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Sergey S. Laev, Nariman F. Salakhutdinov

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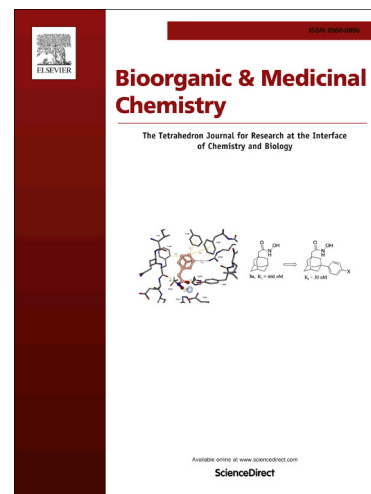
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Anti-arthritic agents: Progress and potential*

Sergey S. Laev^{a,*}, Nariman F. Salakhutdinov^{a,b}

^a *Vorozhtsov Institute of Organic Chemistry, Siberian Division, Russian Academy of Sciences, pr. akademika Lavrent'eva 9, Novosibirsk, 630090, Russian Federation*

^b *Novosibirsk State University, Pirogova str. 2, Novosibirsk, 630090, Russian Federation*

ABSTRACT

Osteoarthritis and rheumatoid arthritis are the two most common types of arthritis. Cartilage breakdown is a key feature of both diseases which contributes to the pain and joint deformity experienced by patients. Therefore, anti-arthritis drugs are of great importance. The aim of this review is to present recent progress in studies of various agents against osteoarthritis and rheumatoid arthritis. The structures and activities of anti-arthritic agents, which used in medical practice or are in development, are presented and discussed. The effects and mechanisms of action of opioids, glucocorticoids, non-steroidal anti-inflammatory drugs, disease-modifying anti-rheumatic drugs, natural products derived from plants, nutraceuticals, and a number of new and perspective agents are considered. Various perspective targets for the treatment of osteoarthritis and rheumatoid arthritis are also discussed. Trials of good quality are needed to draw solid conclusions regarding efficacy of many of the studied agents. Unfortunately, to date, there is no pharmacologic agent proven to prevent the progression of both diseases, and there is an urgent need for further development of better anti-arthritic agents.

Keywords:

Cyclooxygenase, disease-modifying anti-rheumatic drugs, kinase, methotrexate, non-steroidal anti-inflammatory drugs, natural products, nutraceuticals, osteoarthritis, rheumatoid arthritis

* Corresponding author. Tel: +7-383-3309733; Fax: +7-383-3309752.
E-mail address: sergey@nioch.nsc.ru

* This review is primarily intended for chemists, but we hope it can be useful for professionals in the medical field.

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