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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**

Runtuvuori-Salmela, A., Kunttu, H. M. T., Laanto, E., Almeida, G. M. F., Mäkelä, K., Middelboe, Mathias & Sundberg, L., 2022, In: Environmental Microbiology. 24, 5, p. 2404-2420 17 p.

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

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

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

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

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

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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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