

# Combination of enzymes and rutin to manage osteoarthritis symptoms: lessons from a narrative review of the literature

Yves Henrotin, Christoph Michlmayr, Stefanie Rau, Anne-Marie Quirke, Marco Bigoni, Michael A Überall.

## Background

Osteoarthritis (OA) is the most common joint disorder affecting

>300 million people worldwide



OA standard therapy is NSAIDs

Treatment with NSAIDs in OA is associated with:



Severe gastrointestinal complications



Cardiovascular events



Renal dysfunction

OEC therapy combines:



Bromelain



Trypsin



Rutin

Proteolytic enzymes

Plant flavonoid

OEC therapy has been investigated in various conditions:



OA



Surgery



Trauma

## Purpose and scope of narrative review



### Aim:

Summarize the evidence on the efficacy and safety profile of OECs specifically in the management of OA symptoms

## Key messages

Evidence suggests that OECs are as efficacious for the treatment of OA as NSAIDs as measured by:



Knee joint OA  
LAFI score<sup>1</sup>



Hip joint OA  
WOMAC pain score and quality of life<sup>2</sup>



Temporomandibular joint OA  
NRS for pain intensity<sup>3</sup>

Overall OECs are associated with fewer AEs than NSAIDs<sup>1</sup>

OEC

vs.

NSAID

14.7%

AEs

21.1%

5.9%

AEs leading to discontinuation

10.2%

Laboratory safety parameters were significantly lower in OEC vs NSAID ( $P<0.001$ )<sup>1</sup>

OEC therapy may serve as an effective treatment option for patients with OA due to similar efficacy and a more beneficial safety profile compared to NSAIDs such as diclofenac

Abbreviations: AE, adverse events; LAFI, Lequesne Algofunctional index, NRS, 10-11 point numeric rating scale; NSAID, nonsteroidal anti-inflammatory drugs; OA, osteoarthritis; OEC oral enzyme combination therapy; RCT, randomized controlled trial; WOMAC, Western Ontario and McMaster Universities Arthritis Index

References: 1. Ueberall et al., J Pain Res. 2016;9:941-61, 2. Klein et al., Clin Exp Rheumatol. 2006;24(1):25-30; 3. Jayachandran et al., J Clin Dis Res, 2017, 11,6, ZC09-ZC11

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