

## ANNUAL HIGHLIGHTS 2022

2022 was a productive year for CeMiSt with novel findings, publications, conferences and PhD graduates. CeMiSt showed that the metabolic turnover of secondary metabolites of one organism by another can result in novel bioactive chemistry and found that the physiology of the producing organism can be dramatically influenced by the ability to produce a particular secondary metabolite. Thus, emphasizing that these metabolites have multiple (non-antibiotic) role(s) in microbiomes. Using sequence analyses, CeMiSt found that the Biosynthetic Gene Clusters (BGCs) responsible for secondary metabolite producers evolve more rapidly than other genes, and that also horizontal gene transfer and the cross-metabolism in a community allow for rapid chemical diversification. In total, 24 scientific articles were published in 2022. CeMiSt was again on the Clarivate Highly Cited Researcher list with Professors Jens Frisvad and Tilmann Weber. Four CeMiSts (Jens Frisvad, Lone Gram, Thomas Larsen and Tilmann Weber) were included on the Stanford list of 2% highly cited scientists. Five PhD students graduated in 2022. CeMiSt members gave invited talks at international conferences, and several CeMiSt members obtained new grants including funding from Innovation Fund Denmark, Novo Nordisk Foundation, and the EU.

Professor Poul Jensen, UCSD; and group leader Dr Manuel Liebeke, MPI Marine Microbiology, joined CeMiSt as Otto Mønsted guest professors, and contributed to the very successful 2<sup>nd</sup> international conference on *Microbial Secondary Metabolites in Microbiomes 2022* (MSMM 22) financed by the Novo Nordisk Foundation. They also gave several talks, including at the CeMiSt symposium *Listening in on the chemical language of the ocean. Symposium on marine microbial and chemical ecology*. Besides these two large in-person events, CeMiSt organized and hosted several lectures with international top scientists, including *Back to the Roots- Search for the 'missing' plant microbes* by Prof. Jos Raaijmakers, NIOO-KNAW.

CeMiSt held the yearly 2-day-retreat at Kollekolle, with a focus on data integration across the scientific projects. Three international guests joined us to provide input and feedback to CeMiSt discussions. Also, in 2022, CeMiSt completed its mid-term self-evaluation, submitted an application for extension and provided answers to the reviewer's comments.



<b>Feb</b>	24	J Raaijmakers (NIOO-KNAW) CeMiSt lecture
	25	PhD Defence ML Hansen
<b>May</b>	05	PhD Defence Y Wang
<b>Jun</b>	03	T Booth (NNF Center for Biosustainability), talk at CeMiSt Bi-weekly
	08-14	M Liebeke (MPI) OM Guest professor
	12-14	<b>MSMM22, international workshop &amp; conference</b>
<b>Aug</b>	<b>Nov</b>	P Jensen (UCSD) OM Guest professor
<b>Oct</b>	11-15	M Liebeke (MPI) OM Guest professor
	13	PhD Defence, CN Lozano-Andrade
	14	Marine CeMiSt Symposium: J Pawlik (UNC Wilmington), P Jensen (UCSD) & M Liebeke (MPI)
	22-29	K Duncan (USG) at CeMiSt
	23-25	MI Jaspars (Aberdeen University, CeMiSt SAB) at CeMiSt
	24-25	CeMiSt Retreat on Data Integration, Kollekolle, Guests: P Jensen, K Duncan & M Jaspars
	26	PhD Defence NNSE Henriksen
<b>Nov</b>	11	CeMiSt Bi-weekly: DNRF YT Scientific communication accelerated
	22	T Northen (Berkeley Lab) visits CeMiSt
	25	M Arendt Rasmussen (KU) talk at CeMiSt Bi-weekly
<b>Dec</b>	01	PhD Defense PK Bech
	16	CeMiSt Bi-weekly: comments to reviewers

### CeMiSt 2022. Highlights and time-line