

New approach to arthritis treatment could avoid serious side-effects

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(Medical Xpress)—A new approach to arthritis treatment, which avoids unforeseen side-effects by delivering drugs exclusively to affected inflamed joints, has been developed by researchers at Queen Mary University of London.

In a study highlighted in *Nature Rheumatology*, the team developed antibodies that are specific to damaged arthritic cartilage. When drugs

are fused to these antibodies they are delivered specifically to the arthritic joints, whilst avoiding side effects such as an increased risk of infections.

As yet there is no cure for [arthritis](#) but the condition may be controlled. Treatment currently involves painkillers, non-steroidal anti-inflammatory drugs, steroidal tablets or a second group of [drug](#) that can suppress inflammation and possibly improve disease outcome.

These small molecule drugs, called disease modifying anti-rheumatoid drugs (DMARDs) suppress inflammation. Newer [biologic drugs](#) which are designed to block inflammation signals are beneficial, but they have serious side effects, because they cause systemic immunosuppression.

Lead author Dr Ahuva Nissim explains "We believe that our targeted approach may become one of the new ways to treat arthritis patients.

"Targeting of biologic drugs to the inflamed joint will result in high local concentrations and low systemic concentrations, increasing efficacy while minimising [side effects](#). Additionally, a lower total dose may be effective, thereby reducing the cost of treatment."

Rheumatoid arthritis is the second most common form of arthritis in the UK. It is an autoimmune disease that causes inflammation in the joints, and is characterised by the abnormal immune response of the body against joint tissues normally present in the body.

Rheumatoid arthritis causes long term inflammation in the synovium – which is found at the bone joints – leading to cartilage and bone erosion and, eventually, pain and deformation.

Provided by Queen Mary, University of London

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