

## Wiebe H.C.F. Kooistra



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**Position:** Dirigente di Ricerca, Scientist, Department of Integrated Marine Ecology, Stazione Zoologica Anton Dohrn, Napoli (Italy)

<b>Institute and Location</b>	<b>Degree / Function</b>	<b>Year</b>	<b>Field of Study</b>
Higher Agricultural School, Leeuwarden, the Netherlands	Engineer	1977-1980	Agriculture and soil sciences
Department of Marine Biology, Rijksuniversiteit Groningen, Groningen, the Netherlands	Master (Laurea)	1981-1987	Biological sciences
Department of Marine Biology, Rijksuniversiteit Groningen, Groningen, the Netherlands	Ph.D.	1987-1992	Molecular biogeography of tropical macroalgae
Alfred-Wegener-Institut für Polar und Meeresforschung, Bremerhaven, Germany	Postdoc	1993-1996	Diatom phylogenetics
Smithsonian Tropical Research Institute Balboa, Panama City, Republic of Panama	Postdoc	1996-1999	Macroalgal evolution and phylogeography
Stazione Zoologica Anton Dohrn, Napoli, Italy	1° Ricercatore, Dirigente di Ricerca	2000-present	Phytoplankton ecology, taxonomy and life cycles

### Appointments and awards

2005: Winner of the Provasoli Award for authoring best paper in Journal of Phycology

2015 – present: Head of the Section RIMAR of the Stazione Zoologica Anton Dohrn

2007 – 2010: member of the Editorial Board of *Phycologia*

2008 – Present: member of the Editorial Board of *European Journal of Phycology*

2007 – 2009: member of the Editorial Board of *Marine Ecology*

2006 – 2009: member of the Editorial Board of *Journal of Plankton Research*

2015-present: member of the Editorial Board of *Protist*

2011-2013 Project manager of the preparatory phase of the ESFRI RI-project EMBRC

Member of the European Phycological Society, the International Phycological Society, the Phycological Society of America

PhD supervisor of 8 Ph.D. students (internal supervisor, dir. of studies, external), four Postdoctoral researchers and three Project Managers (past and present)

Local coordinator - participant in eight EU-funded projects and two Italian projects

## Publications

Author of 94 publications on ISI-journals and 13 book chapters

List of publications of the last 10 years (2013-present):

### Peer Reviewed Papers:

1. Tesson, S.V.M, Legrand, C., van Oosterhout C., Montresor, M., **Kooistra, W.H.C.F.**, Procaccini, G. (2013) Mendelian inheritance pattern and high mutation rates of microsatellite alleles in the diatom *Pseudo-nitzschia multistriata*. *Protist* 164: 89-100.
2. Guillou, L., Bachar, D., Audic, S., Bass, D., Berney, C., Bittner, L., Boutte, C., Burgaud, G., de Vargas, C., Decelle, J., del Campo, J., Dolan, J.R., Dunthorn, M., Edvardsen, B., Holzmann, M., **Kooistra, W.H.C.F.**, Lara, E., Le Bescot, N., Logares, R., Mahé, F., Massana, R., Montresor, M., Morard, R., Not, F., Pawlowski, J., Probert, I., Sauvadet, A.-L., Siano, R., Stoeck, T., Vaulot, D., Zimmermann, P., Christen, R. (2013). The Protist Ribosomal Reference database (PR2): a catalog of unicellular eukaryote Small Sub-Unit rRNA sequences with curated taxonomy. *Nucleic Acids Research*, 41: D597-D604
3. Nanjappa, D., **Kooistra, W.H.C.F.**, Zingone, A. (2013) A reappraisal of the genus *Leptocylindrus* (bacillariophyta), with the addition of three species and the erection of *Tenuicylindrus* gen. nov. *Journal of Phycology* 49: 917–936
4. Barra, L., Ruggiero, M.V., Sarno, D., Montresor, M., **Kooistra, W.H.C.F.** (2013) Strengths and weaknesses of microarray approaches to detect *Pseudo-nitzschia* species in the field. *Environmental Science and Pollution Research* 20: 6705-6718. DOI 10.1007/s11356-012-1330-1
5. Klöpffer, S., John, U., Zingone, A., Mangoni, O., **Kooistra, W.H.C.F.**, Cembella, A.D. (2013) Phylogeny and morphology of a *Chattonella* (Raphidophyceae) species from the Mediterranean Sea: what is *C. subsalsa*? *European Journal of Phycology* 48: 79-92.
6. Lamari, N., Ruggiero, M.V., d'Ippolito, G., **Kooistra, W.H.C.F.**, Fontana, A., Montresor, M. (2013) Specificity of lipoxxygenase pathways supports species delineation in the marine diatom genus *Pseudo-nitzschia*. *PLOS one* 8/8 e73281: 1-10.
7. Fuchs, N., Scalco, E., **Kooistra, W.H.C.F.**, Assmy, P., Montresor, M., (2013) Genetic characterization and life cycle of the diatom *Fragilariopsis kerguelensis*. *Eur. J. Phycol.* 48: 411–426.
8. Logares, R., Audic, S., Bass, D., Bittner, L., Boutte, C., Christen, R., Claverie, J.-M., Decelle, J., Dolan, J.R., Dunthorn M., Edvardsen, B., Gobet, A., **Kooistra, W.H.C.F.**, Mahé, F., Not, F., Ogata, H., Pawlowski, J., Pernice, M.C., Romac, S., Shalchian-Tabrizi, K., Simon, N., Stoeck, T., Santini, S., Siano, R., Wincker, P., Zingone, A., Richards, T.A., de Vargas, C., Massana, R. (2014). Patterns of Rare and Abundant Marine Microbial Eukaryotes. *Current Biology* 01/2014; DOI:10.1016/j.cub.2014.02.050
9. Bouchouicha Smida, D., Lundholm, N., **Kooistra, W.H.C.F.**, Sahraoui, I, Ruggiero, M.V., Kotaki, Y., Ellegaard, M., Lambert, C., Hadj Mabrouka, H., Sakka Hlaili, A. (2014) Morphology and molecular phylogeny of *Nitzschia bizertensis* sp. nov.—A new domoic acid-producer. *Harmful Algae* 32: 49-63.

10. Barra, L., Ruggiero, M.V., Chen, J., **Kooistra, W.H.C.F.** (2014) Specificity of LSU rRNA-targeted oligonucleotide probes for *Pseudo-nitzschia* species tested through dot-blot hybridization. *Environmental Science and Pollution Research* 21: 548-557.
11. Tesson, S.V.M., Montresor, M., Procaccini, G., **Kooistra, W.H.C.F.** (2014) Temporal Changes in Population Structure of a Marine Planktonic Diatom. *PLoS ONE*. DOI: 10.1371/journal.pone.0114984
12. Nanjappa, D., Audic, S., Romac, S., **Kooistra, W.H.C.F.**, Zingone, A. (2014). Assessment of Species Diversity and Distribution of an Ancient Diatom Lineage Using a DNA Metabarcoding Approach. *PLoS ONE* 9(8): e103810. doi:10.1371/journal.pone.0103810
13. Ruggiero, M.V., Sarno, D., Barra, L., **Kooistra, W.H.C.F.**, Montresor, M., Zingone, A. (2015). Diversity and temporal pattern of *Pseudo-nitzschia* species (Bacillariophyceae) through the molecular lens. *Harmful Algae* 42: 15-24.
14. Bosak, S., Šupraha, L., Nanjappa, D., **Kooistra, W.H.C.F.**, Sarno, D. (2015). Study of the morphology and phylogeny of four species from the genus *Bacteriastrum* (Bacillariophyta). *Phycologia* 54: 130-148
15. Li, C.L., Ashworth, M.P., Witkowski, A., Dąbek, P., Medlin, L.K., **Kooistra, W.H.C.F.**, Sato, S., Zgłobicka, I., Kurzydłowski, K.J., Theriot, E.C., Sabir, J.S.M., Khiyami, M.A., Mutwakil, M.H.Z., Sabir, M.J., Alharbi, N.S., Hajarrah, N.H., Qing, S., Jansen, R.K. (2015). New insights into Plagiogrammaceae (Bacillariophyta) based on multigene phylogenies and morphological characteristics with the description of a new genus and three new species. *PLOS ONE*, DOI:1371/journal.pone.0139300
16. Massana, R., Gobet, A., Audic, S., Bass, D., Bittner, L., Boutte, C., Chambouvet, A., Christen, R., Claverie, L.-M., Decelle, J., Dolan, J.R., Dunthorn, M., Edvardsen, B., Forn, I., Forster, D., Guillou, L., Jaillon, O., **Kooistra, W.H.C.F.**, Logares, R., Mahé, F., Not, F., Ogata, H., Pawłowski, J., Pernice, M.C., Probert, I., Romac, S., Richards, T., Santini, S., Shalchian-Tabrizi, K., Siano, R., Simon, N., Stoeck, T., Vaultot, D., Zingone, A., de Vargas, C. (2015). Marine protist diversity in European coastal waters and sediments as revealed by high-throughput sequencing. *Environmental Microbiology* 06/2015; DOI:10.1111/1462-2920.12955
17. McNamee, S.E., Medlin, L.K., Kegel, J., McCoy, G.R., Raine, R., Barra, L., Ruggiero, M.V., **Kooistra, W.H.C.F.**, Montresor, M., Hagstror, J., Perez Blanc, E., Granelli, E., Rodríguez, F., Escalera, L., Reguera, B., Dittami, S., Edvardsen, B., Taylor, J., Lewis, J.M., Pazos, Y., Elliott, C.T., Campbell, K. (2016) Distribution, occurrence and biotoxin composition of the main shellfish toxin producing microalgae within European waters: A comparison of methods of analysis. *Harmful Algae* 55: 112-120.
18. Forster, D., Dunthorn, M., Mahé, F., Dolan, J.R., Audic, S., Bass, D., Bittner, L., Boutte, C., Christen, R., Claverie, J.M., Decelle, J., Edvardsen, B., Egge E., Eikrem, W., Gobet, A., **Kooistra, W.H.C.F.**, Logares, R., Massana, R., Montresor, M., Not F., Ogata, H., Pawłowski, J., Pernice, M.C., Romac, S., Shalchian-Tabrizi, K., Simon, N., Richards, T.A., Santini, S., Sarno, S., Siano, R., Vaultot, D., Wincker, P., Zingone, A., de Vargas, C., Stoeck, T. (2016). Benthic protists: the under-charted majority. *FEMS Microbiology Ecology* 92: 1-11, ISSN: 0168-6496, doi: <http://dx.doi.org/10.1093/femsec/fiw120>
19. Li, Y., Boonprakob, A., Gaonkar, C.C., **Kooistra, W.H.C.F.**, Lange, C.B., Hernández-Becerril, D., Chen, Z., Moestrup, Ø., Lundholm, N. (2017) Diversity in the globally distributed diatom genus *Chaetoceros* (Bacillariophyceae) I. Three new species from warm-temperate waters. *PLoS ONE* 12(1): e0168887. doi:10.1371/journal.pone.0168887.
20. Gaonkar, C.C., **Kooistra, W.H.C.F.**, Lange, C.B., Montresor, M., Sarno, D. (2017). Two new species in the *Chaetoceros socialis* complex (Bacillariophyta): *C. sporotruncatus* and *C. dichatoensis*, and characterization of its relatives, *C. radicans* and *C. cinctus*. *Journal of Phycology* 53: 889–907. DOI: 10.1111/jpy.12554
21. Piredda, R., Tomasino, M.P., D'Erchia, A.M., Manzari, C., Pesole, G., Montresor, M., **Kooistra, W.H.C.F.**, Sarno, D., Zingone, A. (2017). Diversity and temporal patterns of planktonic protist assemblages at a Mediterranean Long Term Ecological Research site. *FEMS Microbiology Ecology* 93: fiw200. DOI: 10.1093/femsec/fiw200.
22. Mordret, S., Piredda, R., Vaultot, D., Montresor, M., **Kooistra, W.H.C.F.**, Sarno, D. (2018). DINOREF: A curated dinoflagellate (Dinophyceae) reference database for the 18S rRNA gene. *Mol. Ecol. Resour.* 2018; 1-14. DOI: 10.1111/1755-0998.12781.
23. Stern, R., Kraberg, A., Bresnan, E., **Kooistra, W.H.C.F.**, Lovejoy, C. Montresor, M., Morán, X.A.G., Not, F., Salas, R., Siano, R., Vaultot, D., Amaral-Zettler, L., Zingone, A., Metfies, K. (2018). Molecular analyses of protists in long-term observation programmes—current status and future perspectives. *Journal of Plankton Research*, <https://doi.org/10.1093/plankt/fby035>.
24. Piredda, R., Claverie, J.-M., Decelle, J., De Vargas, C., Dunthorn, M., Edvardsen, B., Eikrem, W., Foster, D., **Kooistra, W.H.C.F.**, Logares, R., Massana, R., Montresor, M., Not, F., Ogata, H., Pawłowski, J., Romac, S., Sarno, D., Stoeck, T., Zingone, A. (2018). Diatom Diversity through HTS-metabarcoding in coastal European seas. *Scientific Reports*. (2018) 8:18059 | DOI:10.1038/s41598-018-36345-9.

25. Gaonkar, C.C., Piredda, R., Minucci, C., Mann, D.G., Montresor, M., Sarno, D., **Kooistra, W.H.C.F.** (2018). Annotated 18S and 28S rDNA reference sequences of taxa in the planktonic diatom family Chaetocerotaceae. *PLoS ONE* <https://doi.org/10.1371/journal.pone.0208929>
26. Amato, A., **Kooistra, W.H.C.F.**, Montresor, M. (2019). Cryptic diversity: a long-lasting issue for diatomologists. *Protist*. 170: 1-7. <https://doi.org/10.1038/s41598-018-36345-9>
27. De Luca, D., **Kooistra, W.H.C.F.**, Sarno, D., Gaonkar, C.C., Piredda, R. (2019a). Global distribution and diversity of *Chaetoceros* (Bacillariophyta, Mediophyceae): integration of classical and novel strategies. *PeerJ* 7:e7410 <https://doi.org/10.7717/peerj.7410>
28. De Luca, D., Sarno, D., Piredda, R., **Kooistra, W.H.C.F.** (2019b). A multigene phylogeny to infer the evolutionary history of Chaetocerotaceae. *Molecular Phylogenetics and Evolution* 140, 106575. <https://doi.org/10.1016/j.ympev.2019.106575>
29. Gaonkar, C.C., Piredda, R., Sarno, D., Zingone, A., Montresor, M., **Kooistra, W.H.C.F.** (2020). Species detection and delineation in the marine planktonic diatoms *Chaetoceros* and *Bacteriastrum* through metabarcoding: making biological sense of haplotype diversity. *Environmental Microbiology* 22: 1917-1929 <https://doi.org/10.1111/1462-2920.14984>
30. De Luca D., **Kooistra, W.H.C.F.**, Sarno, D., Biffali, E., Piredda, R. (2021a). Empirical evidence for concerted evolution in the 18S rDNA region of the planktonic diatom genus *Chaetoceros*. *Scientific Reports* 11: 807 <https://doi.org/10.1038/s41598-020-80829-6>
31. De Luca, D., Piredda, R., Sarno, D., **Kooistra, W.H.C.F.** (2021b). Resolving cryptic species complexes in marine protists: phylogenetic haplotype networks meet global DNA metabarcoding datasets. *The ISME Journal* 15: 1931-1942 <https://doi.org/10.1038/s41396-021-00895-0>
32. Lobban, C.S., Majewska, R., Ashworth, M., Bizsel, N., Bosak, S., **Kooistra, W.H.C.F.**, Lam, D.W., Nelson-Navarro, J., Pennesi, C., Sato, S., Van de Vijver, B., Witkowski, A. (2021). Diatom genus *Hyalosira* (Rhabdonematales emend.) and resolution of its polyphyly in Grammatophoraceae and Rhabdonemataceae with a new genus, *Placosira*, and five new *Hyalosira* species. *Protist*. 172: 125816 <https://doi.org/10.1016/j.protis.2021.125816>
33. Gaonkar, C.C., Sarno, D., Montresor, M., Lange, C.B., **Kooistra, W.H.C.F.** (2021). *Chaetoceros turingii* sp. nov. (Bacillariophyceae): morphological and molecular description of a new species from the Gulf of Naples, Italy. *Nova Hedwigia, Beiheft* 151: 161–171. <https://doi.org/10.1127/nova-suppl/2021/161>
34. Piredda, R., Sarno, D., De Luca, D., **Kooistra, W.H.C.F.** (2022). Biogeography of six species in the planktonic diatom genus *Bacteriastrum* (Bacillariophyta). *Eur. J. Phycol.* 57: : 446–457. <https://doi.org/10.1080/09670262.2021.2021591>.
35. Ruggiero, M.-V., **Kooistra, W.H.C.F.**, Piredda, R., Sarno, D., Zampicini, G., Zingone, A., Montresor, M. (2022). Temporal changes of genetic structure and diversity in a marine diatom genus discovered via metabarcoding. *Env. DNA* 4: 763-775 <https://doi.org/10.1002/edn3.288>
36. **Kooistra, W.H.C.F.**, Kusber, W.-H., Hernández-Becerril, D.U., Montresor, M., Sarno. (2022). The type species of the diatom genus *Chaetoceros*. *Diatom Research* 37: 81-88. <https://doi.org/10.1080/0269249X.2022.2066182>.
37. Tara Ocean Foundation\*, Tara Oceans\*, European Molecular Biology Laboratory (EMBL)\* and European Marine Biological Resource Centre - European Research Infrastructure Consortium (EMBRIC-ERIC)\*. (2022). Priorities for ocean microbiome research. *Nature Microbiology* 7: 937-947. <https://doi.org/10.1038/s41564-022-01145-5> \*EMBRIC-ERIC: Casotti, R., Cancio, I., Cunliffe, M., Kervella, A.E., **Kooistra, W.H.C.F.**, Obst, M., Pade, N., Power, D.M., Santi, I., Tsagaraki, T.M., Vanaverbeke, J.

## Review papers in Books and Books:

1. **Kooistra, W.H.C.F.**, Pohl, G. (2015) Diatom frustule morphology and its biomimetic applications in architecture and industrial design. In: C. Hamm (Ed). *Evolution of lightweight Structures: Analysis and Technical Applications. Biologically-Inspired Systems*, Vol. 6, Springer, pp 75-102.
2. Sakka Hlaili, A., Sahraoui Khalifa, I., Bouchouicha-Smida, D., Melliti Garali, S., Ksouri, J., Chalghaf, M., Bates, S.S., Lundholm, N., **Kooistra, W.H.C.F.**, de la Iglesia, P., Diogène, J. (2016). Toxic and potentially toxic diatom blooms in Tunisian (SW Mediterranean) waters: review of ten years of investigations In: J.A. Daniels (Ed). *Advances in Environmental Research* Vol 48. Nova Publishers, New York. Pp. 51-70.
3. Nardello, I., Villanueva, A., Kloareg, B., **Kooistra, W.H.C.F.**, Borra, M., Salvaudon, L., Berkowicz, S., Merciecca, M. (2017) *EMBRIC-ERIC Business Plan Update*, 2017.
4. Piña, M., Colas, P., Cancio, I., Audic, A., Bosser, L., Canario, A., Gribbon, P., Johnston, I.A., Kervella, A.E., **Kooistra, W.H.C.F.**, Merciecca, M., Magoulas, A., Nardello, I., Smith, D., Pade, N., Robinson, D., Schoen, A., Schultz, F., Kloareg, B. (2018) The European Marine Biological Research Infrastructure Cluster: An Alliance of European Research Infrastructures to Promote the Blue Bioeconomy. In: Rampelotto, P.H., Trincon, A. (Eds.). *Grand Challenges in Marine Biotechnology*. [https://doi.org/10.1007/978-3-319-69075-9\\_10](https://doi.org/10.1007/978-3-319-69075-9_10) Springer International Publishing AG

