

Marine Microbial Biotechnology Symposium and discussion

**Thursday 15th- Friday 16th November, 2012
Auditorium 1, Technical University of Denmark**

Marine biotechnology or "*Blue Biotechnology*" involves the use of marine resources as the source or target of biotechnological applications. Due to the impressive diversity in biology and biogeochemistry of the marine environment, it has, for some time, been identified as a new and so far underexplored source of bioactive compounds and principles. Novel drugs and enzyme activities have been isolated from marine organisms and there are several examples of commercial use. Some of these originate from eukaryotic organisms; however, unless total synthesis or transfer of biosynthesis is possible, continuous exploitation is hampered by access to the raw material. Yet, today there are many well-acknowledged examples of compounds from marine eukaryotic organisms that are actually produced by an associated microbial community. Therefore, marine microorganisms stands out as the most promising and sustainable source of novel bioactives.

This symposium will present a range of examples of bioactives from marine microorganisms and outline some of the challenges, both chemically and microbiologically, facing the field. The symposium will also present industrial approaches to marine microbial bioprospecting.

The potential wonders of marine biotechnology have been hailed for almost three decades. Despite several examples of successful products, we have not seen the expected increase in novel compounds in the pipeline. On the second day of the symposium, we will challenge the mindset and have asked speakers to play "the Devil's advocate": Have we exaggerated our expectations and promises? Are there inherent biological or technological barriers to the success of marine biotechnology? Are problems linking academia findings to industrial use unique to this area? Or are they shared by the whole biotechnology and biorefinery sector?

Maria Månsson
DTU Systems Biology

Lone Gram
DTU National Food Institute

Participation costs 350 DKK. Sign up and pay at [MMB Symposium](#) (click to follow link) by November 1st.

This MMB symposium and discussion is jointly sponsored by two projects:
Discovery of bioactive marine bacteria and natural products and their use to promote human health and safety. FøSu #2101-07-0012 (2008-2012)
Ecology-driven drug discovery: A novel approach for enhancing chemical diversity from marine bacteria. FTP with Sapere Aude #116262 (2012-2014)

Marine Microbial Biotechnology

Thursday 15th November

Time	Speaker	Topic
9-9:50	Breakfast	
9:50-10	Maria Månsson & Lone Gram	Welcome
10-11	Professor William Fenical Scripps Institution of Oceanography, USA	The Great Plate Count Anomaly: Are Marine Bacteria Really Unculturable?
11-12	Professor William Gerwick Scripps Institution of Oceanography, USA	Multidisciplinary Biosynthetic, Synthetic and Pharmacological Approaches to Exploring the Biotechnological Potential of Marine Cyanobacteria
12-13	Lunch	
13-14	Dr. David Overy University of Prince Edward Island, Canada	Marine vs. Marine-Derived Fungi? What is the Best Use of Our Resources
14-14:20	Professor Lone Gram Technical University of Denmark	Known and New Antibacterial Compounds from Marine Bacteria
14:20-15	Dr. Nikolaj Vynne and Dr. Maria Månsson Technical University of Denmark	Chemical and Biological Approached to Enhance Antibiotic Discovery from Marine Heterotrophic Bacteria
15-15:30	Coffee	
15:30-16:30	Professor Jörn Piel University of Bonn, Germany	Chemical Surprises from an Uncultivated Sponge Symbiont
16.30-17:30	Dr. Andrew Mearns-Spragg AquaPharm, UK	New Pharmaceutical Lead Compounds from Marine Natural Products.
17:30-18	Drinks	

Friday 16th November

Time	Speaker	Topic
9:30 -10	Coffee	
10-10:30	Professor William Fenical Scripps Institution of Oceanography, USA	The Drug Discovery Paradigm: Exploring Deep Ocean Bacteria Provides New Targets for Cancer Research
10:30-11	Dr. David Overy University of Prince Edward Island, Canada	The Challenge of Industrializing Natural Products Discovery in an Academic Lab
11-11:30	Dr. Guy Carter CEO at Carter-Bernan Consulting	Strategies for Successful Development of Marine Natural Products
11:30-12	Dr. Andrew Mearns-Spragg AquaPharm, UK	Surviving the First Five Years
12-13	Discussion	
13-14	Lunch	