

Essential reading for Canadian physicians

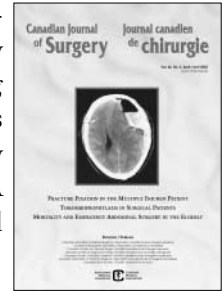
CMAJ



The CMA's flagship publication is Canada's leading peer-reviewed general medical journal. Every 2 weeks *CMAJ* publishes original research, commentary and review articles of interest to clinicians, as well as research updates, public health articles, news and reflective articles about the practice of medicine.

www.cmaj.ca

Canadian Journal of Surgery



CJS publishes original articles, observations on surgical practice, commentary and reviews to meet the continuing medical education needs of Canada's surgical specialists. Published every 2 months, this peer-reviewed CMA journal is sponsored by 7 leading surgical societies.

www.cma.ca/cjs

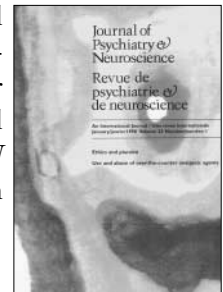
Clinical and Investigative Medicine



This bimonthly CMA journal publishes original research, reviews and commentary, as well as articles of importance to medical education, proceedings of symposia and clinical conferences. *CIM* is the official journal of the Canadian Society for Clinical Investigation.

www.cma.ca/cim

Journal of Psychiatry & Neuroscience



This CMA journal publishes original research and review papers in clinical psychiatry and neuroscience related to major psychiatric disorders for an international audience. Published 6 times a year, *JPN* is the official journal of the Canadian College of Neuropsychopharmacology.

www.cma.ca/jpn

Also from CMA Publications

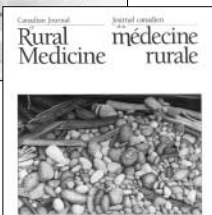
Canadian Association of Radiologists Journal



CARJ is a peer-reviewed specialty journal published on behalf of the Canadian Association of Radiologists. *CARJ* features original papers, case reports, review articles and a Residents' Corner, enhanced by numerous images, diagrams and photographs.

www.cma.ca/carj

Canadian Journal of Rural Medicine



This peer-reviewed journal focuses on original articles, clinical skills, practice experiences and policy issues of particular interest to rural physicians. The *Canadian Journal of Rural Medicine* is published quarterly for the Society of Rural Physicians of Canada.

www.cma.ca/cjrm

Canadian Journal of Emergency Medicine



CJEM is a forum for peer-reviewed research, commentary, case reports and other articles of interest to emergency care providers in rural, urban and academic settings. This journal is published every 2 months for the Canadian Association of Emergency Physicians.

www.caep.ca



For rates and ordering information contact CMA Member Service Centre free 888 855-2555

Editors-in-Chief / Rédacteurs en chef
RT Joffe, MD
SN Young, PhD

Editor Emeritus / Rédacteur émérite
YD Lapierre, MD

Editorial Office / Bureau éditorial
(Enquiries and correspondence on manuscripts
up to acceptance for publication /
Renseignements et correspondance au sujet
des manuscrits non encore acceptés pour
publication)

Managing Editor / Directrice de la rédaction
M Sproule-Jones
Journal of Psychiatry & Neuroscience /
Revue de psychiatrie & de neuroscience
Canadian Medical Association /
l'Association médicale canadienne
1867, prom. Alta Vista Dr.
Ottawa ON K1G 3Y6
Canada
Tel/Tél. 613 729-9545
Fax 613 729-9545
jpn.office@sympatico.ca

Editors / Rédacteurs
GB Baker, PhD
P Blier, MD, PhD
LT Young, MD, PhD

Editorial Advisory Board
Conseil de rédaction
P Boksa, PhD, Canada
M Bourin, MD, France
GD Burrows, MD, Australia
CL Cazzullo, MD, Italy
TN Chase, MD, USA
C de Montigny, MD, PhD, Canada
HC Fibiger, PhD, USA
S Garattini, MD, Italy
A Gjerris, MD, PhD, Denmark
P Grof, MD, PhD, Canada
KA Hawkins, PsyD, USA
T Higuchi, MD, Japan
RW Horton, MD, United Kingdom
S Kanba, MD, PhD, Japan
S Kutcher, MD, Canada
J Mendlewicz, MD, Belgium
SA Montgomery, MD, United Kingdom
B Müller-Oerlinghausen, MD, Germany
M Pollack, MD, USA
R Quirion, PhD, Canada
QA Rae-Grant, MD, Canada
GJ Sarwer-Foner, MD, USA
P Seeman, MD, PhD, Canada
DJ Stein, MD, South Africa
KG Todd, PhD, Canada
D Weinberger, MD, USA

© 2004 Canadian Medical Association /
Association médicale canadienne
ISSN 1180-4882

Publications Mail Agreement no. 40064383. Return undeliverable Canadian copies to CMA Member Service Centre, 1867 Alta Vista Dr., Ottawa ON K1G 3Y6; email cmamsc@cma.ca. USPS #016-037. USPS periodical postage paid at Champlain, NY, and additional locations. Return other undeliverable copies to International Media Services, 100 Walnut St., #3, PO Box 1518 Champlain NY 12919-1518.

Numéro de convention poste-publications 40064383. Retourner toutes copies canadiennes non livrées au Centre des services aux membres, Association médicale canadienne, 1867, prom. Alta Vista, Ottawa (Ontario) K1G 3Y6; courriel : cmamsc@cma.ca. USPS numéro 016-037. Frais postaux USPS au tarif des périodiques payés à Champlain (NY) et autres bureaux de poste. Retourner les autres copies non livrées à International Media Services, 100 Walnut St., #3, PO Box 1518 Champlain NY 12919-1518.

Printed by Tri-Graphic Printing, Ottawa, Ont. It appears in January, March, May, July, September and November.

La revue est imprimée par Tri-Graphic Printing, Ottawa (Ontario). Elle paraît en janvier, mars, mai, juillet, septembre et novembre.

Journal of Psychiatry & Neuroscience

Revue de psychiatrie & de neuroscience

Official Journal of the Canadian College of Neuropsychopharmacology
Revue officielle du Collège canadien de neuropsychopharmacologie
July / juillet 2004 www.cma.ca/jpn Vol. 29, No. 4

Editorial / Éditorial

- 248 How many good antidepressant medications have we missed?
P. Blier

CRSN Symposium: Focus on Depression, Part II Symposium du CRSN : le point sur la dépression, deuxième partie

- 252 The therapeutic role of 5-HT_{1A} and 5-HT_{2A} receptors in depression
P. Celada, M.V. Puig, M. Amargós-Bosch, A. Adell, F. Artigas
- 268 Transcranial magnetic stimulation (TMS) of the human frontal cortex: implications for repetitive TMS treatment of depression
T. Paus, J. Barrett

CRSN Symposium: Focus on Schizophrenia Symposium du CRSN : le point sur la schizophrénie

- 282 Using animal models to test a neurodevelopmental hypothesis of schizophrenia
B.K. Lipska
- 287 Postmortem investigations of the pathophysiology of schizophrenia: the role of susceptibility genes
W.R. Perlman, C.S. Weickert, M. Akil, J.E. Kleinman
- 296 Glutamate co-transmission as an emerging concept in monoamine neuron function
L.É. Trudeau

326 CCNP News and Views Nouvelles et opinions du CCNP

265 Classified Advertising / Annonce classée

AstraZeneca
Seroquel
4 clr. Bootlug
July 2003

Now available — the 2004 *Publications Catalogue*

Get your copy today!

The Canadian Medical Association's 2004 *Publications Catalogue* lists over 50 well-researched, evidence-based publications that are offered at significantly discounted rates for CMA members. **New in 2004...** registered users of **cma.ca** can order books online through the **cma.ca store**.

Contact the **CMA Member Service Centre** for your copy of the **CMA Publications Catalogue**.

email cmamsc@cma.ca
tel 888 855-2555
fax 613 236-8864

Publications Catalogue des publications

La version 2004 du *Catalogue des publications de l'AMC* vient de paraître

Demandez votre exemplaire dès aujourd'hui!

La version 2004 du *Catalogue des publications* de l'AMC présente plus de 50 ouvrages médicaux factuels et approfondis, offerts aux membres de l'AMC à prix spécial avantageux. **Nouveau en 2004...** Les usagers inscrits d'**amc.ca** peuvent commander des ouvrages en ligne à **la boutique amc.ca**

Pour obtenir votre exemplaire du *Catalogue des publications*, communiquez avec le **Centre des services aux membres de l'AMC**.

Courriel : cmamsc@cma.ca
Téléphone : 888 855-2555
Télécopieur : 613 236-8864

Online Bookstore
Now Available
see page 32 for details
La Librairie électronique
maintenant disponible
voir la page 32 pour plus d'information

Published by the
Canadian Medical Association
Publié par
l'Association médicale canadienne
1867, prom. Alta Vista Dr.
Ottawa ON K1G 3Y6

Associate Editor
Rédactrice associée
Patricia Lightfoot
patricia.lightfoot@cma.ca
tel 800 663-7336 x2108
fax 613 565-5471

Administration / Service administratif
Melanie Mooy, melanie.mooy@cma.ca

Translation / Traduction
Marie Saumure

Production
Kathryn A. Freamo
Nicole Barbeau, Carole Lalonde, Clara Walker

Online Publishing / Publication en direct
Holly Bodger
Jeremy Sims, Shirley Waddell

Advertising / Publicité
613 731-8610 x2127/2314; fax 613 565-7488;
advertising@cma.ca

Classified Advertising
Annonces classées
Beverly Kirkpatrick
Deborah Rodd

Display Advertising / Annonces publicitaires
Nancy Pope

Marketing and Advertising Sales
Marketing et publicité
Keith Health Care

Toronto: tel 905 278-6700 or
toll free/sans frais 800 661-5004
fax 905 278-4850
Montréal: tel 514 624-6979 or
toll free/sans frais 877 761-0447
fax 514 624-6707

info@keithhealthcare.com



All prescription drug advertisements have been cleared by the Pharmaceutical Advertising Advisory Board.

Toutes les annonces de médicaments prescrits ont été approuvées par le Conseil consultatif de publicité pharmaceutique.

Canada

We acknowledge the financial support of the Government of Canada, through the Canada Magazine Fund, toward our editorial costs.

Nous remercions le gouvernement du Canada d'avoir accordé son soutien financier à nos dépenses de publication par l'intermédiaire du Fonds du Canada pour les magazines.



President / Président
Sunil V. Patel

Secretary General / Secrétaire général
William G. Tholl

Acting Director, Publications
Directeur intérimaire, Publications
Lorne Ross

Editor-in-Chief, Publications
Rédacteur en chef, Publications
John Hoey

Associate Director, Publishing Services
Directrice associée, Services d'édition
Glenda Proctor

The *Journal of Psychiatry & Neuroscience* publishes original research articles and review papers in clinical psychiatry (adult and child) and neuroscience that relate to major psychiatric disorders, particularly schizophrenia, affective disorders and neurodegenerative diseases. The journal therefore provides a forum for original basic and clinical science research that will present its readership with an integrated perspective on current and emerging issues in clinical and biological psychiatry. In this respect, the *Journal of Psychiatry & Neuroscience* represents a new and unique concept in communication that will bring together the latest advances in both psychiatry and neuroscience.

La *Revue de psychiatrie & de neuroscience* publie des articles de recherches originales et des examens critiques en psychiatrie clinique (adulte et infantile) et en neuroscience, qui portent sur d'importants troubles psychiatriques et en particulier sur la schizophrénie, les troubles affectifs et les maladies neurodégénératives. La revue offre ainsi une tribune où l'on peut présenter des recherches originales en sciences fondamentales et cliniques, et qui exposera à ses lecteurs une perspective intégrée des enjeux courants en psychiatrie clinique et biologique. À cet égard, la *Revue de psychiatrie & de neuroscience* constitue un concept de communication innovateur des progrès les plus récents réalisés tant en psychiatrie qu'en neuroscience.

All editorial matter in the *Journal of Psychiatry & Neuroscience* represents the opinions of the authors and not necessarily those of the Canadian Medical Association (CMA). The CMA assumes no responsibility or liability for damages arising from any error or omission, or from use of any information or advice contained in the *Journal of Psychiatry & Neuroscience*, including articles, editorials, reviews, abstracts, letters and advertisements.

Tous les articles à caractère éditorial dans la *Revue de psychiatrie & de neuroscience* représentent les opinions de leurs auteurs et n'engagent pas l'Association médicale canadienne (AMC). L'AMC décline toute responsabilité civile ou autre quant à toute erreur ou omission ou à l'usage de tout conseil ou information figurant dans la *Revue de psychiatrie & de neuroscience* et les articles, éditoriaux, critiques, résumés, lettres et publicités y paraissant.

Advertisers' Index / Index des annonceurs

AstraZeneca
Seroquel 243, Outside Back Cover
Biogen Idex Canada Inc.
Avonex 250, 251
Janssen-Ortho Inc.
266, 267
Risperdal 245
Lundbeck Canada Inc.
Celexa 246, 247
Keppra 294, 295
Organon Canada Ltd.
Remeron Inside Back Cover
Wyeth
Effexor XR Inside Front Cover, 241, 280, 281

PRESCRIBING INFORMATION
Avonex 312, 313
Celexa 314, 315
Effexor XR 320, 321, 322, 323
Keppra 316, 317
Remeron 318, 319
Seroquel 311

Janssen-Ortho Inc.
Risperdal
4 clr. Bootlug
May