

Vona Méléder¹, Jean-Luc Mouge², Eva Cointet¹, Vincent Turpin¹, Alexandra Petit¹ and Denise Jahan¹

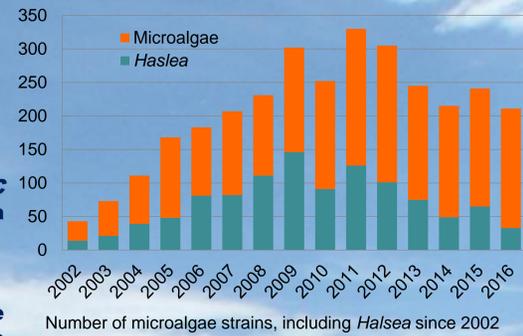
1 - University of Nantes, MMS, 2 rue de la Houssinière, 44322 NANTES cedex 3 FRANCE
2 - Maine University, MMS, Avenue Olivier Messiaen, 72085 LE MANS cedex 9 FRANCE

The Nantes Culture Collection

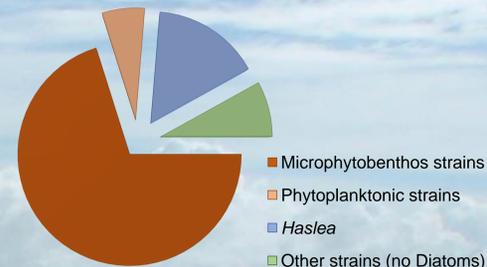
or NCC, referenced since 2002 in the World Data Center for Microorganisms as **NCC WDCM 856**, is dedicated to microalgae preservation, storage and valorisation with a focus on the Class of Diatoms.

The NCC is the only worldwide collection hosting numerous strains of benthic diatoms. With more than 200 strains, including more than 50 'blue diatoms' and 40 genus, the NCC is a real conservatory of microphytobenthos diversity mainly originally from the French Atlantic coast (Loire Estuary and Bourgneuf Bay). Currently, the NCC takes place in the consortium of two European project H2020 (GHANA and Biotide) and a regional project (AMI).

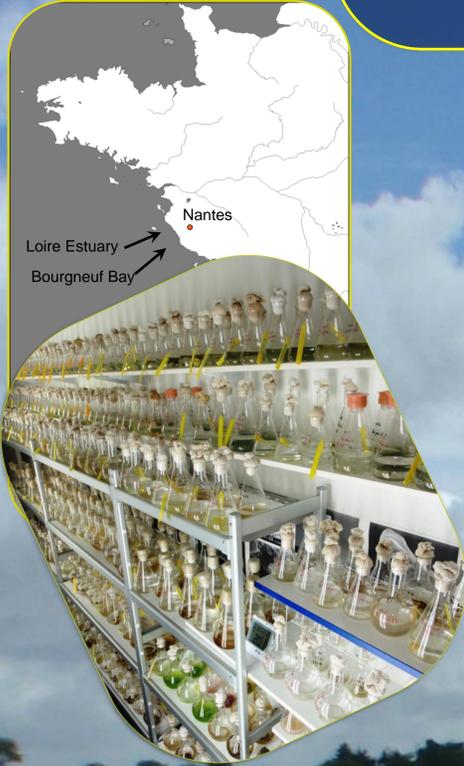
NCC also offers services as strains and by-products supply (cells, culture medium, concentrat, lyophilisats...) to academics but also to companies, either in the context of scientific program either for sale. Information and request should be addressed by email to Dr. Vona Méléder, NCC research manager: vona.meleder@univ-nantes.fr



Number of microalgae strains, including *Haslea* since 2002



NCC strains diversity (up-date: jan-2017)



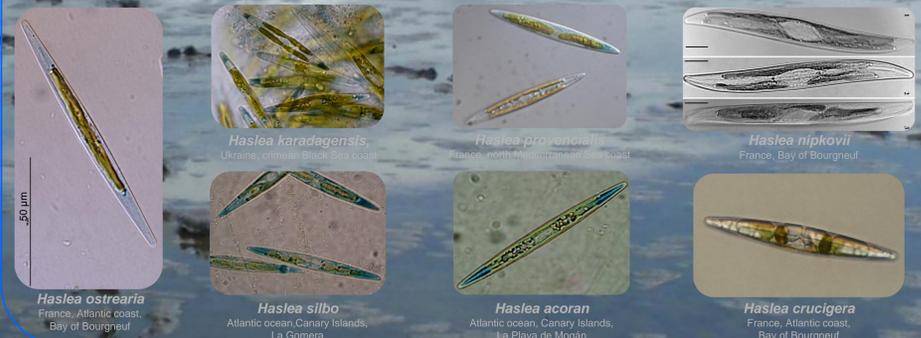
The NCC is a conservatory of microphytobenthos diversity (>70% NCC stains) mainly originally from the French Atlantic coast (>50% NCC strains).

The microphytobenthos, forming at the sediment surface dense biofilms during low tide, is one of the major primary producing groups of intertidal mudflat. Constituted by microscopic algae, mainly Diatoms, the microphytobenthos provides an important energy source for the estuarine food web, has a central role in moderating carbon flow in coastal sediments and contributes to sediment stabilization. Due to these microalgae, estuaries and coastal areas are amongst the most productive marine ecosystems on earth, valuable as habitats and feeding grounds for a variety of organisms (birds, shellfish, demersal fish and invertebrates), and supporting the local economy. This biodiversity is under-exploited in biotechnology



An emblematic species : *Haslea ostrearia*

The NCC has the largest collection of strains of blue-green diatoms in the world, including the emblematic species, *Haslea ostrearia*. This microalga has been known for centuries for its blue-green pigment, marennine, responsible for the greening of oysters during their fattening period in oyster ponds. Recent research has shown that there are several species of blue-green diatoms capable of producing at least two different types of pigment. These pigments are biologically active: antioxidant, antibacterial, antiviral, antiproliferative, etc... Their potential for biotechnology is enormous.



Nantes Culture Collection : Missions and Know-How

Sampling



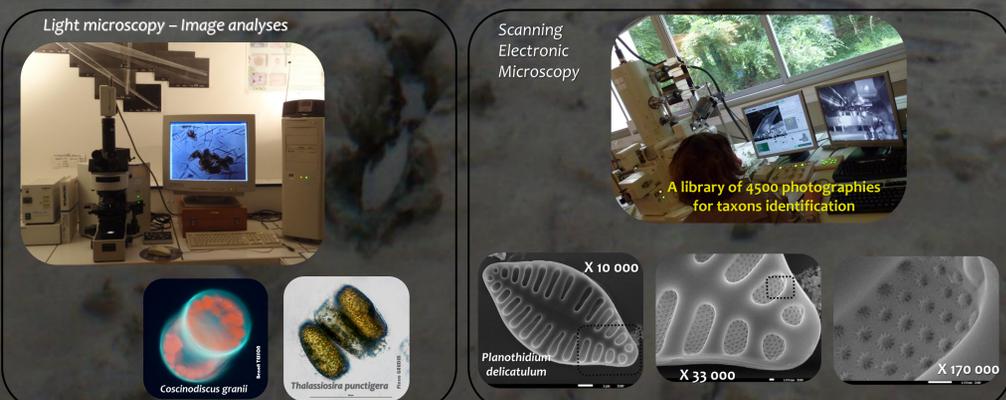
Isolation



Cultures



Morphometric identification and Taxonomy



Strains conservation



Strains characterization

