

3rd International Conference and Exhibition on **Biowaivers, Biologics & Biosimilars**

October 27-29, 2014 Hyderabad International Convention Centre, Hyderabad, India

The Indian pharmaceutical industries should support dichloroacetate (DCA): A new potential metabolic-targeting drug available at low price for cancer treatment

M Manasa Rekha
Annamacharya College of Pharmacy, India

In order to reduce the cost of present cancer drugs here is the low cost cancer drug. At this point the trials of systemic anticancer therapy cannot happen without industry support, which suppresses the potential of many promising drugs that might not be financially attractive for pharmaceutical manufacturers. In that sense, the clinical evaluation of DCA must be carried out by government and should release this drug in the market at low prices for the welfare of cancer patients. DCA Therapy: The unique metabolism of most solid tumors (aerobic glycolysis, i.e., Warburg effect) is not only the basis of diagnosing cancer with metabolic imaging but might also be associated with the resistance to apoptosis that characterizes cancer. The glycolytic phenotype in cancer appears to be the common denominator of diverse molecular abnormalities in cancer and may be associated with a (potentially reversible) suppression of mitochondrial function. The generic drug dichloroacetate is an orally available small molecule that, by inhibiting the pyruvate dehydrogenase kinase, increases the flux of pyruvate into the mitochondria, promoting glucose oxidation over glycolysis. This reverses the suppressed mitochondrial apoptosis in cancer and results in suppression of tumor growth *in vitro* and *in vivo*. Here is the scientific and clinical rationale supporting the rapid translation of this promising metabolic modulator in early-phase cancer clinical trials.

manasarekharoyal@gmail.com