

Institut Jean-Pierre Bourgin

# Séminaire

Lundi 18 juin 2018, à 14h00

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## **Plasmodesmata: cellular machine for inter and intra cellular communication**

Intercellular communication is critical for multicellularity. It coordinates the activities within individual cells to support the function of an organism as a whole. Plants have developed remarkable cellular machines -the Plasmodesmata (PD) pores- which interconnect every single cell within the plant body, establishing direct membrane and cytoplasmic continuity, a situation unique to plants. PD are indispensable for plant life. They control the flux of molecules between cells and are decisive for development, environmental adaptation and defence signalling. However, how PD integrate signalling to coordinate responses at a multicellular level remains unclear.

A striking feature of PD organisation, setting them apart from animal cell junctions, is a strand of endoplasmic reticulum (ER) running through the pore, tethered extremely tight (~10nm) to the plasma membrane (PM) by unidentified “spokes”. To date, the function of ER-PM contacts at PD remains a complete enigma. We don’t know how and why the two organelles come together at PD cellular junctions.

Using a combination of proteomic approaches, biophysical/modelling methods and ultra-high resolution 3D imaging into molecular cell biology of plant cell-to-cell communication, our lab is trying to address the mechanism and function of ER-PM contacts at PD.

[Emmanuelle Bayer Group Web page](#)

Invité par **Grégory Mouille**

Ce séminaire aura lieu dans l’Amphithéâtre Bât. 10