

Abstract

Phosphoinositides (PIs) make up only a small proportion of overall amount of lipids in cell membranes. However, their function mediated through protein effectors is indispensable for cell signaling, vesicular trafficking, cell movement and other important aspects of cellular life. In this bachelor thesis function of PIs is described in relation to Wnt signaling pathway. Proper execution of several steps of the Wnt signaling pathway requires the presence of PIs. Retrograde transport of Wntless (Wls) from the plasma membrane (PM) back to the Golgi apparatus (GA) in Wnt producing cells or internalization of Wnt receptors in Wnt receiving cells are only two examples. All processes are tightly regulated and malfunction of enzymes processing PIs can cause their deregulation resulting in disruption of the Wnt signaling pathway. As deregulated Wnt signaling is a known cause of serious diseases including cancer, understanding the crosstalk between PIs and Wnt signaling could help in designing novel strategies for therapeutic intervention.