

**Technology**

Method of developing therapeutic agents for rheumatoid arthritis

Inventor

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Key Features

- Could prove to be a valuable research tool and drug screening tool
- Multiple applications including rheumatoid arthritis, systemic lupus erythematosus inflammation, and other rheumatic conditions

Stage of Development

Conceptual stage

Keywords

- Therapeutic
- Rheumatoid arthritis
 - Fibrin
 - Disease-modifying anti-rheumatoid drug
 - Inflammation
 - Synovial joint

Patent Status

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Pro-Inflammatory Fibrinopeptide (VA Reference No. 00-045)

Unique method that may lead to the design and development of an effective disease-modifying anti-rheumatic drug

Technology

The Department of Veterans Affairs has discovered and characterized a new and distinct pathway driving inflammation in joints afflicted by rheumatoid arthritis (RA) and/or other inflammatory diseases, which may lead to the design and development of an effective disease-modifying anti-rheumatic drug (DMARD).

Description

The VA technology is based on a discovery of the relationship of a tetrapeptide to RA. Knowing that a specific small molecule (the tetrapeptide) reacts with a receptor, most likely a protein, on the surface of the synovial fibroblast, makes it feasible to identify the receptor with the aid of genetic databases, to clone it, and to confirm its identity as the receptor for the tetrapeptide. Once identified and cloned, the receptor can become a powerful research tool. If it proves to be involved in a critically important pathway for the inflammation of RA, it could be used to design powerful DMARDs. This new approach of identifying a molecular interaction involved with the disease process and experimenting with drugs to block it is considered an exciting advancement in the search for new drugs and treatments against rheumatic diseases.

Competitive Advantage

The subject technology appears to have potential applications in combating inflammation in synovial joints, such as RA, and inflammation associated with systemic lupus erythematosus and other rheumatic conditions.

This invention:

- Could prove to be a valuable tool in exploring the efficacy of clinical RA treatments.
- Could be used to identify, isolate, and potentially clone the cell receptor to which the fibrinoprotein sequence is identified.

Status

The Department of Veterans Affairs is looking for a partner for further development and commercialization of this technology through a license, and the VA inventors are available to collaborate with interested companies through a Cooperative Research and Development Agreement (CRADA).