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Phosphatidylinositol (PI) signaling in basidiomycete *S. commune*

The first study of phosphatidylinositol (PI) signaling in a basidiomycetous fungus *Schizophyllum commune* referred to inositol monophosphatase (IMPase), the second messenger in the PI Pathway which plays a role in the synthesis of inositol from inositol monophosphate. The *imp* has been found to be regulated in a Ras-dependent manner implying cross-talk during sexual development.

On the other hand, inositol depletion by Lithium chloride affects wildtype and a constitutively active Ras mutant, resulting: growth rate reduction, hyperbranching, and short cell lengths in both strains. In the wild type, a compensatory effect was observed with upregulation of *imp* prior to inositol depletion.

Furthermore, the modulation of *imp* in response to nitrogen starvation and knock-out of *imp* by homologous recombination will be demonstrated to know the functional analysis of inositol monophosphatase and to comprehend the feature of PI Signaling in *S. commune*.

Publications

Murry R, Kniemeyer O, Krause K, Saiardi A, Kothe E (2019) Crosstalk between Ras and inositol phosphate signaling revealed by lithium action on inositol monophosphatase in *Schizophyllum commune*. *Adv Biol Regul* 72, 78-88. [Details PubMed](#)

Supervisor

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