



A monthly international journal founded by Metro A. Ogrzyzlo

Editor-in-Chief

Earl D. Silverman

Deputy Editor-in-Chief

Eric M. Ruderman

Managing Editor

Carlyle Rodrigo

Associate Editors

Cheryl Barnabe

Joseph Beyene

Cynthia S. Crowson

John M. Davis, III

Jeffrey B. Driban

Sindhu R. Johnson

Alexis Ogdie

Christine A. Peschken

Website

jrheum.org

Guide for Authors

Complete instructions may be found at www.jrheum.org/guideforauthors. All articles must be submitted online at mc.manuscriptcentral.com/jrheum.

Publisher

The Journal of Rheumatology Publishing Co. Ltd.

Owned by the Canadian Rheumatology Association, a nonprofit organization and the national professional association for Canadian rheumatologists.



The Journal of Rheumatology publishes timely and original clinical papers on rheumatology and related fields. Publication of symposia on topics of interest are also considered.

Editorial Office

365 Bloor Street E.
Suite 901
Toronto, ON M4W 3L4
Canada
T: (416) 967-5155
F: (416) 967-7556
jrheum@jrheum.com

Assistant Managing Editor

Suzanne Urpez
surpez@jrheum.com

Manuscripts

Tina Jin
Lindsay MacNeil
manuscripts@jrheum.com

Editorial

Non Picart Riola
production@jrheum.com

Subscriptions

Trudy Deamude
subscriptions@jrheum.com

Accounting

Zameer Zahir
zzahir@jrheum.com

Reprints

reprints@jrheum.com

Permissions

jrheum.org/permissions
permissions@jrheum.com

Administration & Meetings

Valerie Bibb
meetings@jrheum.com

Advertising (Canada)

Matt McMullan
JLS Media
T: (514) 726-5640
mmcmullan@mediajls.com

Advertising (USA)

Jim Brady
T: (516) 742-7960
F: (516) 742-7908
jtbrady1@verizon.net

Advertising (Europe)

Oliver Webb
Oliver Webb Media
T: +44 (0)1252 901140
+44 (0)7966 530938
oliver@owmedia.co.uk

All advertising subject to editorial review. Acceptance of advertising does not imply endorsement by The Journal of Rheumatology.

Editorial Board

Graciela S. Alarcon (USA)

Joshua F. Baker (USA)

Xenofon Baraliakos (GERMANY)

Claire E. Barber (CANADA)

Timothy Beukelman (USA)

Maarten Boers (NETHERLANDS)

Matthew Brown (AUSTRALIA)

Ruben Burgos-Vargas (MEXICO)

Gerd R. Burmester (GERMANY)

Livia Casciola-Rosen (USA)

Alberto Cauli (ITALY)

Vinod Chandran (CANADA)

Laura C. Coates (UK)

John J. Cush (USA)

Maria I. Danila (USA)

Bhaskar Dasgupta (UK)

Christopher P. Denton (UK)

Atul A. Deodhar (USA)

Patrick H. Deseine (BELGIUM)

Marco Di Carlo (ITALY)

Maxime Dougados (FRANCE)

Lih Eder (CANADA)

David T. Felson (USA)

Oliver M. Fitzgerald (IRELAND)

Roy Fleischmann (USA)

Marvin J. Fritzler (CANADA)

Daniel E. Furst (USA)

Allan C. Gelber (USA)

Jon T. Giles (USA)

Dafna D. Gladman (CANADA)

Miguel A. González-Gay (SPAIN)

Laura Gonzalez-Lopez (MEXICO)

Peter C. Grayson (USA)

Gillian A. Hawker (CANADA)

Philip S. Helliwell (UK)

Marie Hudson (CANADA)

Robert D. Inman (CANADA)

David A. Isenberg (UK)

J. Charles Jennette (USA)

Beverly Johnson (USA)

Gurjit S. Kaeley (USA)

Edward C. Keystone (CANADA)

Dinesh Khanna (USA)

Joel M. Kremer (USA)

Chang-Fu Kuo (TAIWAN)

Robert G. Lambert (CANADA)

Robert B. Landewé (NETHERLANDS)

Ronald M. Laxer (CANADA)

Katy, Ying Ying Leung (SINGAPORE)

Geoffrey O. Littlejohn (AUSTRALIA)

Ennio Lubrano (ITALY)

Walter P. Maksymowycz (CANADA)

Marco Matucci-Cerinic (ITALY)

Gale A. McCarty (USA)

Chi Chiu Mok (HONG KONG)

Elena Myasoedova (USA)

Tuhina Neogi (USA)

Michael Nurmohamed (NETHERLANDS)

Terence W. O'Neill (UK)

Eliseo Pascual (SPAIN)

Theodore Pincus (USA)

Janet E. Pope (CANADA)

Manuel Ramos-Casals (SPAIN)

Angelo Ravelli (ITALY)

Philip C. Robinson (AUSTRALIA)

Alan M. Rosenberg (CANADA)

Nicolini Ruperto (ITALY)

Anthony S. Russell (CANADA)

Percival D. Sampaio-Barros (BRAZIL)

Jorge Sanchez-Guerrero (CANADA)

Rotraud K. Saurenmann (SWITZERLAND)

Enrique R. Soriano (ARGENTINA)

Matthew Stoll (USA)

Vibeke Strand (USA)

Tsutomu Takeuchi (JAPAN)

Yoshiya Tanaka (JAPAN)

William Tillett (UK)

Gunnar Tomasson (ICELAND)

Patompong Ungprasert (USA)

Murray B. Urowitz (CANADA)

Désirée van der Heijde (NETHERLANDS)

Suzanne M.M. Verstappen (UK)

Daniel J. Wallace (USA)

Michael M. Ward (USA)

Ulrich Weber (DENMARK)

Pamela F. Weiss (USA)

Daniel Wendling (FRANCE)

Frederick Wolfe (USA)

Yuqing Zhang (USA)

While the owner, publisher, and authors try to ensure that all materials in *The Journal of Rheumatology* are accurate, complete, and current, they make no guarantees or warranties as to such currency, completeness, or accuracy of the results to be obtained from accessing and using the materials. The publisher and owner do not endorse any information, advice, or other material. The owner, publisher, and authors expressly disclaim all representations, warranties of merchantability, or fitness for a particular purpose. They accept no responsibility or liability for damages or losses relating to any errors in or omissions from any material or from the use or inability to use such material. Printed by Britannia Printers Inc., Toronto.

Copyright © 2021. All rights reserved. Return postage guaranteed. PERIODICAL POSTAGE USPS 737-930 AT BUFFALO, NY, USA. US Postmaster send address changes to The Journal of Rheumatology, 1051 Clinton St., Buffalo, NY 14206-2823, USA.

The Journal of Rheumatology (ISSN 0315-162X) is published monthly by The Journal of Rheumatology Publishing Co. Ltd.

Publication office address: The Journal of Rheumatology, 365 Bloor Street East, Suite 901, Toronto, ON Canada M4W 3L4; Email: jrheum@jrheum.com. 1051 Clinton St., Buffalo, NY 14206-2823, USA.