the uPA receptor (uPA-r), uPA activates plasminogen to form active plasmin. Plasmin converts inactivated pro-MMPs to activated MMPs leading to further degradation of the extracellular matrix (Carmona and Prades, 2009; Martel-Pelletier et al., 1999).

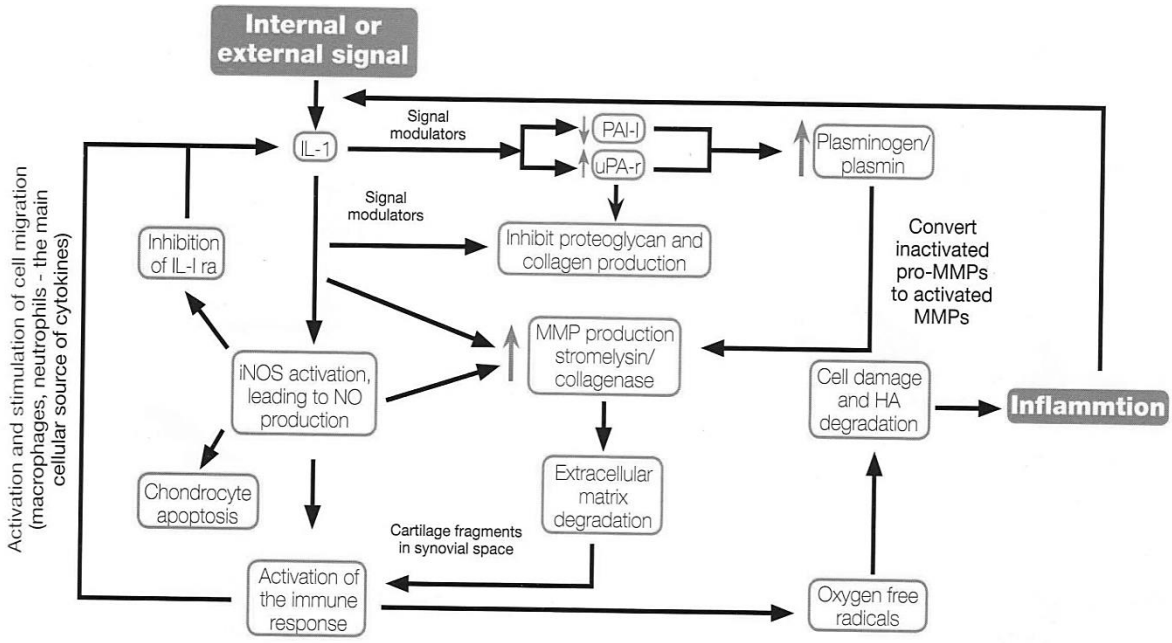

Figure 3: Cartilage breakdown (Novartis osteocerein brochure, n.d.)

2. Triggering synovial membrane inflammation (Carmona and Prades, 2009): the inflammatory cascade is triggered by a signal (e.g. homeostasis disturbance, tissue damage) that activates the monocyte/macrophage system. Cytokines such as IL-1 are then released, which induce the expression of inflammatory mediators, leading to cell damage. IL-1 has been shown to stimulate its own expression and that of other inflammatory cytokines in chondrocytes. It also increases the production of macrophage inflammatory protein-1ß (MIP-1ß) by chondrocytes. Cell damage releases membrane phospholipids, which are converted by phospholipase A_2 into arachidonic acid. Arachidonic acid is further