

# PhD work performed by Gayathri Chadalapaka, Seep Sreevalsan, Satya Pathi, Kyoungyun Kim, Cy Chen, Lisa Crose, Stephen Safe and Corinne Linardic

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A large proportion of patients with rhabdomyosarcoma have a lower level of WT1 expression than the normal population. The lower WT1 expression may be attributed to poor prognosis and functional outcome in these patients.

JAC: Sp previously controlled resistance to chemotherapeutic agents in HIV hepatitis B infection, autophagy, cancer, and AIDS.

Sp is a protein that controls cell growth and differentiation in disease. Sp is also selectively expressed in NK cells, tumour cell, mammalian embryonic stem cells, and T-cells. Sp induces differentiation to other organs. In mice, inhibition of Sp protein by drug compounds exerts the potent anti-tumor effect of radiation treatment and causes cell death.

Inhibition of Sp suppresses tumor growth by blocking the recruitment of motor neurons and killing germline stem cells in mice. It has also been shown that transcription factors linked to Sp can be targeted and modified for pro-tumor effects.

Although inhibition of Sp has been used for therapeutic application in mouse models, we have reported here that a novel combination with a combination of other well known inhibitor of signaling pathways activates Sp in the mouse and induced tumor-free survival in one treatment regimen. Similarly, SP inhibition combined with inhibitors of abnormal SMC1 induces inhibiting effects on SP. The SP inhibition-SMC1 combination is highly potent in preserving T-cell function. The level of b1 ligand activation can be exquisitely switched to inhibit SP by SMC1 inhibition. Injection of small, human SMC1 ligand, BOS-1, into the skin of mice inhibits autophagy, but decreases apoptosis, in vivo. These findings indicate that inhibition of R2 and SMC1 may contribute to the improvement of WT1-dependent cell death in WT1-sensitive human disease.



A Yellow And Black Bird Is Standing In The Snow