

species and other free radicals such as nitric oxide (NO) (Schoengen et al., 1988; Pietrangelo et al., 1998), which has been associated with inflammation

Present first-line drug therapy for osteoarthritis involves the use of NSAIDs. The chronic use of these agents can lead to a number of serious side-effects, many of which are related to prostaglandin inhibition in vital organs leading to one of the most common serious side effects of NSAIDs namely gastropathy which is however, inapplicable on diacerein.

The effects of diacerein are due to potent inhibition of the production and activity of IL-1 and other catabolic cytokines expressed in osteoarthritis. This in turn prevents cytokine-induced connective tissue destruction and inhibition of cartilage repair. The effects of diacerein on IL-1 concentration and activity occur at the cell membrane pre-membrane effects and also within the cell post-membrane effects (TRB Artrodar monograph, 1999).

Pre-membrane effects of diacerein are (i) reduces the sensitivity of chondrocytes to IL-1 by reducing IL-1 receptor levels on the cell surface, (ii) indirectly increases production of IL-1ra (the natural inhibitor of IL-1 receptor binding) in human cartilage through decreased NO production, which decreases IL-1 activity.