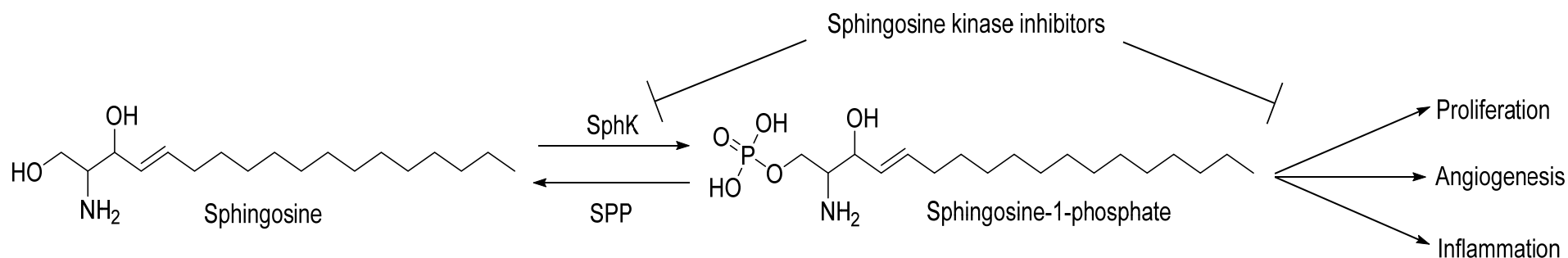


## Evaluation of ligand-target-interactions at G protein-coupled receptors and sphingosine kinases

Sphingosine kinases take an important role in the modulation of the sphingolipid rheostat, a complex network of enzymes and mediators. As the rheostat regulates cell proliferation and division any imbalance can be correlated to inflammatory or cancer diseases. Several cancer types show increased expressions of the sphingosine kinases that can occur in two isoforms, thereby making it a promising target for drug development. The aim of our project will be the development of novel selective and potent inhibitors on these kinases, complemented by their pharmacological evaluation. The new structures will be combined with structure motives of different natural compounds, derived by other working groups. As the molecular targets with numerous natural compounds are unknown, their evaluation, medicinal chemical optimization and their labelling for target identification will take place in this PhD project.



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