



- Title:** The biodiversity of electricity-producing cable bacteria
- Contact person:** Prof. Filip Meysman ([filip.meysman@uantwerpen.be](mailto:filip.meysman@uantwerpen.be))
- Research group:** Ecosystem Management (ECOBEE), Department of Biology, University Antwerpen
- Promotor:** Prof. Filip Meysman
- Supervision:** Dr. Jeanine Geelhoed

Very recently, long filamentous so-called “cable bacteria” have been discovered in marine sediments that are able to generate and mediate the transport of electrons across centimeter-scale distances. These electrogenic bacteria make that the ocean floor operates like a natural battery, and thus cable bacteria have an enormous potential for novel bio-electric applications.

However, research is hampered because we cannot produce sizeable quantities of biomass of cable bacteria. Within our laboratory, we have recently set up a dedicated culture facility to enrich these cable bacteria. In this project, we will test new culturing methods for cable bacteria, based on recent insights in the metabolism, physiology and genome of these microbes.

The research activities will consist of **field sampling** in aquatic habitats in Belgium and The Netherlands (to find new strains of cable bacteria), the **cultivation** of these marine micro-organisms in the laboratory, sample preparation, microscopic imaging, and 16S RNA sequencing. The student will cooperate with other researchers in the dedicated culture facility.

**Keywords:** microbial electricity, cable bacteria, biodiversity, aquatic ecosystems

**Requirements:** A motivated MSc student with strong background and interest in microbial ecology and microbiology.

**More info:** [www.microbial-electricity.eu](http://www.microbial-electricity.eu)