



## **International census of marine microbes.**

M.L. Sogin (1), J.W. de Leeuw (2), L. Amaral-Zettler (1), G. Herndl (2), D.J. Patterson (1), **M.T.J. van der Meer** (2), S. Schouten (2), L. Stal (3)

(1) Marine Biological Laboratory, Woods Hole , USA, (2) Royal Netherlands Institute for Sea Research, The Netherlands, (3) Netherlands Institute of Ecology, Yerseke, The Netherlands

We would like to take this opportunity to present the International Census of Marine Microbes (ICoMM) initiative to the European Geosciences Union general assembly participants. ICoMM (<http://icomm.mbl.edu>) is one of the nine field programmes of the Census of Marine Life programme (<http://www.COML.org/>) sponsored by the Sloan Foundation. The most general statement of ICoMM's goal is developing a highly-resolved biodiversity database based a.o. on DNA, proteins and lipids for marine microbes and understanding how these populations evolve and redistribute on a global scale. Participants in ICoMM are seeking (1) to catalogue all known diversity of single-cell organisms inclusive of the Bacteria, Archaea, Protista and associated viruses, (2) exploring and discovering unknown microbial diversity, and (3) placing that knowledge into appropriate ecological, biogeochemical and evolutionary contexts. Examples of questions that ICoMM is addressing include but are not limited to:

- What governs the evolution of marine microbial lineages within complex marine communities?
- Why do marine microbial consortia retain functionally equivalent but genetically distinct lineages?
- Is there a marine microbial biogeography and if so, what are the principal drivers or restrictors?
- How does genotypic diversity shape phenotypic diversity, and how does this diversity influence the biogeochemistry and the functioning of marine ecosystems?

ICoMM serves the international scientific community through its efforts to coordinate research activities, secure funding for studies of marine microbial diversity and coordinating and initiating the development of large biodiversity database. The web site “<http://icomm.mbl.edu/>” contains important information about the organization and objectives of ICoMM.