

Forskningsgruppen for marin mikrobiologi.

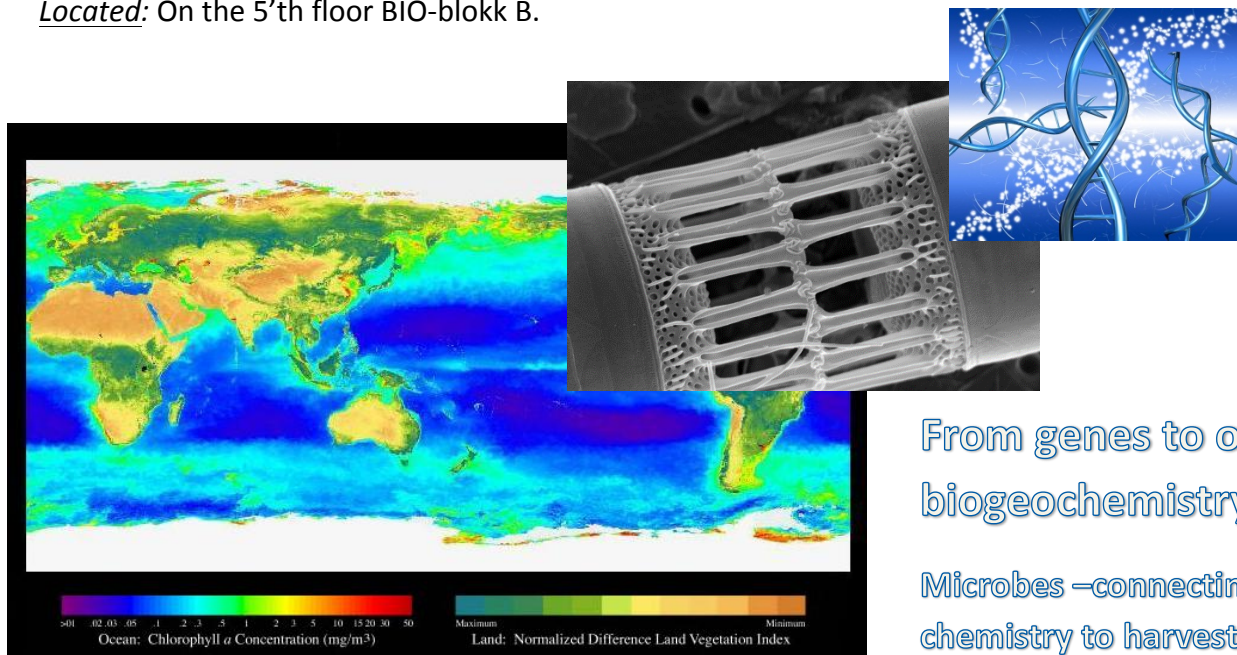
Research Group for Marine Microbiology

We try to:

Understand how the microbial part of the marine pelagic food web functions as a system.

Group: Ca. 25 persons in total (M.Sc. and Ph.D. students, post.docs, permanent scientific and technical staff)

Located: On the 5'th floor BIO-blokk B.



From genes to ocean
biogeochemistry

Microbes –connecting ocean
chemistry to harvestable
resources

The place to do your master thesis if you are interested in how things are connected:

Molecular biology – Taxonomy - Ecological theory - Organism form and function - Mathematical modeling – Biodiversity - The coupling between physics and biology – Biogeochemistry - Global C-cycle - Ecstoichiometry – Evolution - Single cell biology – Microbial ecology of the fjords of Western Norway – The changing Arctic – virus ecology – tradeoff between organism traits – population dynamics – mesocosm experiments – artificial ecosystems

Core projects:

MINOS **M**icrobial **N**etwork **O**rgani**S**ation. On how competition and defense structures biodiversity and biogeochemical fluxes. (European Research Council)

Micropolar (μ P). On how the expected reduction in summer ice will change the microbial ecosystem of the Arctic Ocean (NFR).

OceanCertain: Climate-related ocean processes and combined impacts of multiple stressors on the marine environment. (EU)

Interested in a master thesis? – Come and talk to us on 5th floor BIO-B

Theme	Supervisor	Email
- Temperature effects on viruses and bacterial production (Arctic relevance). - Biological calcite production in the ocean (Climate relevance).	Prof. Gunnar Bratbak	Gunnar.bratbak@bio.uib.no
- Phytoplankton	Prof. Jorun Egge	Jorun.egge@bio.uib.no (presently on sabbatical)
- Light and vertical migration of microalgae	1.aman Svein Rune Erga	Svein.erga@bio.uib.no
- Viruses and prokaryotic hosts	Prof. Ruth-Anne Sandaa	Ruth.sandaa@bio.uib.no
- Ecological theory, nutrient cycles	Prof. Frede Thingstad	Frede.thingstad@bio.uib.no
- Microbial life in meromictic lake Sælen vannet - Microbial biodiversity in Arctic Soil	Prof. Lise Øvreås	Lise.ovreas@bio.uib.no
- Protist interactions (Arctic relevance)	Researcher Aud Larsen (UniEnvironment/BIO)	Aud.Larsen@bio.uib.no

What we publish (examples):

- Dornelas, M., A. E. Magurran, S. T. Buckland, A. Chao, R. L. Chazdon, R. K. Colwell, T. Curtis, K. J. Gaston, N. J. Gotelli, M. A. Kosnik, B. McGill, J. L. McCune, H. Morlon, P. J. Mumby, L. **Ovreas**, A. Stoeny and M. Vellend (2013). "Quantifying temporal change in biodiversity: challenges and opportunities." *Proceedings of the Royal Society B-Biological Sciences* **280**(1750).
- Haraldsson, M., K. Tonnesson, P. Tiselius, T. F. **Thingstad** and D. L. Aksnes (2012). "Relationship between fish and jellyfish as a function of eutrophication and water clarity." *Marine Ecology Progress Series* **471**: 73-85.
- Heldal**, M., S. **Norland**, E. S. Erichsen, T. F. **Thingstad** and G. **Bratbak** (2012). "An Unaccounted Fraction of Marine Biogenic CaCO₃ Particles." *Plos One* **7**(10).
- Larsen**, A., T. **Tanaka**, M. V. Zubkov and T. F. **Thingstad** (2008). "P-affinity measurements of specific osmotroph populations using cell-sorting flow cytometry." *Limnology and Oceanography-Methods* **6**: 355-363.
- Larsen**, J. B., A. **Larsen**, G. **Bratbak** and R. A. **Sandaa** (2008). "Phylogenetic analysis of members of the Phycodnaviridae virus family, using amplified fragments of the major capsid protein gene." *Applied and Environmental Microbiology* **74**(10): 3048-3057.
- Liu, J., G. **Bratbak**, T. Zheng and R. **Thyrhaug** (2011). "Effects of virus infection on expression of cell cycle regulatory proteins in the unicellular marine algae *Emiliania huxleyi*." *Acta Oceanologica Sinica* **30**(4): 89-95.
- Martiny, J. B. H., B. J. M. Bohannan, J. H. Brown, R. K. Colwell, J. A. Fuhrman, J. L. Green, M. C. Horner-Devine, M. Kane, J. A. Krumins, C. R. Kuske, P. J. Morin, S. Naeem, L. **Ovreas**, A. L. Reysenbach, V. H. Smith and J. T. Staley (2006). "Microbial biogeography: putting microorganisms on the map." *Nature Reviews Microbiology* **4**(2): 102-112.
- Monier, A., J. B. **Larsen**, R.-A. **Sandaa**, G. **Bratbak**, J.-M. Claverie and H. Ogata (2008). "Marine mimivirus relatives are probably large algal viruses." *Virology Journal* **5**.
- Ovreas**, L. and T. P. Curtis (2011). *Microbial diversity and ecology*.
- Pagarete**, A., A. Lanzén, P. Puntervoll, R. A. **Sandaa**, A. **Larsen**, J. B. **Larsen**, M. J. Allen and G. **Bratbak** (2013). "Genomic Sequence and Analysis of EhV-99B1, a New Coccolithovirus from the Norwegian Fjords." *Intervirology* **56**(1): 60-66.
- Rodriguez-Valera, F., A.-B. Martín-Cuadrado, B. Rodriguez-Brito, L. Pasic, T. F. **Thingstad**, F. Rohwer and A. Mira (2009). "OPINION Explaining microbial population genomics through phage predation." *Nature Reviews Microbiology* **7**(11): 828-836.
- Sandaa**, R.-A., L. Gomez-Consarnau, J. Pinhassi, L. Riemann, A. Malits, M. G. Weinbauer, J. M. Gasol and T. F. **Thingstad** (2009). "Viral control of bacterial biodiversity - evidence from a nutrient-enriched marine mesocosm experiment." *Environmental Microbiology* **11**(10): 2585-2597.
- Sebastian, M., P. Pitta, J. M. Gonzalez, T. F. **Thingstad** and J. M. Gasol (2012). "Bacterioplankton groups involved in the uptake of phosphate and dissolved organic phosphorus in a mesocosm experiment with P-starved Mediterranean waters." *Environmental Microbiology* **14**(9): 2334-2347.
- Tambi**, H., G. A. F. **Flaten**, J. K. **Egge**, G. Bodtker, A. Jacobsen and T. F. **Thingstad** (2009). "Relationship between phosphate affinities and cell size and shape in various bacteria and phytoplankton." *Aquatic Microbial Ecology* **57**(3): 311-320.
- Tanaka**, T., T. Zohary, M. D. Krom, C. S. Law, P. Pitta, S. Psarra, F. Rassoulzadegan, T. F. **Thingstad**, A. Tselepidis, E. M. S. Woodward, G. A. F. **Flaten**, E. F. **Skjoldal** and G. Zodiatis (2007). "Microbial community structure and function in the Levantine Basin of the eastern Mediterranean." *Deep-Sea Research Part I-Oceanographic Research Papers* **54**(10): 1721-1743.
- Thingstad**, T. F. (2005). "Simulating the response to phosphate additions in the oligotrophic eastern Mediterranean using an idealized four-member microbial food web model." *Deep-Sea Research Part I-Topical Studies in Oceanography* **52**(22-23): 3074-3089.
- Thingstad**, T. F., R. G. J. Bellerby, G. **Bratbak**, K. Y. Borsheim, J. K. **Egge**, M. **Heldal**, A. **Larsen**, C. Neill, J. **Nejstgaard**, S. **Norland**, R. A. **Sandaa**, E. F. **Skjoldal**, T. **Tanaka**, R. **Thyrhaug** and B. **Topper** (2008). "Counterintuitive carbon-to-nutrient coupling in an Arctic pelagic ecosystem." *Nature* **455**(7211): 387-U337.
- Thingstad**, T. F., E. Strand and A. **Larsen** (2010). "Stepwise building of plankton functional type (PFT) models: A feasible route to complex models?" *Progress in Oceanography* **84**(1-2): 6-15.
- Zaballos, M., A. Lopez-Lopez, L. **Ovreas**, S. G. Bartual, G. D'Auria, J. C. Alba, B. Legault, R. Pushker, F. L. Daae and F. Rodriguez-Valera (2006). "Comparison of prokaryotic diversity at offshore oceanic locations reveals a different microbiota in the Mediterranean Sea." *FEMS Microbiology Ecology* **56**(3): 389-405.