Contribution ID: **81** Type: **Talk**

The crystal structure of phospholipase PlaB from Legionella pneumophila reveals the basis of tetramerization-dependent inactivation by a central metabolite

Monday, 14 March 2022 14:50 (20 minutes)

PlaB is a secreted phospholipase of *Legionella pneumophila*, the causative agent of Legionnaires' Disease. It is an unusual enzyme that looses activity at higher concentrations due to tetramer formation.
Here, we show the crystal structure of PlaB in its inactive tetrameric form. We find that the tetramer is stabilized by NAD(H), a central metabolite only found within the cell. This ligand-mediated oligomerization may hence establish a self-protection mechanism.

Primary authors: Prof. FLIEGER, Antje (Robert Koch Institute, Wernigerode); Dr DIWO, Maurice (Helmholtz Centre for Infection Research); BLANKENFELDT, Wulf (DGK); Dr MICHEL, Wiebke (Robert Koch Institute, Wernigerode)

Presenter: BLANKENFELDT, Wulf (DGK)

Session Classification: Biocrystallography: Enzymes

Track Classification: Main conference: Biologic Structure, Function, Reactivity, and Regulation