

# BayCEER Kolloquium

Lectures in Ecology and  
Environmental Research

Summer 2023



UNIVERSITÄT  
BAYREUTH

Donnerstag/Thursday

**27.04.2023**

**12:15 in H6, GEO**

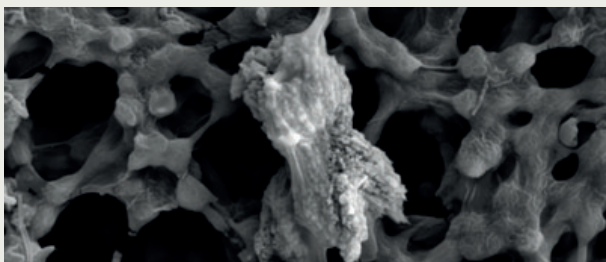


**Prof. Maria Dittrich**

Earth Sciences Department, University of Toronto

## **Dolomite formation in microbial mats in Qatar's sabkhas**

In this talk, I will present the results of our studies on the role of microbes in dolomite formation in a hypersaline environment. Although significant advances in our understanding of dolomite precipitation have been made, the abundance of ancient dolomitic sequences remains an enigma. Our multi-seasonal work with microbial mats in the hypersaline sabkhas of Qatar shed light on the interplay between environmental conditions, microbial communities, and dolomite formation. We observed cyclical fluctuations in microbial community composition which shift from growing microbial mats (GMM) with oxygenic phototrophs to decaying microbial mats (DMM) which are dominated by anoxygenic phototrophs. Our findings suggest that the interplay between oxygenic and anoxygenic phototrophs is a key factor for dolomite formation.



Bayreuth Center of Ecology  
and Environmental Research



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