Newly identified drug target in rheumatoid arthritis paves way for development of new therapies

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University of Melbourne researchers have identified a protein involved

in rheumatoid arthritis-induced inflammation that could lead to new drug treatments for people who do not respond to current therapies.

Arthritis is Australia's most common chronic disease and affects more than 3.5 million people. Rheumatoid arthritis (RA) affects about one per cent of the population and is one of the most severe forms of the disease.

It is characterised by debilitating, painful inflammation that causes irreversible joint damage if untreated.

While there is no known cure for RA, current treatments that aim to manage the disease can lead to side effects and have limited effectiveness in some patients.

Recent research has detected a protein involved in mediating inflammatory processes, namely CCL17, in increased amounts in the synovial fluid and blood of RA patients compared with healthy individuals.

Published in the *Journal of Biological Chemistry*, the new study investigated the expression of CCL17 in immune cells and identified at the molecular level how CCL17 is regulated as inflammatory disease progresses.

University of Melbourne researcher Dr. Adrian Achuthan said in collaboration, academic and industry researchers would now investigate whether CCL17 was a suitable drug for RA.

Dr. Achuthan said anti-TNF therapy is among the most effective treatments for RA. However, some patients do not respond, highlighting the need for alternative therapies.

"Based on the new data, neutralising CCL17 or its regulators can

potentially be beneficial in treating RA," he said. "In addition, given the role of CCL17 in pain, anti-CCL17 therapy can have much broader application."

Provided by University of Melbourne

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