



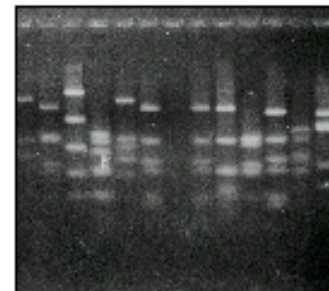
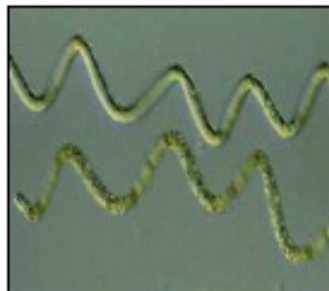
***KORDI***  
**Korea Ocean Research &  
Development Institute**



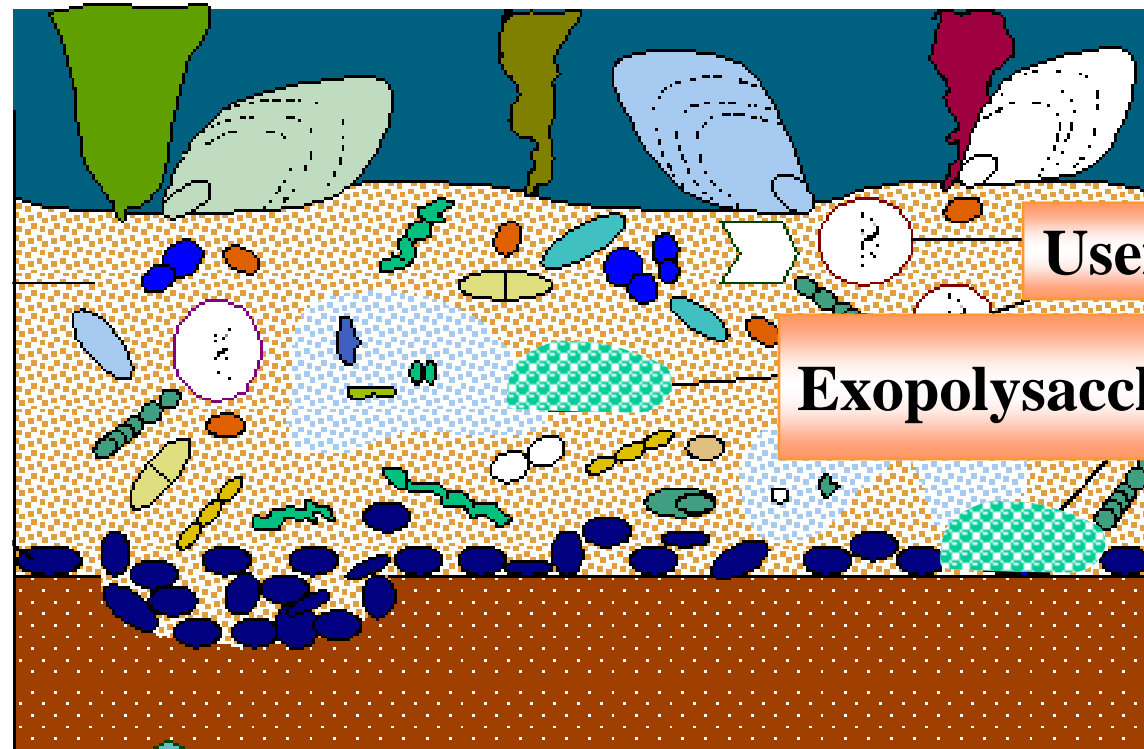
**King Sejong Station in the Antarctic**

The Properties of Exopolysaccharide p-CY36  
Produced by a Marine Cyanobacterium  
*Chroococcus* sp. 00SS-CY36

**Joung-Han Yim, Sung-Jin Kim, Se-Hoon Ahn**  
**Yoo Kyung Lee and Hong Kum Lee**

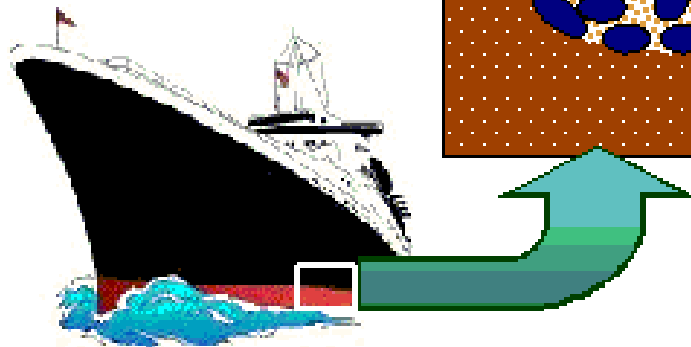


# Biomembrane Ecosystem



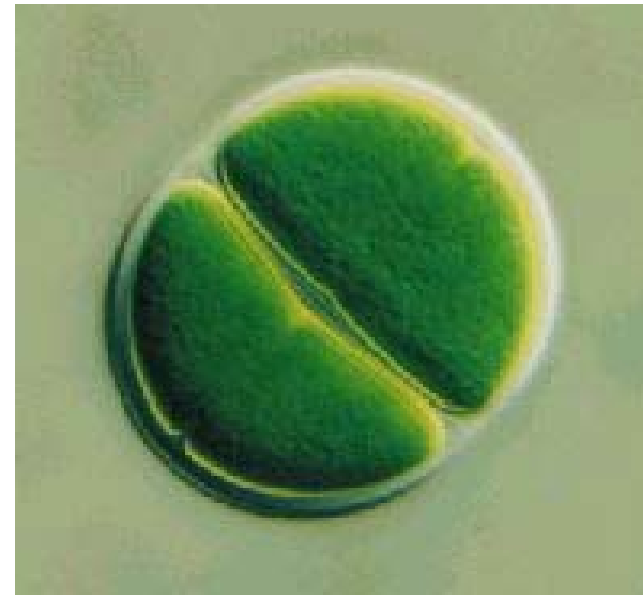
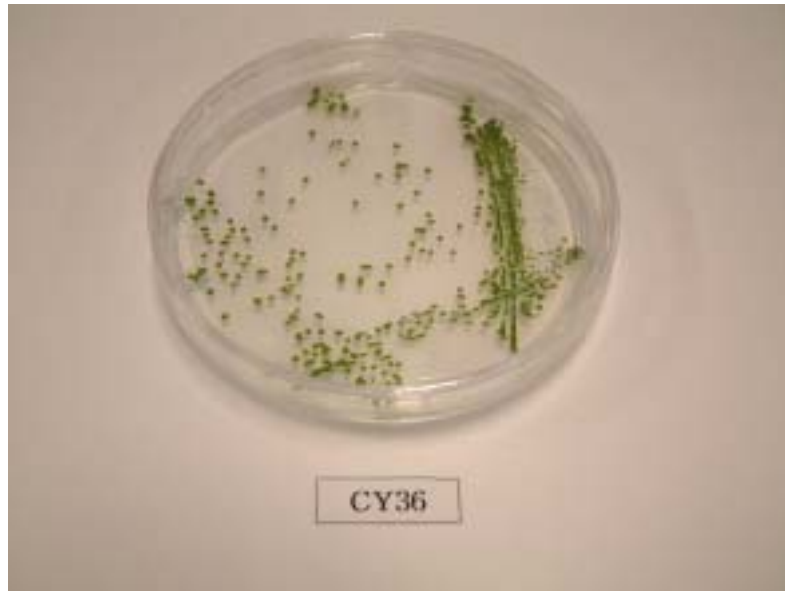
**Useful Genes**

**Exopolysaccharides**





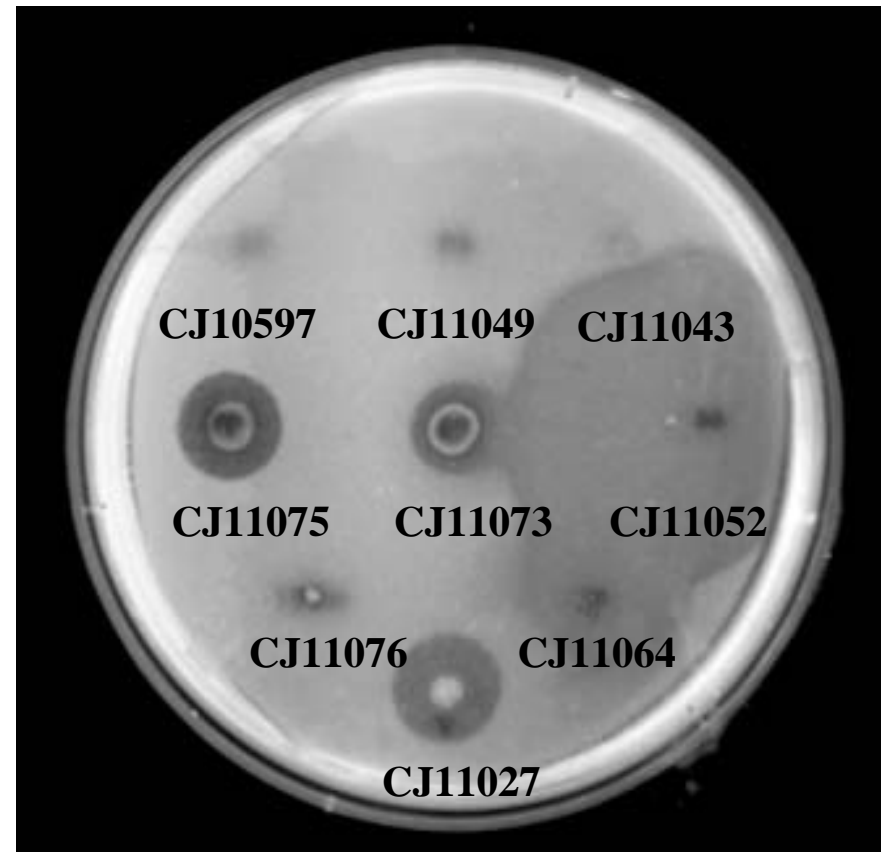
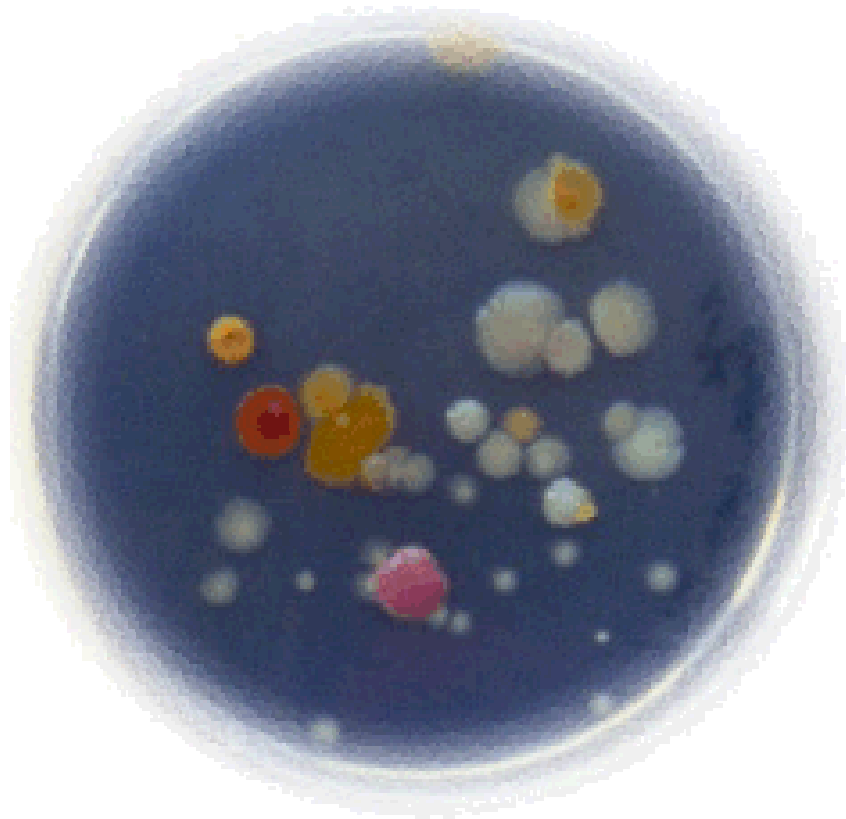
# *Chroococcus* sp. 00SS-CY36



## **Properties of p-CY36 of *Chroococcus* sp. 00SS-CY36**

- ✓ **p-CY36 was separated into two types : OSI-1 and OSI-2**
- ✓ **Molecular weight of OSI-1 and OSI-2 :  $1.8 \times 10^7$  Da and  $2.0 \times 10^6$  Da**
- ✓ **Sugar composition**
  - OSI-1 - glucose : galactose : glucronic acid : mannose = 1 : 4 : 1 : 3**
  - OSI-2 - glucose : galactose : glucronic acid = 1 : 4 : 19**
- ✓ **Maximum conditions for p-CY36 production**
  - : ASN-III medium with  $\text{CaCl}_2 \cdot 2\text{H}_2\text{O}$  3.0 g/l,  $\text{K}_2\text{HPO}_4$  5.0 g/l,  $\text{MgSO}_4$  10.0 g/l**
- ✓ **The rheological properties were changed by pH, temperature and salt concentration.**
- ✓ **p-CY36 showed flocculating activity of 15.5 (1/OD) at 0.6%.**
- ✓ **P-CY36 is suggested to be used as flocculating agent.**

# Chitinase-Producing Marine Bacteria

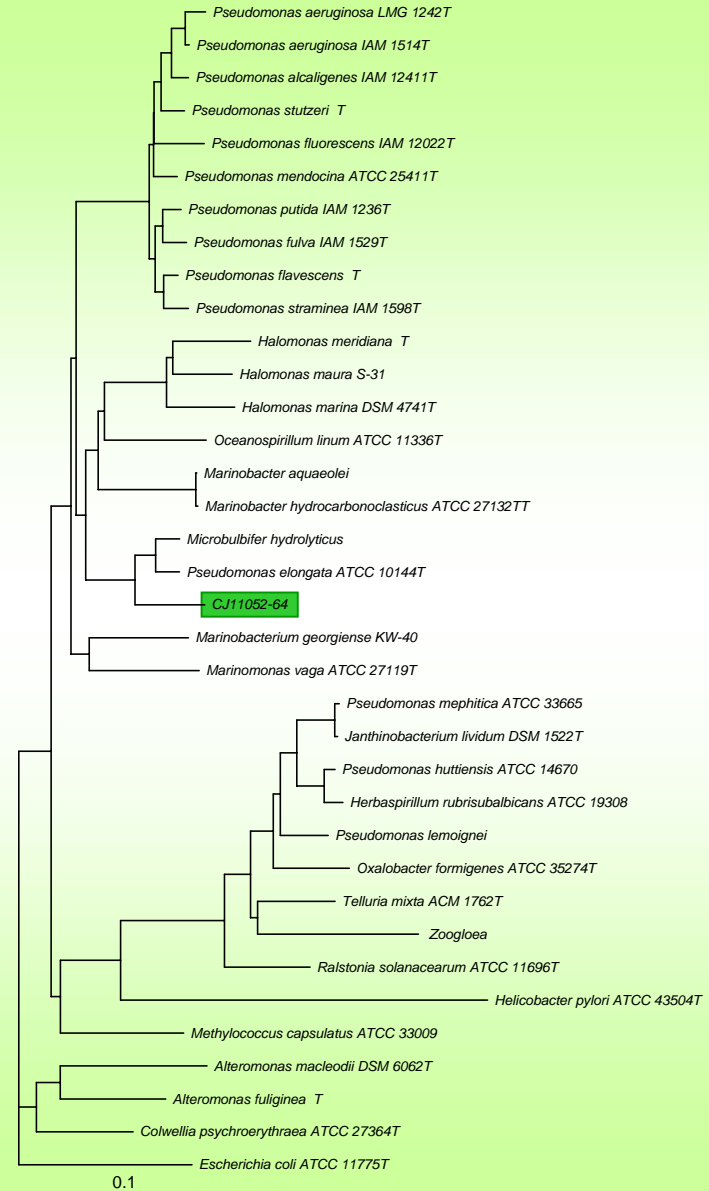
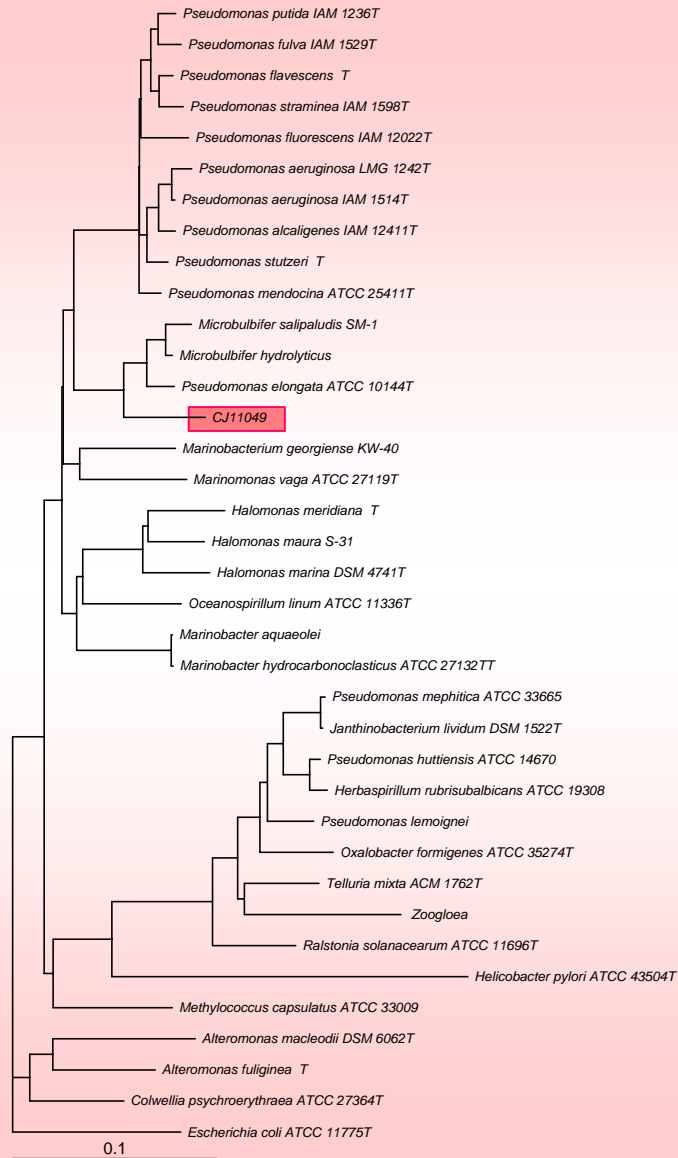


# Identification using 16S rDNA

Strain	Species
CJ11027	<i>Vibrio</i> sp.
CJ11043	<i>Bacillus</i> sp.
CJ11049	<i>Hongella chejuensis</i>
CJ11052	<i>Kordiella chejuensis</i>
CJ11064	<i>Kordiella chejuensis</i>
CJ11073	<i>Thalassospira chejuensis</i>
CJ11075	<i>Microbulbifer</i> sp.
CJ11076	<i>Bacillus</i> sp.
CJ10597	<i>Cellulomonas</i> sp.

# Hongella chejuensis gen.et sp. nov.

# Kordiella chejuensis gen.et sp. nov.



# Identification using 18S rDNA & ITS

*Cochlodinium* sp.

18S rDNA & ITS

*Gyrodinium* sp.