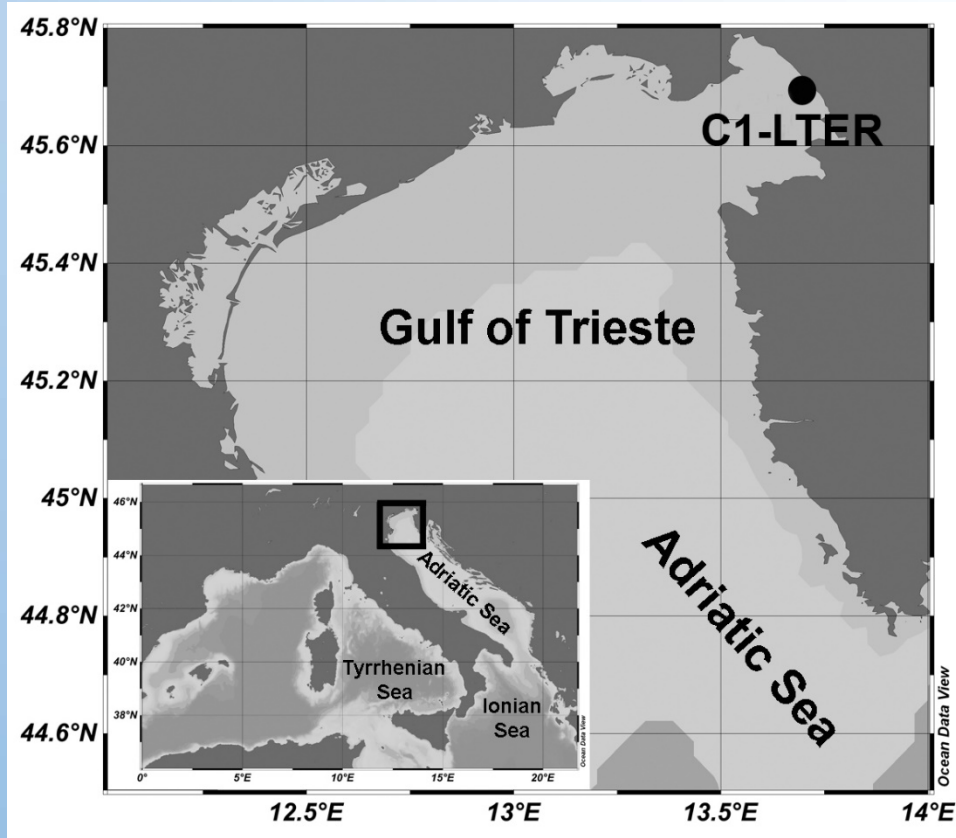


Exploring and preserving the phytoplankton diversity: some examples from a long-term ecological research coastal station in the Adriatic Sea

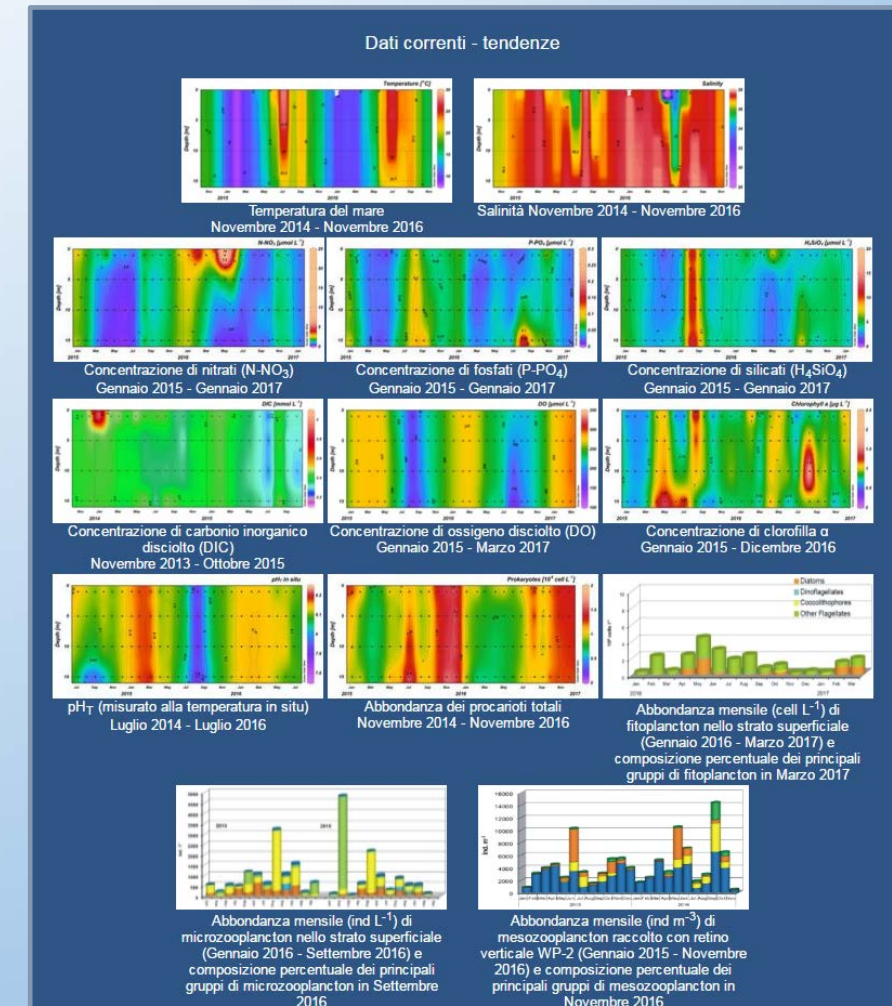
Federica Cerino, Alfred Beran, Marina Cabrini, Bruno Cataletto

Oceanography Section, Istituto Nazionale di Oceanografia e di Geofisica Sperimentale - OGS

Sampling site



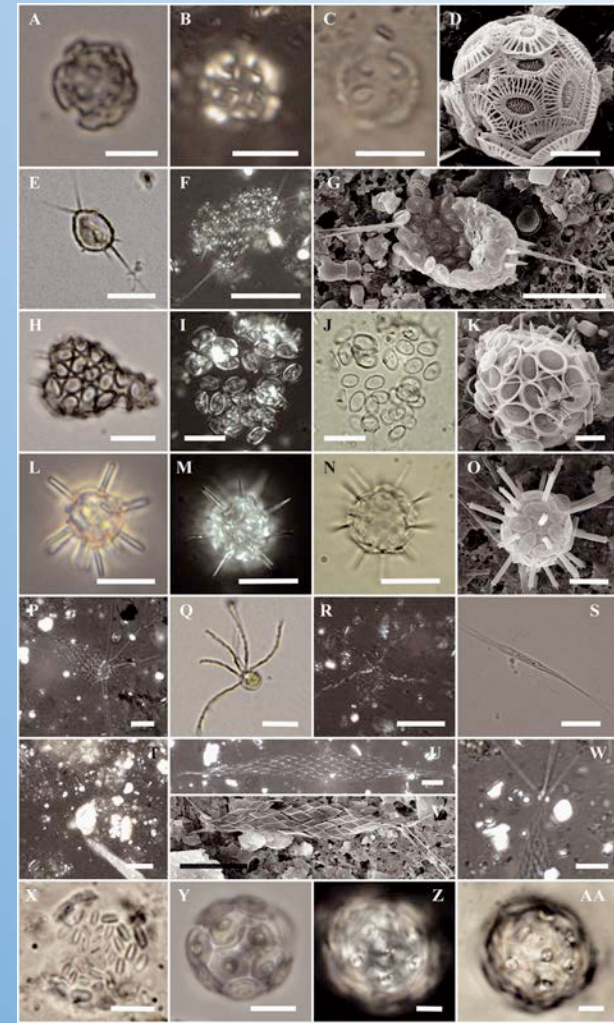
C1-LTER Long Term Ecological Research networks (LTER-Italy, LTER-Europe, ILTER)



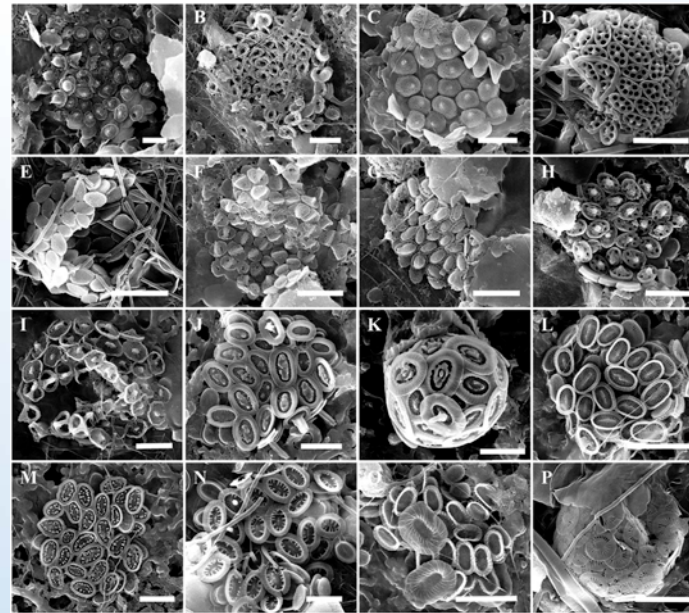
COCCOLITHOPHORES

Light microscopy
Polarized light microscopy
Scanning electron microscopy

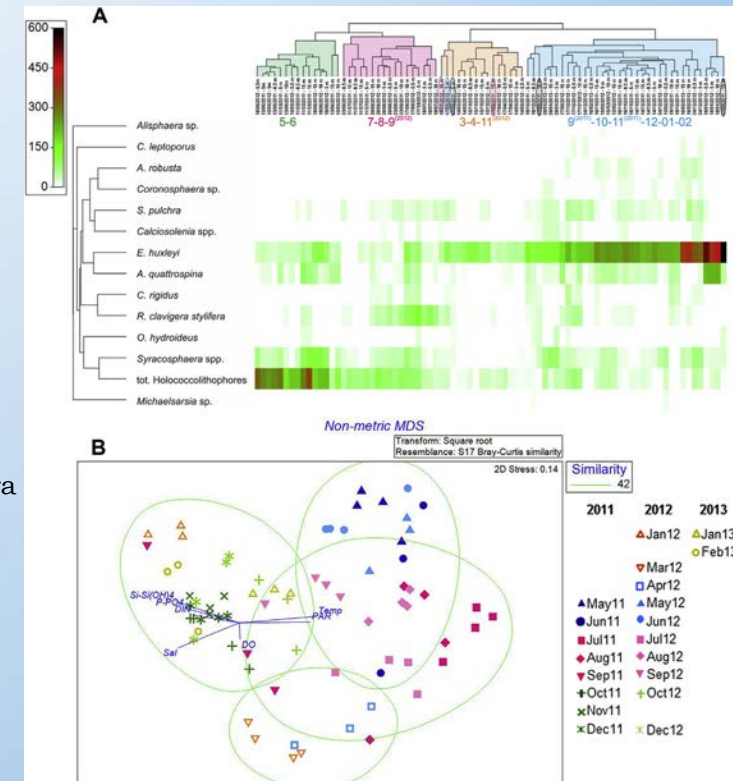
27 species



A-D: *Emiliania huxleyi*
E-G: *Acanthoica quattropsina*
H-K: *Syracosphaera pulchra*;
L-O: *Rhabdosphaera clavigera* var. *stylifera*
P: *Calciopappus rigidus*
Q-R: *Ophiaster hydroideus*
S-T: *Calciosolenia brasiliensis*
U: *C. corsellii*
V-W: *C. murrayi*
X: *Algirosphaera robusta*
Y-AA: *Calcidiscus leptoporus*



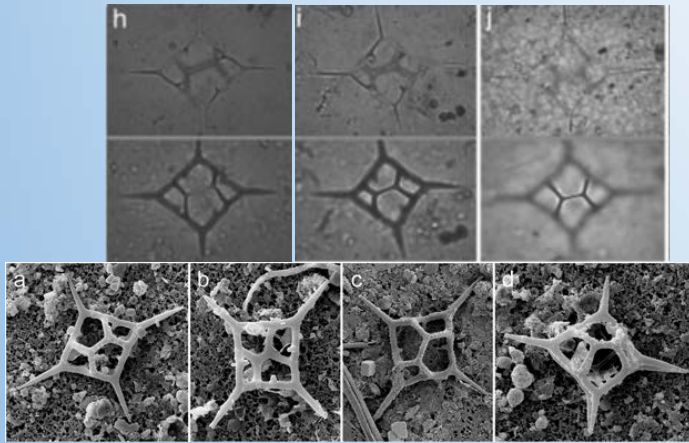
A: *Acanthoica quattropsina* HOL
B: *Calicosphaera blockii*
C: *Algirosphaera robusta* HOL (Sphaerocaliptra quadridentata)
D: *Syracosphaera mediterranea* HOL (C. wettsteinii)
E: *S. histrica* HOL (*Calyptrolithophora papillifera*)
F: *S. hirsuta* HOL (C. strigilis)
G: *S. molischii* HOL (*Anthosphaera fragaria*)
H: *Helicosphaera carteri* HOL (*Syracolithus confusus*)
I: *S. halldalii* HOL (*Calyptrolithina divergens* var. *tuberosa*)
J: *S. ossa* type II
K: *S. molischii* type 3
L: *S. arethusae*
M: *S. hirsuta*
N: *S. protrudens*
O: *S. corolla*
P: *S. nodosa* type A



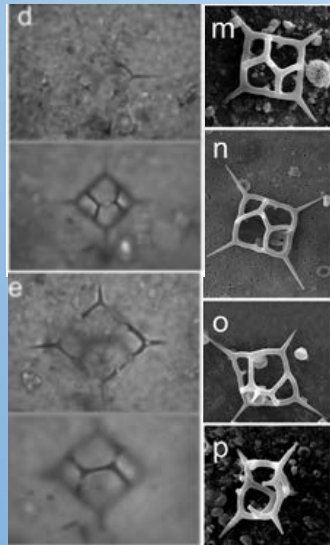
SILICOFLAGELLATES

Light microscopy
Scanning electron microscopy

4 species
2 varieties

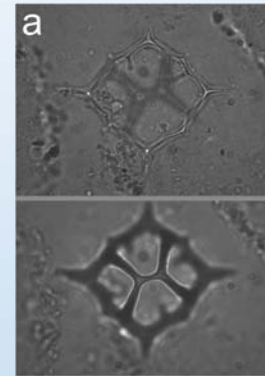
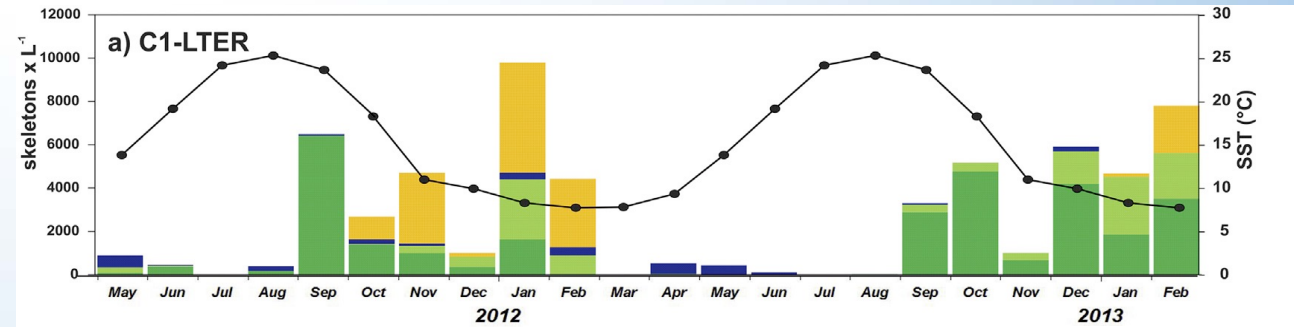
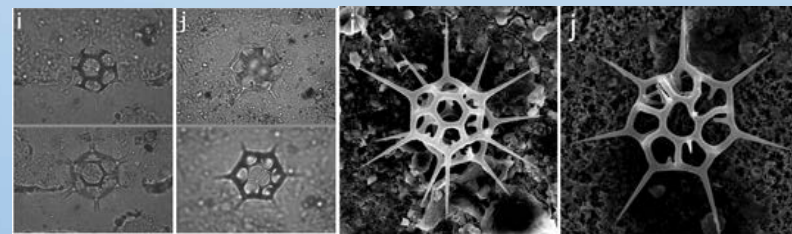


Dictyocha stapedia
var. *aspinosa*

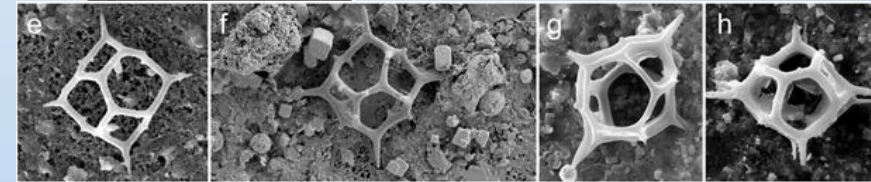


D. stapedia
var. *stapedia*

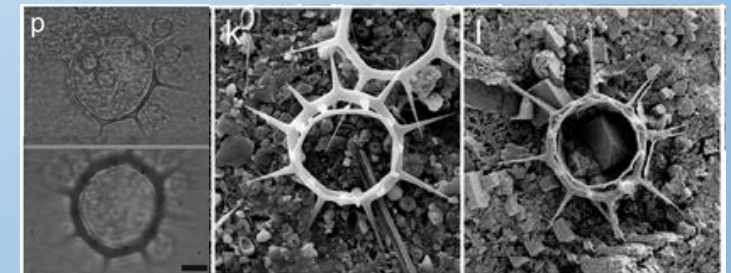
Stephanocha speculum



D. aculeata



Octactis pulchra



Pseudo-nitzschia genus

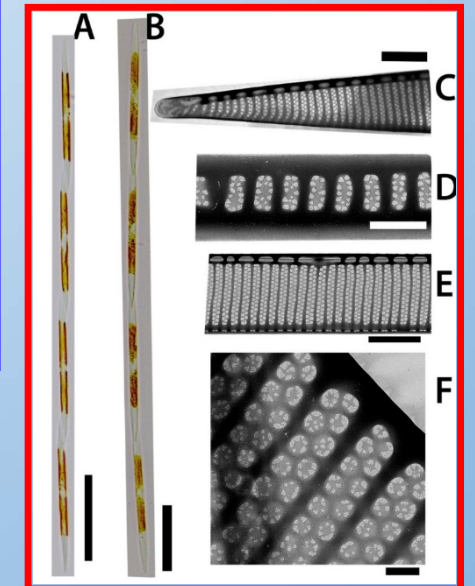
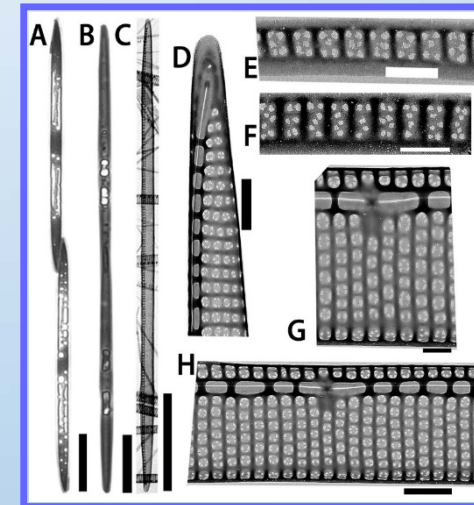
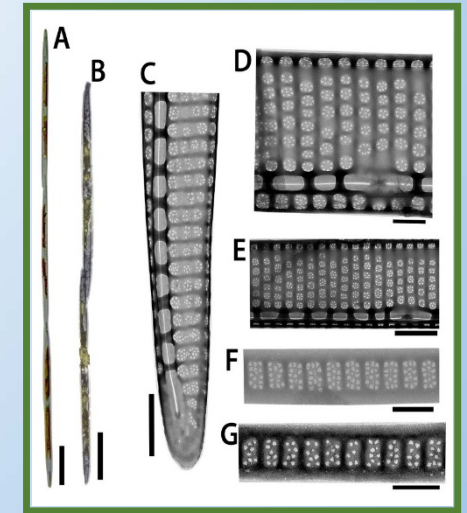
Light microscopy
Transmission electron microscopy
Molecular analysis (ITS2)



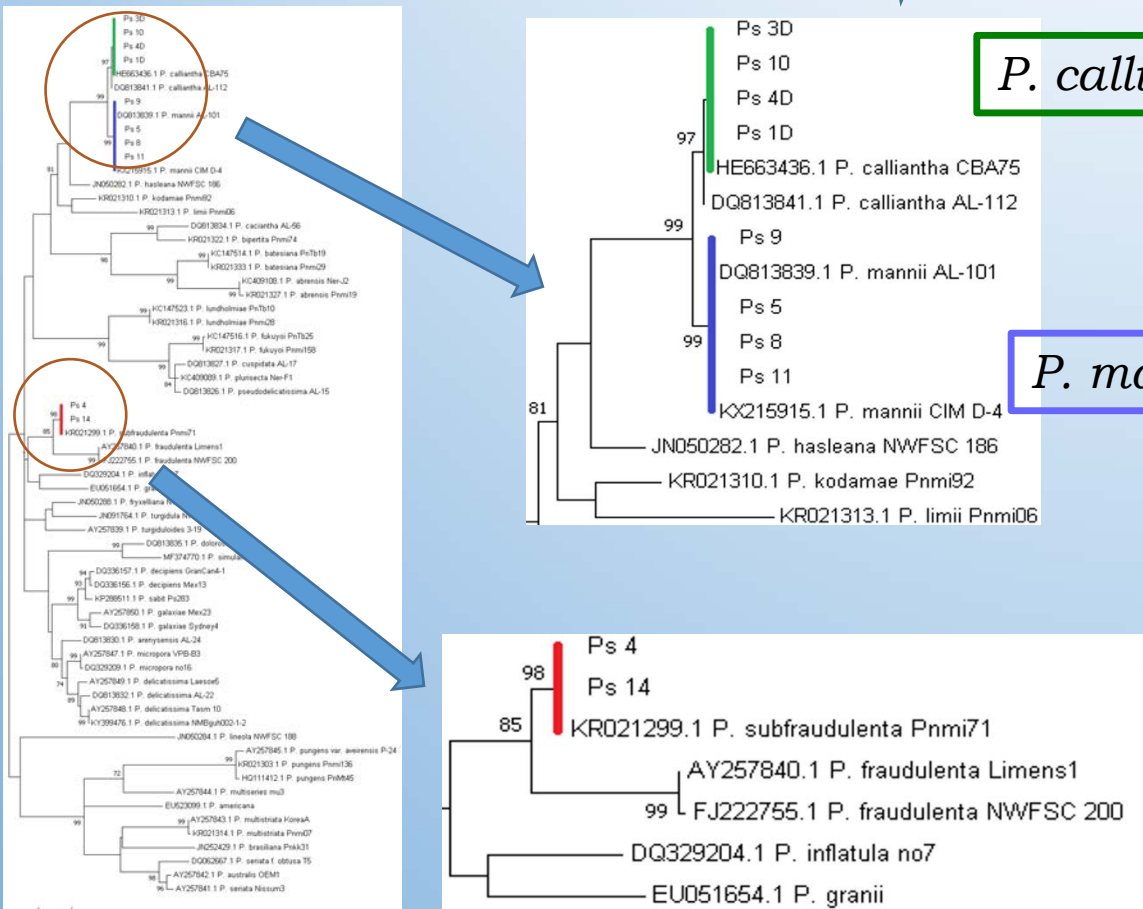
15 strains were isolated from
one sampling (October 2016)



It is important to isolate more
strains during the year and to
maintain them in culture



Maximum Likelihood tree of
ITS2 rDNA



<http://www.ogs.trieste.it>

- is a facility within the infrastructures of LifeWatch-Italia and EMBRC-Italia;
- is part of the BioMarine Lab ECCSEL ERIC;
- is an integral part of the Observatory System: Gulf of Trieste

125 strains of phytoplankton and microzooplankton

9 taxa of algae

Dinophytes - 71 strains

Diatoms- 13 strains

Cryptophytes - 7 strains

Prymnesiophytes - 9 strains

Chlorophytes - 3 strains

Prasinophytes - 7 strains

Euglenophytes - 2 strains

Dictyochophytes - 2 strains

Incertae sedis - 6 strains

2 taxa of heterotrophs

Ciliophora - 3 strains

Heliozoa - 2 strains



CoSMi Trieste

search this site

Home

Languages

English

Navigation

- Contact
- Media
- Strains

User login

Username *

Password *

- Create new account
- Request new password

Log in

Home page

Home

The Collection of Sea Microorganisms, CoSMi, includes many species of unicellular (autotrophic and heterotrophic) eukaryotes that belong to the broad categories of diatoms, flagellates and ciliates.

CoSMi is a bioresource center collecting many species of the Gulf of Trieste (Northern Adriatic Sea, Mediterranean Sea) such as toxic dinoflagellates and diatoms. The collection includes also microalgae used in aquaculture and ecotoxicology.

CoSMi collection was established in the Marine Biology Laboratory in 1990 now is part of OGS. CoSMi's mission is to isolate, taxonomically and genetically identify marine microorganisms and cultivate them. CoSMi cultures are available to the scientific community and to different industry sectors: human nutrition, pharmaceutical, nutraceutical and energy.

CoSMi is a facility within the infrastructures Lifewatch and EMBRC; it is part of the BioMarine Lab ECCSEL ERIC and is an integral part of the Observatory System: Gulf of Trieste.

CoSMi's team is active in outreach and communication activities on the topic of microalgae and microorganism biodiversity and their importance in the marine food web structure and environmental dynamics. CoSMi collaborates with national and international Middle to High Schools and supports experimental studies for Master and Doctorate degree projects.

A large, out-of-focus image of a microorganism, possibly a diatom or a similar marine microorganism, is centered in the background. It has a dark, irregular shape with a bright blue circular spot in the middle.

THANKS FOR YOUR ATTENTION!