



UNIVERSITÄT **BONN**

Die Pflanzenwissenschaftlichen  
Institute

# Einladung zum Pflanzenwissenschaftlichen Kolloquium

**Freitag, den 21. Oktober 2022, 12 c.t.**

Nussallee 4, Hörsaal Botanik

**Referent: Dr. Fabian Nies**

*Genomische Mikrobiologie, Institut für Allgemeine Mikrobiologie, CAU Kiel*

**Thema: „Natural competence in cyanobacteria“**

The complete set of genes for the ability to take up DNA from the environment via natural transformation, termed natural competence, is present in the major parts of the cyanobacterial phylum, with the exception of picocyanobacteria. However, experimental evidence for natural competence has been only available for few species.

In this talk, I will show DNA uptake via natural transformation for species of parts of the cyanobacterial phylum, for which natural competence has not been reported yet. These examples include either chromosomal integration of the introduced DNA or reconstitution of a replicating plasmid.

Prevalence of natural competence raises the question to its potential evolutionary advantage in cyanobacteria, e.g. allele transfer within a population or potential route for DNA repair. Furthermore, the establishment of gene transfer into new species open avenues for recombinant work in new parts of the phylum, relevant for both basic and applied research in the field.

**Diskussionsleitung:** Prof. Dr. P. Dörmann, IMBIO

Zu diesem Vortrag und zu einer evtl. Nachsitzung sind Sie herzlich eingeladen