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## Employment

**Professor**

Marine Biology

Helsingør, Denmark

1 Feb 2015 → nu

## Research outputs

**Hydrostatic pressure induces transformations in the organic matter and microbial community composition of marine snow particles**

Stief, P., Schauburger, C., Becker, K. W., Elvert, M., Balmonte, J. P., Franco-Cisterna, B., Middelboe, Mathias & Glud, R. N., 2023, In: Communications Earth and Environment. 4, 1, 14 p., 377.

**Staying below the Radar: Unraveling a New Family of Ubiquitous “Cryptic” Non-Tailed Temperate Vibriophages and Implications for Their Bacterial Hosts**

Kalatzis, P. G., Mauritzen, Jesper Juel, Winther-Have, Caroline Sophie W, Michniewski, S., Millard, A., Tsertou, M. I., Katharios, P. & Middelboe, Mathias, 2023, In: International Journal of Molecular Sciences. 24, 4, 23 p., 3937.

**Strain-specific quorum-sensing responses determine virulence properties in *Vibrio anguillarum***

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***In Vitro* Evolution of Specific Phages Infecting the Fish Pathogen *Flavobacterium psychrophilum***

Castillo, D., Højsting, A. R., Roosvall, A., Smyrlis, G., Jørgensen, J. & Middelboe, Mathias, 2022, In: PHAGE: Therapy, Applications, and Research. 3, 1, p. 28-37 10 p.

**On Single-Cell Enzyme Assays in Marine Microbial Ecology and Biogeochemistry**

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**Prevalence of genetically similar *Flavobacterium columnare* phages across aquaculture environments reveals a strong potential for pathogen control**

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**Reversible mutations in gliding motility and virulence genes: A flexible and efficient phage defence mechanism in *Flavobacterium psychrophilum***

Jørgensen, J., Sundell, K., Castillo, D., Dramshøj, L. S., Jørgensen, N. B., Madsen, S. B., Landor, L., Wiklund, T., Donati, V. L., Madsen, L., Dalsgaard, I. & Middelboe, Mathias, 2022, In: Environmental Microbiology. 24, 10, p. 4915-4930

**The Gut Microbiota of Healthy and *Flavobacterium psychrophilum*-Infected Rainbow Trout Fry Is Shaped by Antibiotics and Phage Therapies**

Donati, V. L., Madsen, L., Middelboe, Mathias, Strube, M. L. & Dalsgaard, I., 2022, In: Frontiers in Microbiology. 13, 21 p., 771296.

**Bacteriophage Resistance Affects *Flavobacterium columnare* Virulence Partly via Mutations in Genes Related to Gliding Motility and the Type IX Secretion System**

Kunttu, H. M. T., Runtuvuori-Salmela, A., Sundell, K., Wiklund, T., Middelboe, Mathias, Landor, L., Ashrafi, R., Hoikkala, V. & Sundberg, L., 2021, In: Applied and Environmental Microbiology. 87, 16, 19 p., e00812-21 .

**Comparative Genomic Analyses of *Flavobacterium psychrophilum* Isolates Reveals New Putative Genetic Determinants of Virulence Traits**

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**Dynamics of Baltic Sea phages driven by environmental changes**

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**Genome-informed approach to identify genetic determinants of *Flavobacterium psychrophilum* phage susceptibility**

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**Genomic Analysis of *Pasteurella atlantica* Provides Insight on Its Virulence Factors and Phylogeny and Highlights the Potential of Reverse Vaccinology in Aquaculture**

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**Interactions between Rainbow Trout Eyed Eggs and *Flavobacterium* spp. Using a Bath Challenge Model: Preliminary Evaluation of Bacteriophages as Pathogen Control Agents**

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**Bacteriophages: Emerging Applications in Medicine, Food, and Biotechnology**

Sohail, H. A., Coffey, A., Debrowska, K., Meyer, I. M., Middelboe, Mathias, Sohail, M. & Clokie, M. R. J., 2020, In: PHAGE: Therapy, Applications, and Research. 1, 2, p. 75-82 8 p.

**Bacteriophages as Biocontrol Agents for *Flavobacterium psychrophilum* Biofilms and Rainbow Trout Infections**

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***P. aeruginosa* flow-cell biofilms are enhanced by repeated phage treatments but can be eradicated by phage-ciprofloxacin combination: —monitoring the phage–*P. aeruginosa* biofilms interactions**

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**Combining probiotic *Phaeobacter inhibens* DSM17395 and broad-host-range vibriophage KVP40 against fish pathogenic vibrios**

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**Large Phenotypic and Genetic Diversity of Prophages Induced from the Fish Pathogen *Vibrio anguillarum***

Castillo, D., Andersen, N., Kalatzis, Panagiotis & Middelboe, Mathias, 2019, In: Viruses. 11, 11, 15 p., 983.

**Phage defense mechanisms and their genomic and phenotypic implications in the fish pathogen *Vibrio anguillarum***

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**Phenotypic and Genetic Predictors of Pathogenicity and Virulence in *Flavobacterium psychrophilum***

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**Exploring the Effect of Phage Therapy in Preventing *Vibrio anguillarum* Infections in Cod and Turbot Larvae**

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**Widespread distribution of prophage-encoded virulence factors in marine *Vibrio* communities**

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**Marine viruses: key players in marine ecosystems**

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**Stumbling across the same phage: comparative genomics of widespread temperate phages infecting the fish pathogen *Vibrio anguillarum***

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**Comparative genome analyses of *Vibrio anguillarum* strains reveal a link with pathogenicity traits**

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**Carbon bioavailability in a high arctic fjord influenced by glacial meltwater, NE Greenland**

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**Detection and quantification of *Flavobacterium psychrophilum*-specific bacteriophages *In Vivo* in rainbow trout upon oral administration: implications for disease control in aquaculture**

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