

# KJELDGAARD Lecture - Myriam Charpentier, PhD

Wednesday 15 May 2024 at 13:15—14:00

Followed by PhD-session at 14:30—15:00

(Coffee and cake will be served between lecture and PhD-session)

1871-120 (NUCLEUS)

Host: Kasper Røjkjær Andersen



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## Integration mechanism of nuclear calcium signaling in plant

Nutrient acquisition is fundamental to life. Plants have evolved strategies to overcome soil phosphate limitations and access atmospheric dinitrogen by developing beneficial associations with root fungal and bacteria endosymbionts, respectively. A defining feature of root endosymbioses lies in the induction of nuclear calcium oscillations, pivotal for cellular reprogramming and the inception of endosymbiotic interactions. However, calcium serves as a ubiquitous secondary messenger, and nuclear calcium releases not only occur to specify endosymbiotic programs but are also associated with root apical meristem development, utilizing the same nuclear ion channels. How similar ion channels are regulated to generate different developmental outputs is unknown. Recent advances in understanding how nuclear calcium oscillations are generated in endosymbioses will be presented.