Volume 11 • Supplement 1 • May 2024

Osteoarthritis: A special issue from the European Journal of Rheumatology

- Special Issue on Osteoarthritis: Risk Factors and Treatment Strategies
- Senescence in OA
- Sex Difference in OA
- Chondrocalcinosis and Osteoarthritis
- Walking, Running, and Recreational Sports for Knee Osteoarthritis
- Plant-Based Foods and Healthy Diets in Knee Osteoarthritis
- Surgical Treatments for Osteoarthritis
- Evidence-Based Review of Nonsurgical Treatments
- Non-Surgical Therapies for OA of the Hand

Editor in Chief

George C. Tsokos D

Division of Rheumatology, Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, Massachusetts, USA

Managing Editor

Ahmet Mesut Onat D

Department of Rheumatology, Gaziantep Medical Park Hospital, Gaziantep, Turkey

Associate Editors

Xenofon Baraliakos 🕩

Department of Rheumatology, Ruhr-University Bochum, Bochum, Germany

Hèctor Corominas 🕩

Servei de Reumatologia, Hospital Universitari de la Santa Creu i Sant Pau, Barcelona, Catalonia, Spain

Guo-Min Deng 🕒

Department of Rheumatology, Union Hospital Affiliated to Tongji Medical College, Huazhong University of Science and Technology, Wuhan, China

Christian Hedrich

Department of Women's and Children's Health, Institute of Translational Medicine, University of Liverpool School of Life Sciences, Liverpool, UK. Department of Paediatric Rheumatology, Alder Hey Children's NHS Foundation Trust Hospital, Liverpool, UK

Bünyamin Kısacık 🕒

Department of Rheumatology, Gaziantep Medical Park Hospital, Gaziantep, Turkey

Seung-Ki Kwok 🕒

Seoul St. Mary's Hospital, The Catholic University of Korea, Seoul, Korea

Vasileios C. Kyttaris 🕒

Division of Rheumatology, Beth Israel Deaconess Medical Center and Harvard Medical School, Boston, MA, USA

Roger A. Levy 🗅

Department of Rheumatology, The State University of Rio de Janeiro, Rio De Janeiro, Brazil

Stmatis-Nick Liossis D

Division of Rheumatology, University of Patras School of Medicine, Patras University Hospital, Patras, Greece

Konstantinos M. Parperis 🕒

Division of Rheumatology, Department of Medicine, University of Cyprus School of Medicine, Nicosia, Cyprus

Carlo Perricone D

Rheumatology, Dipartimento di Medicina, University of Perugia, Perugia, Umbria, Italy

İsmail Sarı 🕒

Department of Rheumatology, Dokuz Eylül University School of Medicine, İzmir, Turkey

Amr H. Sawalha 🕒

Division of Rheumatology, Department of Pediatrics, Children's Hospital of Pittsburgh, University of Pittsburgh, Pittsburgh, PA, USA

Amir Sharabi

Division of Rheumatology, Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, MA, USA; Department of Clinical Immunology, Tel Aviv University Sackler Faculty of Medicine, Tel Aviv, Israel

Biostatistical Editor

İlker Ercan 🕩

Department of Biostatistics, Uludağ University School of Medicine, Bursa, Turkey

Owner and Responsible Manager

Ahmet Mesut Onat

Professor in Rheumatology



General Manager Ali Şahin

Finance Coordinator Sinem Fehime Koz

Journal Managers Deniz Kaya Irmak Berberoğlu Publications Coordinators Alara Ergin Irem Özmen Derya Azer Nisanur Atıcı Şeref Mert Gücün Web Specialist Erdem Ercivan

Project Assistant Batuhan Kara Contact Address: Büyükdere Cad. 199/6, 34394, Şişli, İstanbul, Turkey Phone: +90 212 217 17 00 E-mail: info@avesyayincilik.com

Editorial Board

Julian Ambrus

Division of Allergy, Immunology and Rheumatology, Buffalo School of Medicine, Buffalo, NY, USA

Iannis Adamopoulos

Division of Rheumatology, Allergy and Clinical Immunology, University of California Davis School of Medicine, California, USA

Nurullah Akkoc

Division of Rheumatology and Immunulogy, Department of Internal Medicine, Dokuz Eylul University School of Medicine, İzmir, Turkey

Sibel Zehra Aydın

Division of Rheumatology, Ottawa University School of Medicine, Ottawa, Canada

Ernest Brahn

Department of Rheumatology, UCLA School of Medicine, CA, USA

Afroditi Boulougoura

Department of Medicine, Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, MA, USA

Dimitrios Boumpas

Department of Internal Medicine and Rhematology, Clinical Immunulogy and Allergy, University of Crete, Crete, Greece

Juan Jesus Gomez Reino Carnata

Division of Rheumatology, Department of Medicine, Hospital Clinico Universitario, Choupana, Santiago de Compostela, Spain

David D Cruz

Louise Coote Lupus Unit, St Thomas' Hospital, London, UK

Haner Direskeneli

Department of Rheumatology, Pendik Training and Research Hospital, Marmara University, Istanbul, Turkey

Paul Emery

Leeds Institute of Rheumatic and Musculoskeletal Medicine, University of Leeds, Leeds, UK

Doruk Erkan

Department of Rheumatology, Hospital for Special Surgery, New York, NY, USA

Eugen Feis

Department of Rheumatology, Cooperation Partner of the Otto-von-Guericke University, Magdeburg, Germany

Cem Gabav

Division of Rheumatology, Geneva University Hospitals, Geneva, Italy

Francessco Del Galdo

Leeds İnstitiute of Rheumatic and Musculoskelatal Medicine, Leeds University, Leeds, UK

Conchi Castillo Gallego

Department of Rheumatology, Hospital Universitario La Paz, Madrid, Spain

Tamer A. Gheita

Department of Rheumatology, Cairo University School of Medicine, Giza, Egypty

Allan Gibofsky

Clinic of Rheumatology, Hospital for Special Surgery, New York, NY, USA

Dennis Mc Gonagle

Leeds Institiute of Rheumatic and Musculoskelatal Medicine, Leeds University, Leeds, UK

Vedat Hamuryudan

Division of Rheumatology, Depertment of Internal Medicine, İstanbul University School of Medicine, İstanbul, Turkey

Nicholas Manolios

Department of Rheumatology, Westmead Hospital, Sydney, Australia

Hilal Maradit Kremers

Department of Health Sciences Research, Collage of Medicine, Mayo Clinic, Minnesota, USA

Marco Mattuci-Cerinic

Department of Experimental and Clinical Medicine, Division of Rheumatology AOUC, University of Florence, Florence, Italy

Pier Luigi Meroni

Department of Rheumatology, University of Milan Clinical Sciences and Community Health, Milan, Italy

Devyani Misra

Division of Gerontology and Rheumatology, Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, Massachusetts, IJSA

Peter Nash

Physician And Rheumatologist, University Of Queensland School of Medicine, Brisbane, QLD, Australia

Seza Özen

Division of Pediatric Rheumatology, Department of Child Health and Diseases, Hacettepe University School of Medicine, Ankara, Turkey

Antonio Gonzales Martinez Pedroya

Division of Rheumatology, Department of Medicine, Hospital Clinico Universitario, Choupana, Santiago de Compostela, Spain

Claus Rasmussen

Department of Bioscience, Aarhus University, Aarhus, Denmark

Carlo Salvaran

Servizio di Reumatologia, Azienda Ospedaliera Arcispedale S. Maria Nuova, Emilia, Italy

Nancy Ann Shadick

Division of Rheumatology, Brigham and Women's Hospital, Harvard Medical School, Boston, USA

Yehuda Shoenfeld

Zabludowicz Center for Autoimmune Diseases, Sheba Medical Center, Sackler Faculty of Medicine, Tel-Aviv University, Tel-Aviv, Israel

Sekib Sokolovic

Clinic for Heart Diseases and Rheumatism, Clinical Center of University of Sarajevo, Sarajevo, Bosnia and Herzegovina

Isaac Ely Stillman

Department of Pathology and Cancer Research Institute, Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, Massachusetts, USA

John H. Stone

Massachusetts General Hospital Rheumatology Unit, Harvard Medical School, Boston, MA

Elias Toubi

Division of Allergy and Clinical Immunology, Bnai Zion Medical Center, Haifa, Israel

Konstantinos Tselios

Centre for Prognosis Studies in the Rheumatic Diseases, Toronto Western Hospital, University Health Network, Toronto, ON, Canada

Panayiotis Vlachoyiannopoulos

National and Kapodistrian University of Athens, Athens, Greece

Alvin Wells

Board-certified Rheumatologist Director, Rheumatology and Immunotherapy Center, Franklin, WI, USA

Hasan Yazıc

Department of Rheumatology, İstanbul University School of Medicine, İstanbul. Turkev



AIMS AND SCOPE

European Journal of Rheumatology (Eur J Rheumatol) is an international, open access peer reviewed journal committed to promoting the highest standards of scientific exchange and education. The journal is published quarterly on January, April, July and October.

The aim of the European Journal of Rheumatology is to cover various aspects of rheumatology for its readers, encompassing the spectrum of diseases with arthritis, musculoskeletal conditions, autoinflammatory diseases, connective tissue disorders, osteoporosis, translational research, the latest therapies and treatment programs. European Journal of Rheumatology publishes original articles, invited reviews, case based reviews, letters to the editor and images in rheumatology. The publication language of the journal is English.

The journal's target audience includes academicians, practitioners, specialists and students from all disciplines of rheumatology.

European Journal of Rheumatology is currently indexed in Web of Science-Emerging Sources Citation Index, PubMed Central, DOAJ, EBSCO, CINAHL, CNKI, Gale, and TUBITAK ULAKBIM TR Index.

European Journal of Rheumatology adheres to the principles outlined by the guidelines of ICMJE, WAME, EASE and COPE.

All published content of the European Journal of Rheumatology is available online at eurjrheumatol.org, free of charge.

Statements or opinions expressed in the manuscripts published in the European Journal of Rheumatology reflect the views of the author(s) and not the opinions of the editors, the editorial board and the publisher; the editors, the editorial board and the publisher disclaim any responsibility or liability for such materials.

European Journal of Rheumatology is an open access publication and the journal's publication model is based on Budapest Open Access Initiative (BOAI) declaration. Journal's archive is available online, free of charge at eurjrheumatol. org. European Journal of Rheumatology's content is licensed under a Creative Commons Attribution-NonCommercial 4.0 International License.

The journal is printed on an acid-free paper.

You can find the current version of the Instructions to Authors at: https://eurjrheumatol.org/en/instructions-to-authors-109.



Reprint requests and requests concerning advertising should be addressed to the publisher;

Publisher: AVES

Address: Büyükdere Cad. 199/6, 34394, Şişli, İstanbul, Turkey

Phone: +90 212 217 17 00 e-mail: info@avesyayincilik.com

avesyayincilik.com

\sim	N 15		A 15	ГС
-1		13		
O I	N		N	TS.
_	-	_	-	

<u>S1</u>	Editorial Special Issue on Osteoarthritis: Risk Factors and Treatment Strategies Devyani Misra
S3	Invited Reviews Senescence in Osteoarthritis: Overview of Mechanisms and Therapeutics Natalya Surmachevska, Jose Rubio
S7	Sex Difference in OA: Should We Blame Estrogen? Uyen-Sa D. T. Nguyen, Fiona R. Saunders, Kathryn R. Martin
S15	Chondrocalcinosis and Osteoarthritis: A Literature Review Stacey Ying Guo, Cassandra A. Lee, Barton L. Wise
S21	Walking, Running, and Recreational Sports for Knee Osteoarthritis: An Overview of the Evidence Dana Voinier, Daniel K. White
S32	A Literature Review on Plant-Based Foods and Dietary Quality in Knee Osteoarthritis Zhaoli Dai
<u>S41</u>	Surgical Treatments for Osteoarthritis Ilana Usiskin
S48	Evidence-Based Review of Nonsurgical Treatments for Knee and Hip Osteoarthritis Devyani Misra, David T. Felson
S53	Systematic Review of Non-surgical Therapies for Osteoarthritis of the Hand: An Update Haonan Mi, Christopher Oh, Tanveer Towheed