New attack on pain

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A research team from the University of Melbourne is working on a new therapy that can potentially control the pain caused by diseases such as rheumatoid arthritis and osteoarthritis.

The research relates to a family of molecules firstly discovered in Melbourne that applied to blood cell development. One of these, granulocyte macrophage colony-stimulating factor or GM-CSF, acts as a messenger between cells acting at a site of inflammation.

Professor John Hamilton has posed the question: could blocking GM-CSF action lead to a new treatment for inflammatory diseases? In experimental models of rheumatoid arthritis, Professor Hamilton and Dr Andrew Cook had previously shown that blocking GM-CSF function with an antibody suppressed the disease leading to clinical trials which are already showing patient benefit.

They have now shown, in a paper that has just appeared in the world's top ranking arthritis journal, *Annals of the Rheumatic Diseases*, that GM-CSF depletion also suppresses pain in such models; they have also noted similar efficacy in an osteoarthritis experimental model.

"Without a doubt, quality of life and to be free from pain are important issues for people suffering with arthritis-related conditions" said Professor Hamilton.

Rheumatoid arthritis is a debilitating condition with the peak incidence being in people in their 30s and 40s. It is more common in women than

in men.

"With our ageing population, the more common condition of osteoarthritis impacts more on our community and medical resources. A new therapy that can block such painful conditions would have massive benefits for health providers and governments in the future" said Dr Cook.

Provided by University of Melbourne