



## CRAZY POLYSACCHARIDES

### EXPLORING THE DIVERSITY OF MARINE MOLECULES: SUGAR-BASED BIOPOLYMERS

Polysaccharides are complex sugar-based polymers which constitute the most diverse and abundant renewable matter from land and ocean. Some are used in the agribusiness, cosmetics or pharmaceuticals, but most of them remain unknown.

The CRAZY POLYSACCHARIDES project proposes to set up a medium throughput screening platform for a collection of polysaccharides from different sources – plants, algae, bacteria, fungi, etc.

Certain depolymerising enzymes – Glycoside Hydrolases (GH) and Polysaccharide Lyases (PL) – will be used to facilitate the polysaccharides' structural analysis. These enzymes break down high-molecular weight polysaccharides and produce series of oligosaccharides. Characterising the latter is a key factor in understanding the structure of polysaccharides. Furthermore, oligosaccharides potentially have unique functional properties, for example biological properties, and could serve as precursors for chemical synthesis.

The object of the project is to discover new GH and PL enzymatic activities to enable the structure of unknown or little known polysaccharides to be determined, to produce oligosaccharides with unique structures and properties, and lastly to significantly add to the currently limited catalogue of enzymatic tools.

#### Partners

##### Research centers

CNRS-UPMC, UMR 7139, Station biologique de Roscoff [[Project Developer](#)]  
CEVA, Pleubian  
Ifremer, Brest  
INRA-BIBS-BIA, Nantes  
Université d'Évry-Val-d'Essonne - LAMBE  
Université de la Méditerranée AFMB, Luminy

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