

**Viability of an in Vitro Chondrocyte line supported by
Adenosine, Lignocaine and
Magnesium (ALM) - GOAL: commence Feb
2016**

Level II: Experimental

Immunological modulators produced by the body called cytokines can worsen cartilage damage due to musculoskeletal conditions. It has been proposed that a solution of adenosine, lignocaine and magnesium (ALM) could play a physiological role in the regulation of chondrocyte (cartilage cell) activity. Although these chemicals have been used separately in previous studies and not shown to have any adverse effects to joint cartilage, they have not been used together. Before human trials commence, it is imperative to see if the solution is damaging to chondrocytes in vitro, and at what concentrations. We intend to assess damage to the chondrocytes by measuring glycosaminoglycans (GAGs) and collagen production, which are important in their function in maintaining cartilage health. Ultimately, the study will assess if ALM is safe for intra-articular application in human trials.