

Journal of **Oral & Facial Pain**  
and **HEADACHE**  
Formerly *Journal of Orofacial Pain*



Founded by  
American Academy of Orofacial Pain  
European Academy of Craniomandibular Disorders

ISSN 2333-0384 (print)  
ISSN 2333-0376 (online)

**Publisher**

H. W. Haase

**Executive Vice President**

William G. Hartman

**Director, Journal Publications**

Lori A. Bateman

**Manuscript Editor**

Hallie Koontz

**Editorial Coordinator**

Fong Yuen

**Production Manager**

Diane Curran

**For advertising or subscription information contact:**

Quintessence Publishing Co, Inc  
4350 Chandler Drive, Hanover Park, Illinois 60133  
Telephone: (630) 736-3600  
Toll-free: (800) 621-0387, Fax: (630) 736-3633  
Advertising Email: plochner@quintbook.com  
Subscription Email: mhartman@quintbook.com  
Website: www.quintpub.com

**Subscription rates (includes online version):** Regular rate for North America is \$138 per year; \$384 institutional (Canadian subscribers add applicable GST). International rate (outside North America) is \$158 regular; \$404 institutional. International subscribers add \$20 to international rate for air mail. Student rate is \$78 per year (\$98 international); verification should accompany order. Single issue is \$38.

**Journal of Oral & Facial Pain and Headache** is published 4 times a year by Quintessence Publishing Co, Inc, 4350 Chandler Drive, Hanover Park, Illinois 60133. **Postmaster:** Send address changes to Quintessence Publishing Co, Inc, 4350 Chandler Drive, Hanover Park, Illinois 60133.

Copyright © 2017 by Quintessence Publishing Co, Inc. All rights reserved. No part of this journal may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording, or any information and retrieval system, without permission from the publisher through the Copyright Clearance Center. Single photocopies of single articles may be made for personal use as allowed by national copyright laws. Please contact the Copyright Clearance Center for permission requests and to pay fees: Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923 (www.copyright.com).

The views expressed herein are those of the individual authors and are not necessarily those of the publisher. Information included herein is not professional advice and is not intended to replace the judgment of a practitioner with respect to particular patients, procedures, or practices. To the extent permissible under applicable laws, the publisher disclaims responsibility for any injury and/or damage to persons or property as a result of any actual or alleged libelous statements, infringement of intellectual property or other proprietary or privacy rights, or from use or operation of any ideas, instructions, procedures, products, or methods contained in the material therein.

**Submit manuscripts** at [www.manuscriptmanager.com/jop](http://www.manuscriptmanager.com/jop). The publisher assumes no responsibility for unsolicited manuscripts.

**Advertising Policy:** All advertising appearing in the **Journal of Oral & Facial Pain and Headache** must be approved by the editorial staff. The publication of an advertisement is not to be construed as an endorsement or approval by the journal or its publisher.

Printed in USA.

*Journal of Oral & Facial Pain and Headache* is abstracted and/or indexed in MEDLINE/PubMed, Science Citation Index, Science Citation Index Expanded, Current Contents/Clinical Medicine, BIOSIS Previews, and the Cumulative Index to Nursing and Allied Health Literature (CINAHL).

**EDITOR-IN-CHIEF**

**Barry J. Sessle**, BDS, MDS, BSc, PhD, DSc(hc), FRSC

Professor  
Faculty of Dentistry, University of Toronto  
Toronto, Ontario, Canada

**ASSOCIATE EDITORS**

**Ilana Eli**, DMD

Professor  
School of Dental Medicine, Tel Aviv University  
Tel Aviv, Israel

**Greg M. Murray**, BDS, MDS, PhD, FRACDS, FICD

Professor  
Faculty of Dentistry, University of Sydney  
Westmead Hospital Center for Oral Health  
Westmead, New South Wales, Australia

**Sandro Palla**, Dr Med Dent

Professor Emeritus  
School of Dentistry, University of Zurich  
Zurich, Switzerland

**Christian S. Stohler**, DMD, Dr Med Dent

Professor and Dean  
College of Dental Medicine, Columbia University  
New York, New York, USA

**ABSTRACT EDITORS**

Lene Baad-Hansen, DDS, PhD  
Ramesh Balasubramaniam, BDS, MS  
Koichi Iwata, DDS, PhD  
Jonathan H. Smith, MD

**ACADEMY JOURNAL COMMITTEE**

Jeffrey P. Okeson, DMD, Chairman  
Charles Carlson, PhD  
Claude Catach, DDS  
Jin Woo Chung, DDS, PhD  
Antoon De Laat, LDS, GHO  
Robert Delcanho, BDS, MS  
Ming Lun Hsu, DDS, PhD  
Wilma A. Simoes, DDS  
Michel H. Steenks, DDS, PhD  
Thomas M. Wilkinson, MDS, MSc  
Dr Sessle and Associate Editors

*Journal of Oral & Facial Pain and Headache* is the official journal of the American Academy of Orofacial Pain, Asian Academy of Craniomandibular Disorders, Australian and New Zealand Academy of Orofacial Pain, European Academy of Craniomandibular Disorders, and Ibero-Latin American Academy of Craniomandibular Disorders.