

Regular Wednesday IMG seminar



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“Multiple layers of control in early sphingolipid biosynthesis”

Sphingolipids are fundamental components of cellular membranes and key mediators of intracellular signaling. Their de novo synthesis is initiated in the endoplasmic reticulum (ER) and is tightly regulated at the level of the serine palmitoyltransferase (SPT) complex. ORMDL proteins are established canonical negative regulators of SPT activity, thereby maintaining sphingolipid homeostasis. In this seminar, we demonstrate that ceramides act as major regulators of ORMDL expression levels and identify a previously unrecognized ORMDL interactor that establishes a novel relationship between ORMDL expression and sphingolipid abundance, reminiscent of dysregulated sphingolipid metabolism observed in pathological conditions. These findings uncover an additional layer of control over the sphingolipid pathway and highlight unexpected flexibility in ORMDL-dependent regulation of de novo sphingolipid biosynthesis.

The seminar will be held

on Wednesday 14th January 2026 at 15:00

in the Milan Hašek Auditorium at IMG

(Institute of Molecular Genetics of the Czech Academy of Sciences, Vídeňská 1083, Prague 4)
