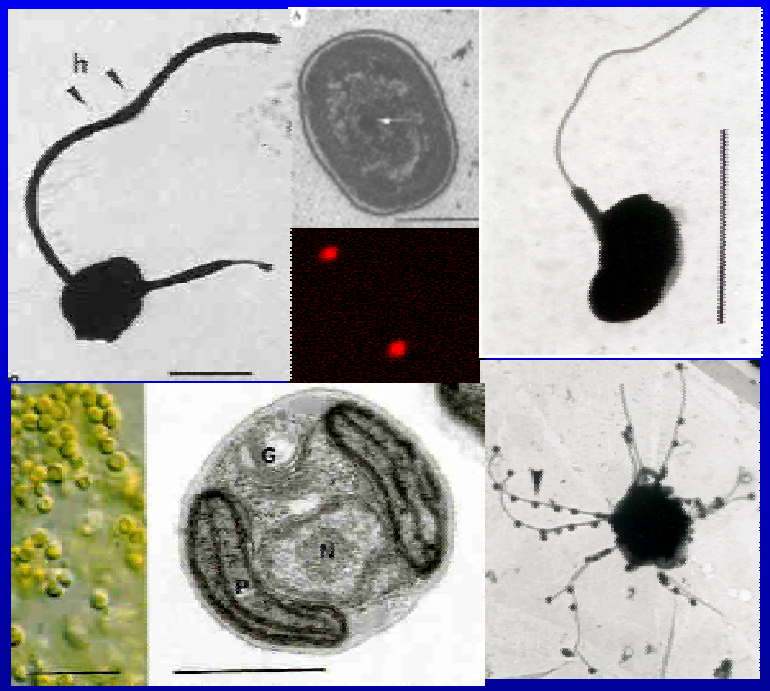
Roscoff Culture Collection



Station Biologique de Roscoff

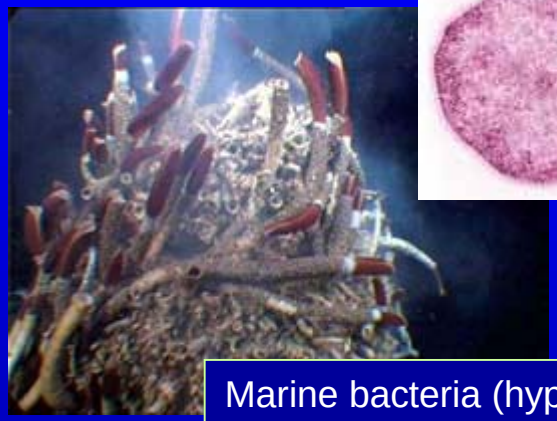
Scientist in charge: D. Vaulot (DR1 CNRS)
Curator: Florence Le Gall (AI CNRS)

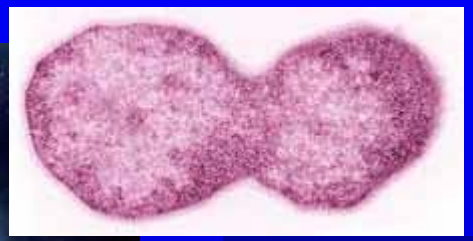
Souchothèque de Bretagne

Centralized data base accessible through web

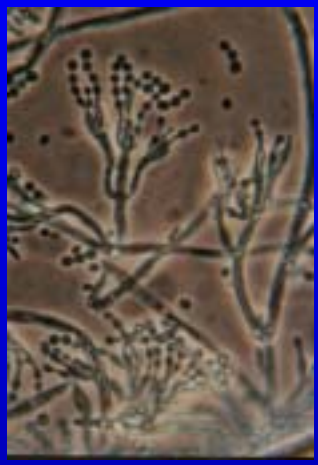
4000 à 5000 strains

Marine bacteria (hyperthermophiles)
LMM (UBO) D. Prieur - **coordinator**



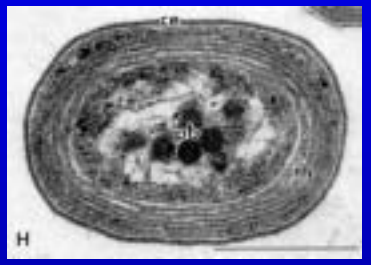


Fungi and bacteria related to food science
ESMISAB (UBO) Y. Tirilly



Picoplankton
SBR (CNRS, UPMC) D. Vaulot

Souchothèque de Bretagne



Marine bacteria (hyperthermophiles)
LMBE (IFREMER) G. Barbier

CRB project

Diatoms
ISOMER (U Nantes) J.M. Robert

Microalgae
(Coccoilthophorids..)
Algobank (U Caen) C. Billard

Microalgae
ENS Paris J.Houmard

Microalgae of economical interest
IFREMER (A. Muller-Feuga)

Number of unique strains : 516

	Class	Count
Bacteria	**Cyanophyceae**	**149**
Chlorophyta	Chlorophyceae	9
	Trebouxiophyceae	30
	Prasinophyceae	**100**
Chlorarachniophyta	Chlorarachniophyceae	4
Cryptophyta	Cryptophyceae	5
Rhodophta	Bangiophyceae	4
Haptophyta	Pavlophyceae	2
	Prymnesiophyceae	30
Stramenopiles	Bacillariophyceae	20
	Bolidophyceae	8
	Eustigmatophyceae	4
	Pelagophyceae	11
	Chrysophyceae	6
	Dictyochophyceae	13
	Pinguiophyceae	5
	Fucophyceae	1
	Bicosoecid	5
	Heterotrophic Stramenopiles	3
Alveolates	Dinophyceae	8
	Ciliés	1
Others	Euglenophyceae	1
	Euglenozoa	1
	Telonema	3
	Unknown	**93**

Backup cultures not taken into account

New strains since July 2002: 96

	#	Remark
Blanes	55	32 heterotrophic
Helgoland	20	Most not unialgal; 2 lost
CCMP	13	

Culture characterization

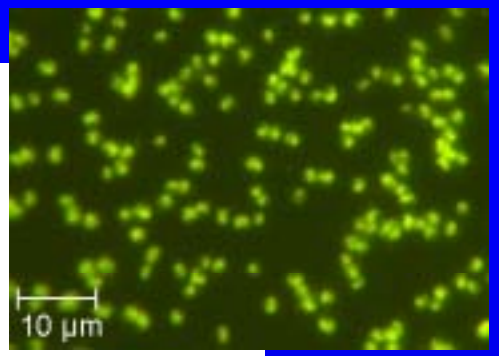
			Done	Planned
Microscopy	LM	SBR	232	
	EM	Wenche/SBR	31	
Pigments	HPLC	SBR/Mikel	119	
Gene sequences	18S partial	SBR	142	19
	18S full	SBR	82	
	16S full	Nick	50	
	psbA	Oded Beja		17
	Silicon transporter	Pascal Lopez		12

Isolation off Roscoff

Class	Genus	Count	Date Isolation					
			Spring	Summer		Fall		Winter
Cyanophyceae	*Synechococcus*	2		9-Jun-00	11-Jul-00			
Prasinophyceae	*Ostreococcus*	7	12-Apr-00	13-Jun-01		7-Sep-00	25-Sep-01	
	Bathycoccus	3		14-Jun-01		7-Sep-00		
	Micromonas	2		14-Jun-01				
	Mantoniella	1			11-Jul-00			
	Pycnococcus	1						19-Dec-00
Prymnesiophyceae	*Chrysochromulina*	2		9-Jun-00	11-Jul-00			
	Emiliania	1	16-May-01					
	Imantonia	5	16-May-01	9-Jun-00				19-Dec-00
Bacilliarophyceae	*Navicula*	4	17-Apr-01	9-Jun-00		7-Sep-00		
Dictyochophyceae	undescribed species	1	12-Apr-00					
Eustigmatophyceae	*Nannochloropsis*	1			11-Jul-00			
Incertae	*Telonema*	3	12-Apr-00		11-Jul-00	7-Sep-00		
	Total	33						

Only strains originating from different pre-cultures have been counted

FISH data



cultures

Micromonas
Ostreococcus
Bathycoccus

English Channel

Cell/mL

0
2000
4000
6000
8000

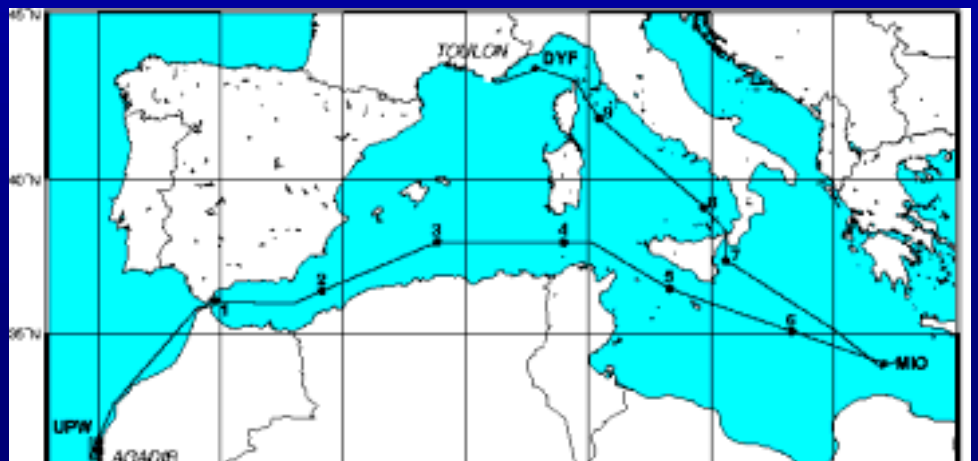
Jul
Oct
Jan
Apr
Jul
Oct

Date (2000-2001)

F. Not et al. unpublished

Isolation in Mediterranean Sea

Location	Station	Latitude	Longitude	Surface <0.6 um	Surface <3 um	Deep <0.6 um	Deep <3 um
Morocco upw elling	UPW	30° N	10° W	*Ostreococcus*	*Synechococcus* *Mamiella* sp. *Mesopedinella arctica* *Chrysochromulina acantha*	*Ostreococcus*	
West Basin	3	38° N	3° E	*Synechococcus* Dictyochophyceae sp.	*Synechococcus* Dictyochophyceae sp.	*Pycnococcus*	*Synechococcus*
	8	39° N	14° E		*Synechococcus* *Bathycoccus*	*Synechococcus*	*Synechococcus*
	9	41° N	10° E	*Synechococcus*			*Synechococcus* *Ostreococcus*
	DYF	43° N	7° E		*Synechococcus* Chlorarachnophycae sp.		
East Basin	5	36° N	13° E		*Synechococcus*	*Ostreococcus*	*Synechococcus*
	7	37° N	15° E	Chlorarachnophycae sp. Dictyochophyceae sp *Chlamydomonas* sp	*Synechococcus* *Chlorarachnion* sp.		*Synechococcus*
	MIO	33° N	22° E		*Synechococcus*	*Pelagomonas*	*Synechococcus*



Roscoff RCC Culture Collection

Workplan

- **Continue to sequence 18S rDNA RCC strains**
- **Purify cultures which contain contaminants such as heterotrophic flagellates**
  - Coccoid: Purification on plate (0,3% agar)
  - Flagellates: Serial dilutions (1 cell/tube)
- **TEM on heterotrophic flagellates from Blanes**
  - priority to the smallest ones
- **Indian Ocean cruise planned in may 2003:**
  - Screening of precultures
  - Isolation of new strains
- Web catalog (souchothèque)

Roscoff RCC Culture Collection