

Frederiek – Maarten Kerckhof, Ph.D.

Frederiek-Maarten (°1988) is a postdoctoral researcher at the Center of Microbial Ecology and Technology (CMET) at the Department of Biotechnology of the Faculty of Bioscience engineering of Ghent University.

His research focuses on the interactions between microbes in biotechnologically relevant settings. During his doctoral research he focused on interactions between obligately methanotrophic bacteria (MOB) and their heterotrophic “partner” bacteria. In his early postdoc, he further pursued interactions between these MOB and mixotrophic hydrogen oxidizing bacteria, specifically in the framework of production of microbial protein as a sustainable source of protein and supplements in food and feed. From this work grew the interest in a fast and reliable way of quantitively assessing the physiological and compositional “fingerprint” of the “manufacturing microbiome”. By leveraging the flow cytometric diversity assessment method that was developed by his colleague Ruben Props (Ph. D.), Frederiek – Maarten soon saw the effectiveness of flow cytometric fingerprinting as a bioprocess control and management tool. Together with Ruben, they decided to explore the valorization potential of this technique with support of Ghent University’s industrial research fund.

Currently, Frederiek-Maarten is working on a spin-off mandate of the Flanders Innovation and Entrepreneurship fund (VLAIO) with a focus on fermentation monitoring and -potentially- management using flow cytometric fingerprinting. Together with Ruben and their PI, Nico Boon (Ph. D.) they are to become co-founder of Kytos™, a Ghent University spin-off company that will leverage flow cytometric fingerprinting with a focus on agri- and aquaculture applications ([www.kytos.be](http://www.kytos.be)).

Fun fact: Frederiek-Maarten loves sailing, fermented beverages, a wide array of electronic music and spending quality time with his wife and their 4-year old son.