-limitation on phytoplankton species from the Ross Sea (Antarctica).” XXXII cycle, 2020.

Current position: researcher RTDA at the Department of Biology, University of Naples Federico II, Italy.

Course of: Ecology of Extreme Environments (6-CFU)- LM Biology of Extreme Environments (BEXE); Marine Biology (6-CFU)

Research activity: the scientific activity falls within the frame of marine phytoplankton ecology, and address community structural and functional patterns. Particularly attention is paid to spatial and temporal scales as determinant drivers of community dynamics. Highly variable and extreme ecological systems are investigated as those providing an appropriate context for studying scale-induced variations, namely transitional waters systems of the Mediterranean and polar regions.

Research collaboration foreign institutions

Hollings Marine Laboratory, Department of Biology, College of Charleston South Carolina (USA).
Collaboration with Prof. G.R. DiTullio
University of North Carolina at Wilmington (UNCW), Center of Marine Science NC (USA).
Collaboration with Prof. CR Tomas

Publications (5 years)

Bolinesi, F., Rossetti, E., Mangoni, O. Phytoplankton dynamics in a shellfish farming lagoon in a deltaic system threatened by ongoing climate change. *Sci Rep* 14, 19424 (2024).
<https://doi.org/10.1038/s41598-024-70492-6>

Monti-Birkenmeier, M*, Diociaiuti, T., **Bolinesi, F****, Saggiomo, M., Mangoni, O. Microzooplankton and phytoplankton of Ross Sea polynya areas and potential linkage among functional traits. *Deep Sea Research Part II: Topical Studies in Oceanography*, 105393 (2024). <https://doi.org/10.1016/j.dsr2.2024.105393>

Lauritano, C., Bazzani, E., Montuori, E., **Bolinesi, F.**, Mangoni, O., Riccio, G., Buondonno, A., Saggiomo, M. Salinity Stress Acclimation Strategies in *Chlamydomonas* sp. Revealed by Physiological, Morphological and Transcriptomic Approaches. *Mar Drugs*. 2024 Jul 29;22(8):351. doi: 10.3390/md22080351. PMID: 39195467; PMCID: PMC11355073.

Misic, C., **Bolinesi, F.**, Castellano, M. *et al.* Factors driving the bioavailability of particulate organic matter in the Ross Sea (Antarctica) during summer. *Hydrobiologia* 851, 2657–2679 (2024). <https://doi.org/10.1007/s10750-024-05482-w>

Bolinesi, F.; Talamo, A.; Mangoni, O. Temporal Evolution of Phytoplankton Metacommunity in a Disused Mediterranean Saltwork. *Water* 2023, 15, 2419.
<https://doi.org/10.3390/w15132419>

- Saggiomo, M., **Bolinesi**, F., Brunet, C., Passarelli, A., Margiotta, F., Saggiomo, V., & Mangoni, O. (2023). A CHEMTAX-derived phytoplankton community structure during 12-year observations in the Gulf of Naples (LTER-MC). *Marine Ecology*, 44, e12745. <https://doi.org/10.1111/maec.12745>
- Cordone, A.; Selci, M.; Barosa, B.; Bastianoni, A.; Bastoni, D.; **Bolinesi**, F.; Capuozzo, R.; Cascone, M.; Correggia, M.; Corso, D.; et al. Surface Bacterioplankton Community Structure Crossing the Antarctic Circumpolar Current Fronts. *Microorganisms* 2023, 11, 702. <https://doi.org/10.3390/microorganisms11030702>
- Cordone, A., D'Errico, G., Magliulo, M., **Bolinesi**, F.*, Selci, M., Basili, M., de Marco, R., Saggiomo, M., Rivaro, P., Giovannelli, D., Mangoni, O. (2022). Bacterioplankton Diversity and Distribution in Relation to Phytoplankton Community Structure in the Ross Sea Surface Waters. *Frontiers in Microbiology*, 13, 10.3389/fmicb.2022.722900 (*Corresponding author).
- Salbitani, G., Carillo, P., Di Martino, C., **Bolinesi F.**, et al. (2022). Microalgae cross-fertilization: short-term effects of Galdieria phlegrea extract on growth, photosynthesis and enzyme activity of Chlorella sorokiniana cells. *J. Appl. Phycol.* doi.org/10.1007/s10811-022-02769-0.
- Bazzani, E., Lauritano, C., Mangoni, O., **Bolinesi**, F., Saggiomo, M. (2021). Chlamydomonas Responses to Salinity Stress and Possible Biotechnological Exploitation. *J. Mar. Sci. Eng.*, 9, 1242. <https://doi.org/10.3390/jmse9111242>.
- Cau, A., Ennas C., Moccia D., Mangoni O., **Bolinesi F.**, Saggiomo M., Granata A., Guglielmo L., Swadling K.M., Pusceddu A. (2021). Particulate organic matter release below melting sea ice (Terra Nova Bay, Ross Sea, Antarctica): possible relationships with zooplankton. *Journal of Marine Systems*, 217, 103510. doi.org/10.1016/j.jmarsys.2021.103510.
- D'Elia, L., Impimbo, P., Liberti, D., **Bolinesi**, F., Pollio, A., Mangoni, O., Brilman W., Olivieri G., Monti D.M. (2021). Switchable solvent selective extraction of hydrophobic antioxidants from *Synechococcus bigranulatus*. *ACS Sustainable Chemistry & Engineering*, 9(41), pp. 13798-13806.
- D'Elia, L., Imbimbo, P., Liberti, D., **Bolinesi**, F. et al. (2021). Thermo resistant antioxidants from photoautotrophic microorganisms: screening and characterization. *World J Microbiol Biotechnol* 37, 215. doi.org/10.1007/s11274-021-03180-6.
- Saggiomo, M., Escalera L., **Bolinesi**, F., Rivaro, P., Saggiomo, V., Mangoni O. (2021). Diatom diversity during two austral summers in the Ross Sea (Antarctica). *Marine Micropaleontology*, 165, 101993. doi.org/10.1016/j.marmicro.2021.101993.
- Saggiomo, M., Escalera, L., Saggiomo, V., **Bolinesi**, F. and Mangoni O. (2021), Phytoplankton Blooms Below the Antarctic Landfast Ice During the Melt Season Between Late Spring and Early Summer. *J. Phycol.*, 57: 541-550. doi.org/10.1111/jpy.13112.
- Torstensson, A., Margolin, A.R., Showalter, G.M., Smith, W.O., Jr, Shadwick, E.H., Carpenter S.D., **Bolinesi F.** and Deming J.W. (2021). Sea-ice microbial communities in the Central Arctic Ocean: Limited responses to short-term pCO₂ perturbations. *Limnol Oceanogr*, 66: S383-S400. doi.org/10.1002/lno.11690.
- Schanke, N.L., **Bolinesi**, F., Mangoni, O., Katlein, C., Anhaus, P., Hoppmann, M., Lee, P.A. and DiTullio G.R. (2021). Biogeochemical and ecological variability during the late summer–early autumn transition at an ice-floe drift station in the Central Arctic Ocean. *Limnol Oceanogr*, 66: S363-S382. doi.org/10.1002/lno.11676.
- Arienzo, M., **Bolinesi**, F., Aiello, G., Barra, D., Donadio, C., Stanislao, C., Ferrara, L., Mangoni, O., Toscanesi M., Giarra A., Trifuoggi M. (2020). The Environmental Assessment of an Estuarine Transitional Environment, Southern Italy. *Journal of Marine Science and Engineering*, 8(9): 628.

- Bolinesi, F.**, Arienzo, M., Donadio, C., Ferrara, L., Passarelli, A., Saggiomo, M., Saggiomo, V., Stanislao, C., Trifuoggi, M., Mangoni, O. (2020). Spatial and temporal variation of phytoplankton community structure in a coastal marine system subjected to human pressure. *Regional Studies in Marine Science*, 35. 101198. doi.org/10.1016/j.rsma.2020.101198.
- Bolinesi, F.**, Saggiomo, M., Ardini, F., Castagno, P., Cordone, A., Fusco, G., Rivaro, P., Saggiomo, V., Mangoni, O. (2020). Spatial-Related Community Structure and Dynamics in Phytoplankton of The Ross Sea, Antarctica. *Frontiers in Marine Science*, 7,1092. doi: 10.3389/fmars.2020.574963.
- Bolinesi, F.**, Saggiomo, M., Aceto, S., Cordone, A., Serino, E., Valoroso, M.C., Mangoni, O. (2020). On the Relationship between a Novel *Prorocentrum* sp. and Colonial *Phaeocystis antarctica* under Iron and Vitamin B₁₂ Limitation: Ecological Implications for Antarctic Waters. *Applied Sciences*, 10(19), 6965 doi.org/10.3390/app10196965.
- Mangoni, O., **Bolinesi, F.**, Saggiomo, V., Saggiomo, M. (2020). Photosynthetic rate and size structure of the phytoplankton community in transitional waters of the Northern Adriatic Sea. *Ecological Questions*, 31 (4):1-15. doi.org/10.12775/EQ.2020.025.
- Salbitani, G., **Bolinesi, F.**, Affuso, M., Carraturo, F., Mangoni, O., Carfagna, S. (2020). Rapid and Positive Effect of Bicarbonate Addition on Growth and Photosynthetic Efficiency of the Green Microalgae *Chlorella Sorokiniana* (Chlorophyta, Trebouxiophyceae). *Applied Sciences*, 10(13), 4515. doi.org/10.3390/app10134515.
- Salbitani, G., Del Prete, S., **Bolinesi, F.**, Mangoni, O., De Luca, V., Carginale, V., Donald, W.A., Supuran, C.T, Carfagna, S., Capasso, C. (2020). Use of an immobilised thermostable α -CA (SspCA) for enhancing the metabolic efficiency of the freshwater green microalga *Chlorella sorokiniana*. *Journal of Enzyme Inhibition and Medicinal Chemistry*, 35(1): 913-920. doi.org/10.1080/14756366.2020.1746785.
- Saggiomo, M., Escalera, L., Saggiomo, V., **Bolinesi, F.**, Mangoni, O. (2020). Phytoplankton blooms below the Antarctic land-fast ice during the melt season between late spring and early summer. *Journal of Phycology*. doi:10.1111/jpy.13112.
- Schanke, N.L., Lee, P.A., **Bolinesi, F.**, Mangoni, O., Hoppmann, M., Katlein, C., Anhaus, P., and DiTullio, G.R. (2020). Biogeochemical and ecological variability during the late summer early autumn transition at an ice-floe drift station in the central Arctic Ocean. *Limnology and Oceanography*. doi:10.1002/lno.11676.
- Mangoni, O., Saggiomo, M., **Bolinesi, F.**, Castellano, M., Povero, P., Saggiomo, V. and DiTullio, G.R (2019). *Phaeocystis antarctica* unusual summer bloom in stratified Antarctic coastal waters (Terra Nova Bay, Ross Sea). *Marine Environmental Research*, 151: 104733. doi.org/10.1016/j.marenvres.2019.05.012.