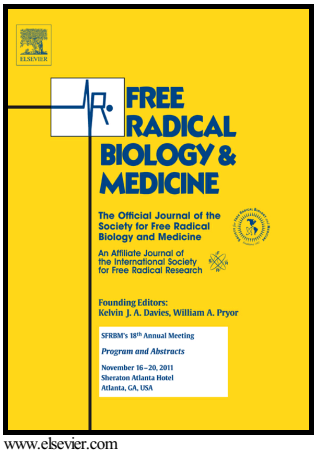
Synergistic Enhancement of Topotecan-Induced Cell Death by Ascorbic Acid in Human Breast MCF-7 Tumor Cells

Birandra K. Sinha, Thomas J. van 't Erve, Ashutosh Kumar, Carl D. Bortner, Ann G. Motten, Ronald P. Mason



www.elsevier.com

PII: S0891-5849(17)31160-7
DOI: https://doi.org/10.1016/j.freeradbiomed.2017.10.377
Reference: FRB13494

To appear in: *Free Radical Biology and Medicine*

Received date: 31 July 2017
Revised date: 20 October 2017
Accepted date: 23 October 2017

Cite this article as: Birandra K. Sinha, Thomas J. van 't Erve, Ashutosh Kumar, Carl D. Bortner, Ann G. Motten and Ronald P. Mason, Synergistic Enhancement of Topotecan-Induced Cell Death by Ascorbic Acid in Human Breast MCF-7 Tumor Cells, *Free Radical Biology and Medicine,* https://doi.org/10.1016/j.freeradbiomed.2017.10.377

REVISED-2 **FRBM-D-17-00732**

Synergistic Enhancement of Topotecan-Induced Cell Death by Ascorbic Acid in Human Breast MCF-7 Tumor Cells.

Birandra K. Sinha[1*], Thomas J. van 't Erve[1], Ashutosh Kumar[1], Carl D. Bortner[2], Ann G. Motten[1] and Ronald P. Mason[1]

[1]Immunity, Inflammation and Disease Laboratory, and [2]Laboratory of Signal Transduction, National Institute of Environmental Health Sciences, NIH, Research Triangle Park, North Carolina, USA

Dr. Birandra K. Sinha: Phone 919-541-4751: e-mail: sinha1@niehs.nih.gov

Abbreviations: Topotecan, TPT; Ascorbic Acid, AA; Topoisomerase, Topo; Electron Spin Resonance, ESR; Horseradish Peroxidase, HRP; Reduced Glutathione, GSH; Oxidized Glutathione, GSSG; 5,5-Dimethyl Pyrroline-1-N-oxide, DMPO; Reactive Oxygen Species, ROS.