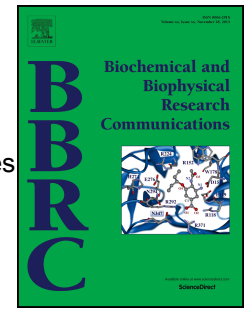
# Accepted Manuscript




A novel alkaloid, evodiamine causes nuclear localization of cytochrome-c and induces apoptosis independent of p53 in human lung cancer cells

Vijay Mohan, Rajesh Agarwal, Rana P. Singh

PII: S0006-291X(16)31152-4

DOI: 10.1016/j.bbrc.2016.07.037

Reference: YBBRC 36114

To appear in: *Biochemical and Biophysical Research Communications*

Received Date: 30 June 2016

Accepted Date: 7 July 2016

Please cite this article as: V. Mohan, R. Agarwal, R.P. Singh, A novel alkaloid, evodiamine causes nuclear localization of cytochrome-c and induces apoptosis independent of p53 in human lung cancer cells, *Biochemical and Biophysical Research Communications* (2016), doi: 10.1016/j.bbrc.2016.07.037.

## Graphical Abstract

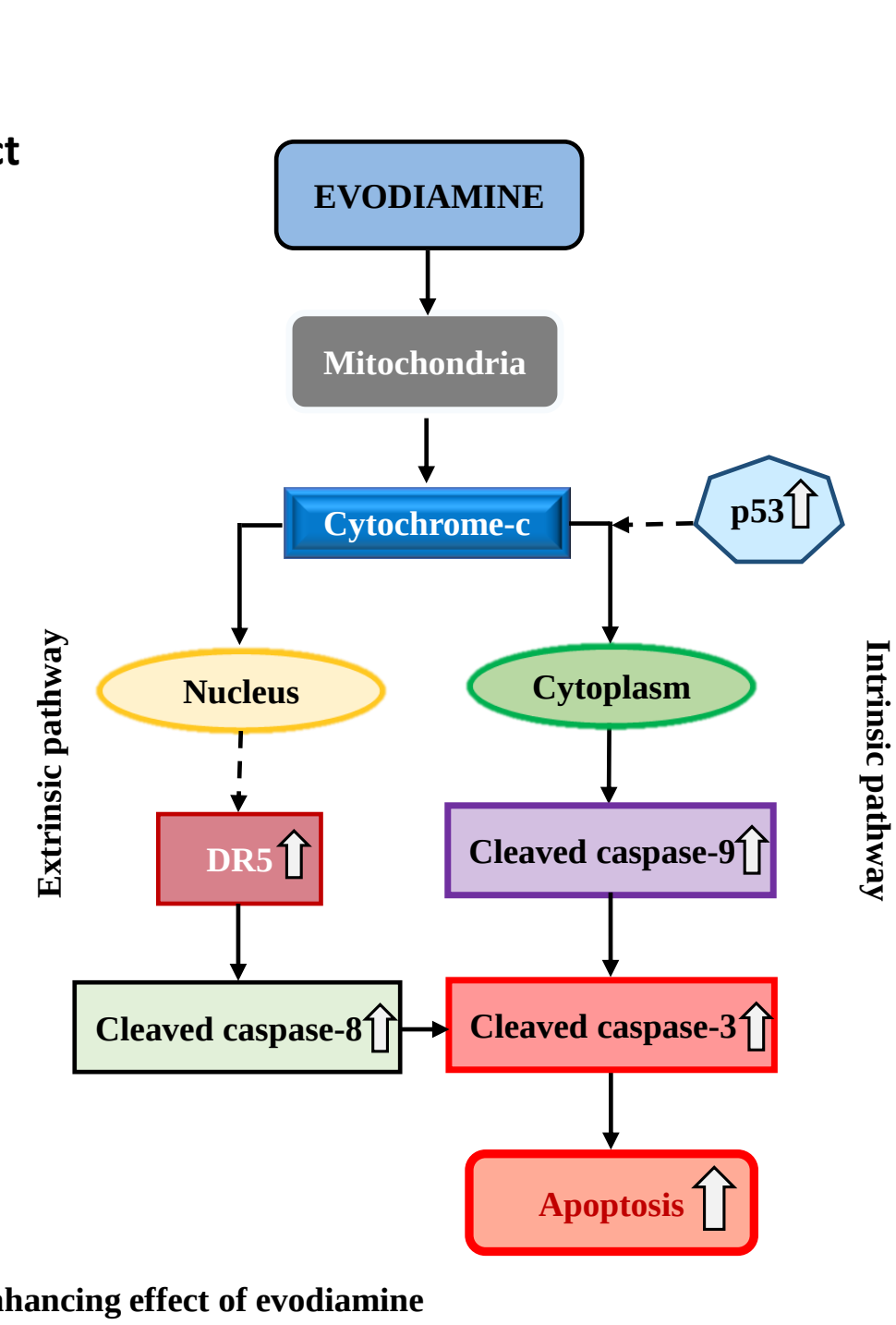



**Figure:** Evodiamine-induced mechanism of apoptosis in A549 lung cancer cells. Evodiamine induced the release of mitochondrial cytochrome-c in both cytosol and mitochondria and activated both intrinsic and extrinsic pathways. It activates p53 phosphorylation that further initiates apoptosis through intrinsic pathway. Evodiamine increased the expression of DR5 which could be linked to nuclear cytochrome-c, and enhanced cleaved caspases-8, and in p53 inhibitory condition down-stream it activated caspase-3 to trigger apoptosis.