

Title:- A Novel Molecular Degradar for the Regulation of the NF- κ B Pathway for Non-small Cell Lung Cancer Treatment.

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Non-small cell lung cancer (NSCLC) is one of the leading causes of cancer-related mortality globally. The NF- κ B pathway has been found to be crucial in cancer signaling and its inhibition has been proposed as a potential treatment. Compound 29 is an AI designed compound which acts as a molecular glue degrader, targeting the degradation of the p65 protein which is associated with the NF- κ B signalling pathway. Herein, we aim to investigate 1) the anti-proliferative and migratory properties of the proposed compound with relation to sortilin and 2) the regulation of the NF- κ B signalling cascade. Our results supported that compound 29 sufficiently slowed down the proliferation and the migration of NSCLC, and efficiently inhibited the NF- κ B pathway. Interestingly, the regulation of sortilin enhanced cellular death and the delay of cell metastasis. To conclude, the novel compound exhibited inhibitory and anti-cancer properties thus making it a promising therapeutic strategy for cancers upregulating the NF- κ B pathway.