Technology Summary

Hepatocellular Carcinoma (HCC) is a type of liver cancer that is currently untreatable in the later stages. Staphylococcal nuclease and tudor domain 1 (SND1) functions as an oncogene in diverse cancers. It has been shown that for HCC, SND1 levels gradually increase and correlate with the stages of the cancer. In human HCC cells, overexpression of SND1 promotes the knockdown of SND1 abrogates. Therefore an effective inhibitor of SND1 may immerge as a clinically relevant therapeutic for HCC.

Experimental data has shown that SND1 overexpression alone might induce spontaneous HCC by promoting tumor initiating cells. A hepatocyte-specific SND1, mouse model, Alb/SND1, was created in which at one year 30% of the mice developed spontaneous HCC; thus, confirming oncogenic function of SND1. Experimentally, it was shown that pdTp is a highly selective, non-toxic inhibitor of SDN1. Results of the study show pdTp may be a viable option for treating HCC and may have the ability to be further developed to make better analogs with more potent SND1 inhibitors at low doses.

Technology Status

Research tool
This technology currently exists as a mouse model.

This technology is available for licensing to industry for further development and commercialization.