

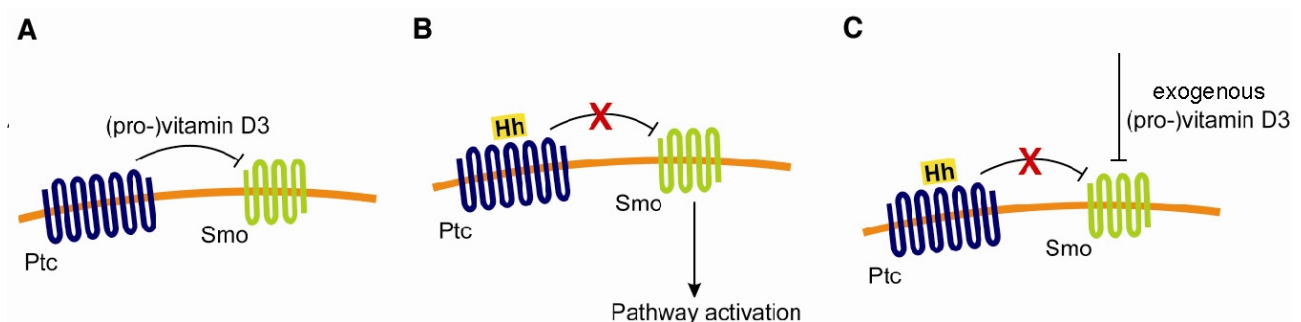


Licensing Opportunity

Therapeutic applications of Vitamin D3 in cancer

Market sector(s): Cancer therapies, gastroenterology.

Summary: This patent application covers the use of (pro-)vitamin D3 for the treatment of cancers of the upper gastrointestinal tract. (pro-)vitamin D3 (*cholecalciferol*) was identified as the endogenous inhibitory compound for the developmental Hedgehog pathway. Although the Hedgehog pathway is mostly known to be involved in embryonic development, it is also active in the adult organism. For instance, excessive activation of this pathway is known to be causative in cancers.



Key benefits: Inactivation of the Hedgehog pathway with a naturally occurring and known safe compound should prove a promising therapeutic option for (gastro-intestinal) cancer. Side effects of vitamin D supplementation, such as hypercalcemia, occur only at very high doses.

Applications: The applications for (pro)vitamin D3 include all the known cancers that are due to an excessive activation Hedgehog pathway activation such as medulloblastoma, basal cell carcinoma, prostate cancer, pancreatic cancer, small cell lung carcinoma and rhabdomyosarcoma.

Patent status: Patent application filed in July 2006 (PCT phase)

R&D Status: The inhibitory role of (pro-)vitamin D3 on the hedgehog pathway has been established both *in vitro* as well as *in vivo*. The consequent anti-tumour activity has been validated in *in vitro* experiments in which (pro-)vitamin D3 efficiently kills Hedgehog-dependent tumor cell lines (more efficient than the known Hedgehog inhibitor cyclopamine).