



## Short Article

# World Cancer 2021: Immune tumor suppressor gene discovery and its suppression mechanism - Shulin Li - MD Anderson Cancer Center, USA

**Shulin Li**

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## Biography

Shulin Li has his expertise in evaluation and passion in tumor immunology and immune therapy. His focus is on IL12 family cytokines and its negative regulators as demonstrated in the recent publications in Science Advances and Nature Communication. He is the co-inventors for multiple type of IL12 and Fgl2 based cell therapy.

## Abstract

Hepatocellular carcinoma (HCC) is the leading cause of cancer deaths worldwide, and while ongoing research has improved our understanding on this tumor initiation and progression, more research is needed to fully understand the biology of this disease for developing effective treatment. Our team discovered WSX1 acts as a novel class of tumor suppressor in HCC—'immune' tumor suppressor, effectively downregulating neoplastic PD-L1 expression in abnormal hepatocytes or HCC cells to boost immune surveillance as shown in NRAS/AKT-oncogenic driven HCC mouse models, WSX1 knockout model, human tissue microarrays, WSX1 overexpression or downregulation models, and molecular and immune profiling tools. The suppression of PD-L1 in abnormal hepatocytes and HCCs by WSX1 is through destabilization of a novel subtype of AKT protein. This result uncovered novel target for cancer immunotherapies to treat this disease. Learn more in Nature Communications.