

Séminaire



CONFÉRENCIER
INVITÉ

Vendredi 22 Octobre 2021 à 11h

Salle des
séminaires IBS &
visioconférence

Institut de biologie structurale - 71 avenue des Martyrs CS 10090 38044 Grenoble Cedex 9 - T.+33 (0)4 57 42 85 00

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Mono- and polyunsaturated phosphatidic acid differentially regulate the last steps of neurosecretion

Lipids have been recently suspected to contribute to vesicle fusion, but the precise mechanism remains elusive. Phosphatidic acid (PA) synthesized by phospholipase D1 (PLD1) has been described to be crucial in regulated exocytosis both in neuroendocrine cells and in neurons. Using a combination of pharmacological and molecular approaches associated with genetic mouse models, we have recently shown that PA produced by PLD1 regulates the last key steps of secretory granule exocytosis in neuroendocrine chromaffin cells. Interestingly these observations revealed that mono-unsaturated PA control the number of exocytotic events most likely by contributing to granule recruitment/docking, whereas poly-unsaturated PA regulate fusion pore stability and expansion. We also found that PA modulates secretory granule biogenesis, transport, and recycling, revealing a very complex regulation of the entire life cycle of secretory vesicles by PA. We will also present novel tools to study in more detail these pleiotropic functions of PA in vesicular trafficking. Altogether, this work opens a novel insight into the different roles in a given cellular function that subspecies of the same phospholipid may play based on their fatty acyl chain composition and highlights one of the possible functions of polyunsaturated fatty acids during neurosecretion.

Hôte : Winfried Weissenhorn (IBS/groupe Entrée et bourgeonnement des virus enveloppés)

L'audience en présentiel étant actuellement limitée à 29 personnes, merci de penser à vous inscrire sur <https://framadate.org/QcKJPNY8V9BgXO4Y> et à demander un avis de rdv au moins 48h à l'avance auprès de ibs.seminaires@ibs.fr

Ce séminaire sera également retransmis par visioconférence :

*<https://univ-grenoble-alpes-fr.zoom.us/j/98173588627?pwd=N3FBdTZEUXk2OGIuWjFmSnU4YUg1QT09>
(ID de réunion : 981 7358 8627, Code secret : 501658)*