

The Chancellor of Ghent University has the honour of inviting you to attend the public defense of the doctoral dissertation of

ir. Bram Martin

Title of the doctoral dissertation:

*Copepod-bacteria interactions: implications for natural ecosystems
and use as live feed in aquaculture*

The public defence will take place on 27th of October 2026 at 5 pm in Lecture Room E2
Blok E, Campus Coupure, Coupure Links 653, 9000 Ghent.

There will be a contiguous reception to which you are heartily invited.
Please confirm your attendance before 16/10: [Confirmation link](#)

Dissertation supervisors

Prof. dr. Marleen De Troch
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Board of examiners

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Prof. dr. Kang Nian Yap
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Prof. dr. Ellen Decaestecker
Faculty Sciences,
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Prof. dr. Anne Willems
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Abstract of the doctoral research

Copepods are small crustaceans present in freshwater and marine habitats. They form a vital link at the basis of marine food webs, feeding on algae and being preyed on by juvenile fish. Pelagic species inhabit the water column while benthic species reside in sediments, rock pools or are associated to seaweeds. The fundamental aspect of this dissertation was aimed at characterizing the microbial environment of benthic copepod guts. A baseline study for lipid composition and population dynamics was conducted for *Platychelipus littoralis*, as model species for intertidal mudflats. Gut dissections were performed to specifically study the internal microbiome. Ingestion of phosphorescent coated nanobeads by copepods was used to quantify internal oxygen gradients in guts of small copepods.

Copepods have societal value beyond their vital role in the marine food web. They have the ideal size and nutritional composition for juvenile fish and are a preferred live feed in aquaculture. The applied aspect of this dissertation investigated the use of pre- and probiotics during hatching of *Acartia tonsa* to expand current use of copepods as live feed. Further, Raman spectroscopy was investigated as novel non-invasive technique for lipid quantification in copepods eggs, with potential wider applications in aquaculture.

Brief Curriculum Vitae

Bram Martin (°Beveren, Belgium, 18/09/1998) is a PhD candidate in marine sciences at Ghent University, specializing in the interaction between bacteria and copepods. He holds a BSC and MSc in Bioscience Engineering, with a major in Environmental Technology. He obtained a predoctoral scholarship from the Research Foundation of Flanders (FWO) to pursue a PhD at the Marine Biology Department (Marbiol) and the Center for Microbial Ecology (CMET). He was awarded the Brilliant Marine Research Idea Grant 2023 from the Flemish Institute for the Sea (VLIZ) for bacterial characterization of benthic copepod guts. As part of his doctoral research, he completed two research stays at the University of Southern Denmark (SDU) in Odense and a research stay at the Norwegian University for Science and Technology (NTNU) in Trondheim. During his PhD, he (co-)authored four peer-reviewed publications. Bram tutored one master thesis student and two internship students. He assisted in the course of Microbial Ecological Processes and IMBRSea: Food web ecology. He presented his work through posters and oral presentations at various (inter)national conferences.