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ASSESSMENT OF THE ANTARCTIC PHYTOPLANKTON COMMUNITY AND ITS TOXIGENIC RESIDENTS (PHYTO CARE)

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ABSTRACT

The Southern Ocean plays a key role as a climate modulator and constitutes a highly productive marine environment with phytoplankton at the base of its food web. Despite their importance, these waters, including their composition and the processes occurring in them, are still largely unexplored. Moreover, in the last decades, the rise of temperatures due to global warming may threaten the balance of this unique ecosystem. This project aims to study the phytoplankton composition and the oceanographic parameters (e.g., dissolved nutrients) that shape this community. In addition, special attention will be given to harmful algal species and their associated phycotoxins. Trophic transfer of phytotoxins in Antarctic food webs will be addressed by looking at primary consumers, evaluating a potential transfer of phycotoxins to higher trophic levels (e.g., baleen whales). Altogether, the results obtained will draw a baseline on Southern Ocean phytoplankton communities, with a special focus on toxigenic species and phycotoxin transference and will constitute the starting point for future studies focused on composition changes due to global warming.