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It is our pleasure to invite you to the following seminar:

Thursday, March 14th, 2019 at 14:00

BSP 233, Cubotron/Unil, 2nd floor
(Bâtiment sciences physiques UNIL)

Organelle communication - shaping metabolism in immune cells

by

Dr Angelika Rambold

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Mounting a successful immune response is a complex and energy-intensive process where cells rapidly alter their migratory behavior, proliferation and protein synthesis rates. To ensure this response, most immune cells require reprogramming of their metabolism to sustain energy supply and generate building blocks for the synthesis of macromolecules. Inside cells, such metabolic pathways are heavily sub-compartmentalized in specialized entities: organelles. While the fact that organelles present metabolic hubs has long been appreciated, emerging evidence suggests that they do not work as separate entities. Instead they form interactive networks to coordinate their function and connect metabolic sub-processes. These can be formed via direct communication, where the physical contact between organelles facilitates the exchange of nutrients. Alternatively, indirect modes of communication, like transcriptional organelle stress programs can shape and coordinate the activities of one or more organelles. Our previous work identified direct communication between mitochondria to drive memory T cell differentiation and indirect lysosomal stress signaling in shaping mitochondrial TCA cycle integrity in macrophages responding to pathogens.

https://www.ie-freiburg.mpg.de/rambold