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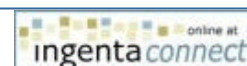
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 1: [Curr Drug Targets](#). 2000 Sep; 1(2): 185-205.

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**Modulation of the ceramide level, a novel therapeutic concept?**[Claus R. Russwurm S.](#), [Meisner M.](#), [Kinscherf R.](#), [Deigner HP.](#)

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The sphingomyelin (SM) pathway is an ubiquitous and evolutionarily conserved signaling system in which ceramide (CA), generated from SM by the action of various isoforms of sphingomyelinases (SMases) functions as an important second messenger. Recent evidence suggests that branching pathways of sphingolipid metabolism mediate either apoptotic or mitogenic responses depending on cell type and the nature of the stimulus. Events involving SM metabolites and CA in particular include proliferation, differentiation and growth arrest as well as the induction of apoptosis. An improved understanding of SMase-dependent signaling may afford relevant insights into the pathogenesis of diseases and provide novel strategies and selective targets for a therapeutic intervention e.g. in cancer, cardiovascular and neurodegenerative diseases, HIV and septic shock. This article briefly summarizes the role of SMases in signaling pathways, its potential contribution in the development and maintenance of various pathobiological states and analyzes the perspective of a potentially isotype-specific inhibition of SMases as a novel therapeutic concept.

PMID: 11465070 [PubMed - indexed for MEDLINE]

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