Accepted Manuscript

Title: Neurokinin-1 receptor (NK1R) inhibition sensitizes APL cells to anti-tumor effect of arsenic trioxide via restriction of NF-κB axis: Shedding new light on resistance to Aprepitant

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PII: S1357-2725(18)30180-8
DOI: https://doi.org/10.1016/j.biocel.2018.08.010
Reference: BC 5403

To appear in: *The International Journal of Biochemistry & Cell Biology*

Received date: 19-5-2018
Revised date: 16-7-2018
Accepted date: 17-8-2018

Please cite this article as: Bashash D, Safaroghli-Azar A, Bayati S, Razani E, Pourbagheri-Sigaroodi A, Gharehbaghian A, Momeny M, Sanjadi M, Rezaie-Tavirani M, Ghaffari SH, Neurokinin-1 receptor (NK1R) inhibition sensitizes APL cells to anti-tumor effect of arsenic trioxide via restriction of NF-κB axis: Shedding new light on resistance to Aprepitant, *International Journal of Biochemistry and Cell Biology* (2018), https://doi.org/10.1016/j.biocel.2018.08.010

Neurokinin-1 receptor (NK1R) inhibition sensitizes APL cells to anti-tumor effect of arsenic trioxide via restriction of NF-κB axis: Shedding new light on resistance to Aprepitant

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Abstract

While a batch of efforts are fastened on synthesizing the novel targeted anti-cancer agents, recent investigations have achieved a breakthrough in identifying a favorable anti-tumor activity for some supportive drugs, which their safety have been confirmed thus far. The results of the present study highlighted the efficacy of Aprepitant, an oral antagonist of the neurokinin-1 receptor (NK1R), against both APL (NB4) and pre-B ALL (Nalm-6) cell lines; however, a differential sensitivity pattern was found in these cells. To the best of our knowledge, this is the first time that the molecular mechanisms of resistance to Aprepitant have been investigated and, herein, we proposed that the