

ANNUAL HIGHLIGHTS 2023

2023 was, like previous years, productive with new results, publications, conferences and PhD candidates. CeMiSt showed that the physiology of the producing microorganism can be dramatically affected by the ability to produce a particular secondary metabolite, that microbial secondary metabolites can specifically induce or reduce gene expression in other microorganisms, and that turnover of secondary metabolites from one microorganism by another can result in new bioactive chemistry. Using sequence analyses, CeMiSt found that genes encoding secondary metabolites evolve faster than other genes, and that horizontal gene transfer and cross-metabolism in a microbiome also enable rapid chemical diversification. CeMiSt published 21 scientific articles in 2023 and was on the Clarivate Highly Cited Researcher list with professor Tilmann Weber. Four CeMiSt participants (Jens Frisvad, Lone Gram, Thomas Larsen and Tilmann Weber) were included on the Stanford list of the 2% most cited researchers. Three PhD students defended their theses in 2023 and two in February 2024. CeMiSt members gave invited lectures and presented posters at conferences, and several CeMiSt members received additional grants from the Innovation Foundation Denmark, the Novo Nordisk Foundation, EU and the Villum Foundation.

In connection with a CeMiSt PhD defense, members of the assessment committee (Professor Alison Buchan, Professor Mathias Middelboe and lecturer Paul Fogg) held a seminar on bacteriophages and horizontal gene transfer "Beyond genetic borders: Decoding the interactions of plasmids, phages, and bacteria". CeMiSt received DKK 1/2 million from the Novo Nordisk Foundation to organize its 3rd international conference on "Microbial Secondary Metabolites in Microbiomes 2024" (MSMM2024). CeMiSt participated with the other Centers of Excellence at DTU in "Forskningens Døgn" and held the annual 2-day Center retreat at Rungstedlund, with presentations from all PhD students and postdocs in the Center. In March, CeMiSt was granted a four-year extension and has therefore started the rollout, both academically and in terms of personnel, of CeMiSt 2.0, which will run until 2028.



Jan	30	Follow-up meeting with DNRF
	31	Poster prize, Mathies Sørensen
Feb	2	CeMiSt lecture: Senior Lecturer Jonathan Friedman
	16	CeMiSt lecture: Postdoctoral Associate Davide Ciccarese
Mar	17	Extension interview at DNRF
	20	Invited for extension negotiation
	20-24	Keynote lecture by Tilmann Weber: at NP-Linker workshop
Apr	23	Price for Philip von Staffelt, Unge Forskere
	27	"Forskningens "Døgn"
May	9-10	Center leader retreat
		Talk on Transformational moments by Lone Gram
	16	Microflora Danica workshop
Jun	13	Videnskab for Vilde Hjernær; Lone Gram podcast
	19	PhD defense Laura Lindqvist
	20	CeMiSt Symposium on Horizontal Gene Transfer
July		Posters at the BAGECO conference
Sep	2-3	CeMiSt retreat
	11	CeMiSt 2.0 contract signed
	21	Talk by Matiss Maleckis, Biology of Bacterial Natural Product Producers
	21	Talk by Matin Nuhamunada, Biology of Bacterial Natural Product Producers
	26	CeMiSt presentation by Lone Gram, limena symposium
Oct	5	PhD defense Mathies Sørensen
	23	Villum postdoc to Nathalie Henriksen
Dec	5	PhD defense Ting Yang
	18	Yearly topic discussion

Figure 2: CeMiSt 2023: Highlights and time-line