**PLANKTON 3D: New 3D Technologies for Science Outreach**
**Plankton as You've Never Seen It Before!**

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1. OCEANOPOLIS

Plankton are invisible to the naked eye, yet they play key roles in aquatic ecosystems and global biogeochemical cycles. They represent 95% of marine biomass and exceptional diversity: viruses, bacteria, microscopic algae, reproductive cells, larval fishes etc. Plankton produce half of the atmosphere's oxygen and therefore contribute to regulate our climate. They form the bottom level of aquatic food chains.

Despite their fundamental role, it can be difficult to present them in aquaria and other centres for science culture or schools, since the capture of this living matter and its manipulation under the microscope poses a number of constraints. Indeed, there are no microscopes able to observe planktonic organisms, from viruses to larvae!

Over thirty-five 3D models of plankton, from viruses to jellies, were created based on microscope imaging and discussions with science educators at Océanopolis and experts at the Roscoff Biological Station in France.

The PLANKTON 3D programme proposes novel plankton exhibits using innovative technologies (RA-RV-ED Kinect) and offers a response to the question: Can new technologies facilitate learning about an object of science, the understanding of a complex message, and outreach in general?

This talk is an opportunity to look at virtual and augmented reality and 3D modelling as promising educational tools that can catch public attention and boost learning. It is also a chance to present innovative, immersive, interactive exhibits designed to engage the public with the fascinating world of plankton.