

International Conference and Exhibition on **Lung Disorders & Therapeutics** July 13-15, 2015 Baltimore, Maryland, USA

Anti-tumor effect of Novel Thalidomide dithiocarbamate analogs on Human lung cancer A549 cells

Bishoy Y A El-Aarag
Menoufia University, Egypt

Lung cancer is the leading cause of cancer-related mortality in the world and non-small cell lung cancer (NSCLC) is the most common form of lung cancer. Numerous evidences had shown that thalidomide has potential for the inhibition and therapy of cancer. The present study aimed to investigate the anti-tumor effect of novel two thalidomide dithiocarbamate analogs towards human lung cancer A549 cells. The anti-proliferative, apoptotic and migration effects of lung cancer cells induced by thalidomide analogs were examined. Also, A549 cells were studied in tumor xenograft model. Our results revealed that thalidomide analogs exhibited anti-proliferative and apoptotic effect more than thalidomide itself. Also, analogs 1 and 2 suppressed the expression level of VEGF₁₆₅ by 42% and 53.25% and MMP-2 by 45% and 52% respectively. Moreover, thalidomide analogs 1 and 2 showed potent anti-tumor activity *in vivo* as they reduced the tumor volume by 30.11% and 53.52% respectively while thalidomide recorded 10.3% compared to vehicle control. Taken together, our study improved that thalidomide dithiocarbamate analogs are more potent anti-tumor and anti-angiogenic agents with more pronounced effect than thalidomide itself.

Biography

Bishoy El-Aarag has awarded PhD degree in the field of medical Biochemistry (Cancer Science and Therapy) through a scientific channel between Egypt (Menoufia University) and Japan (Okayama University). He works as a lecturer of Biochemistry at Faculty of Science, Menoufia University, Egypt.

bishoy.yousef@gmail.com

Notes: