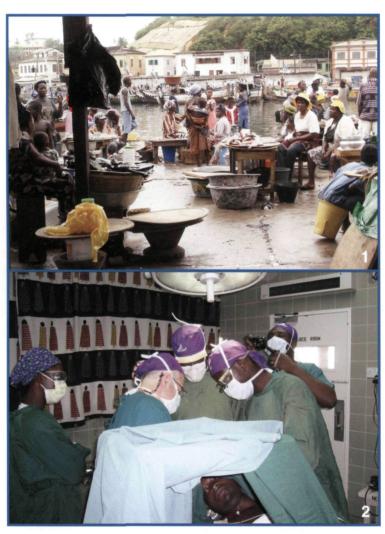


Volume 38 Number 2 March 2011



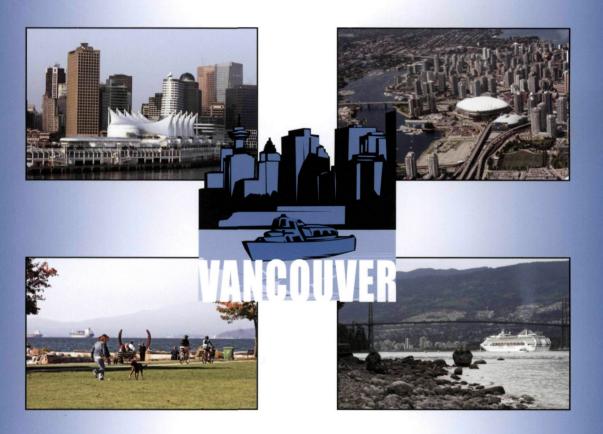
Out of Africa, for now - pages 373-374
From the Reflections article by Mark Bernstein

Figure 1: Fishmarket in Cape Coast, Ghana. Figure 2: Teaching awake brain tumour surgery to local surgeons at Korle Bu Teaching Hospital, Accra, Ghana.



Join us for the 46th Annual Congress of the

# Canadian Neurological Sciences Federation



Surrounded by water on three sides and nestled alongside the Coast Mountain Range, Vancouver is the largest city in the province of British Columbia with over half a million residents and one of the mildest climates in Canada. Home to spectacular natural scenery and a bustling metropolitan core, Vancouver was Host City to the Olympic and Paralympic Winter Games in 2010. Whether just relaxing in a park or bike riding around the seawall, there is always something to do in Vancouver.

June 15-17, 2011 Vancouver, British Columbia



#### Volume 38 / Number 2 / March 2011

#### **EDITORIALS**

- 187 Blood Pressure and Acute Ischemic Stroke Michael D. Hill
- 189 Too Much of a Good Thing? Brain Hyper Excitability and Migraine

Werner J. Becker, Prin Chitsantikul

191 CURES and the Dilemma of Unruptured Intracranial Aneurysms

David Pelz

- 193 Decision Making, Bias, and Low Grade Glioma Praveena Deekonda, Mark Bernstein
- 195 Not Just Numbers: Qualitative Research and the Clinical Neurosciences

Mary Ellen Macdonald, Colin Chalk

197 Histories of our Professions
G. Bryan Young

#### **REVIEW ARTICLES**

- 198 Reflections on the TEAM Trial: Why Clinical Care and Research Should be Reconciled
  - Jean Raymond on behalf of the TEAM collaborative group
- **203** A History of Neurosurgery in Canada *Bryce Weir*

#### AUTOBIOGRAPHY

220 My Front Row Seat Memoir V
Further Encounters at the Greatest Show on Earth
Henry J.M. Barnett

#### **ORIGINAL ARTICLES**

- 225 Blood Pressure and Early Clinical Outcome Among Acute Ischemic Stroke Patients
  - Jintao Zhang, Ying Peng, Huanqing Fan, Mei Chen, Tan Xu, Yonghong Zhang
- 230 Carotid Endarterectomy Versus Stenting: A Meta-Analysis of Randomized Trials
  - Daniel Yavin, Derek J. Roberts, Michael Tso, Garnette R. Sutherland, Misha Eliasziw, John H. Wong
- 236 The Design of the Canadian UnRuptured Endovascular versus Surgery (CURES) Trial

Tim E. Darsaut, J. Max Findlay, Jean Raymond for the CURES Collaborative Group

- 242 Frontal Assessment Battery to Evaluate Frontal Lobe Dysfunction in ALS Patients
  - Suk-Won Ahn, Su-Hyun Kim, Jee-Eun Kim, Sung-Min Kim, Seung Hyun Kim, Jung-Joon Sung, Kwang-Woo Lee, Yoon-Ho Hong
- 247 Stereotactic Radiotherapy: An Emerging Treatment for Spinal Metastases
  - Max Dahele, Michael G. Fehlings, Arjun Sahgal
- 251 Web-Based Software to Assist in the Localization of Neuroanatomical Lesions
  - Evan Cole Lewis, Melanie Strike, Asif Doja, Andy Ni, Jonathan Weber, Nadine Wiper-Bergeron, Erick Sell
- 256 Low Grade Glioma: A Qualitative Study of the Wait and See Approach
  - Caroline Hayhurst, Daniel Mendelsohn, Mark Bernstein
- 262 Minimally Invasive versus Open Approach for Cervical Laminoforaminotomy
  - Mark J. Winder, Kenneth C. Thomas
- 268 Patients' Perceptions of Carpal Tunnel and Ulnar Nerve Decompression Surgery
  - Kathleen Joy Khu, Mark Bernstein, Rajiv Midha
- **274** Normal-Pressure Hydrocephalus: Is There a Genetic Predisposition?
  - M.D. Cusimano, D. Rewilak, D.T. Stuss, J.C. Barrera-Martinez, F. Salehi, M. Freedman
- 282 Meaningful Change in Cognition in Multiple Sclerosis: Method Matters
  - L.A.S Walker, P.D. Mendella, A. Stewart, M.S. Freedman, A.M. Smith
- 289 The Neuropathies of Waldenström's Macroglobulinemia (WM) and IgM-MGUS
  - Christopher J. Klein, Joon-Shik Moon, Michelle L. Mauermann, Steven R. Zeldenrust, Yanhong Wu, Angela Dispenzieri, Peter J. Dyck
- 296 Early Treatment of a Progressive Rasmussen's Like Syndrome with Ganciclovir
  - Richard S. McLachlan, David Diosy, Simon Levin
- 299 Stereopsis in Drug Naïve Parkinson's Disease Patients

  Seung-Hyun Kim, Ji-Hye Park, Yu Hwan Kim,

  Seong-Beom Koh
- **303** Variations in *5-HT2A* Influence Spatial Cognitive Abilities and Working Memory

Pingyuan Gong, Jing Li, Jian Wang, Xu Lei, Dongmei Chen, Kejin Zhang, Wenjiang Zhang, Anyuan Zhen, Xiaocai Gao, Fuchang Zhang



Volume 38	1	Number 2	March 2011
TOTALLIC CO	STATE SERVICE	THE PARTY OF THE P	

**309** Subcortical Hyperexcitability in Migraineurs: A High-Frequency Oscillation Study

Kuan-Lin Lai, Kwong-Kum Liao, Jong-Ling Fuh, Shuu-Jiun Wang

317 Interprofessional Stroke Rehabilitation for Stroke Survivors Using Home Care

Maureen Markle-Reid, Camille Orridge, Robin Weir, Gina Browne, Amiram Gafni, Mary Lewis, Marian Walsh, Charissa Levy, Stacey Daub, Heather Brien, Jacqueline Roberts, Lehana Thabane

#### **NEUROIMAGING HIGHLIGHTS**

335 Susac's Syndrome

Kevin Lian, Rekha Siripurapu, Robert Yeung, Julia Hopyan, Kenneth T. Eng, Richard I. Aviv, Sean P. Symons

338 Pediatric Traumatic Retroclival Epidural Hematoma Cameron M. McDougall, Tejas Sankar, Vivek Mehta, Jeffrey A. Pugh

#### BRIEF COMMUNICATIONS

341 Autonomic, EEG, and Behavioral Arousal Signs in a PVS Case After Zolpidem Intake

Calixto Machado, Mario Estévez, Jesús Pérez-Nellar, Joel Gutiérrez, Rafael Rodríguez, Maylén Carballo, Mauricio Chinchilla, Andrés Machado, Liana Portela, Maria C. García-Roca, Carlos Beltrán

345 Generalized Nonconvulsive Status Epilepticus with Reactive Alpha Rhythm

Evelyne Côté-Mantha, Martin Savard

347 Neuroimaging and Neurophysiology Studies in Carriers of Cree Leukoencephalopathy

R.J. Huntsman, E.G. Lemire, C.L. Voll, S. Wiebe, N.J. Lowry

349 Primary Intracranial Hemangiopericytoma Presenting as Hemiparkinsonism

Vivien Tang, John Woulfe, David Grimes

352 IV Thrombolysis in Stroke From a Cavernous Carotid Aneurysm to Artery Embolus

Jamsheed A. Desai, Albert Yongwon Jin, Michel Melanson

**354** An Unusual Case of Myelopathy: Surfer's Myelopathy *P.P.S. Dhaliwal, A. Cenic, M. Eesa, S. du Plessis* 

357 A Case of Mistaken Identity: Spinal Epidural Angiolipoma Faizal A. Haji, Yatri K. Patel, Lee C. Ang, Joseph F. Megyesi

360 Transient Executive Dysfunction Following STN-DBS in Parkinson's Disease

N. Auclair-Ouellet, S. Chantal, L. Cantin, M. Prudhomme, M. Langlois, J. Macoir

364 Traumatic Spinal Cord Injury Without Initial MRI Abnormality: SCIWORA Revisited

Morgan Schellenberg, Omar Islam, Ronald Pokrupa

367 Superficial Siderosis as a Manifestation of a Dural Arteriovenous Fistula

Francesco Signorelli, Nancy McLaughlin, Michel W. Bojanowski

370 Camptocormia: As the First Sign of Parkinson's Disease Yoon-Sang Oh, Joong-Seok Kim, Sung-Woo Chung,

Young-Do Kim, Kwang-Soo Lee

#### REFLECTIONS

373 Out of Africa, for now

Mark Bernstein

#### **COMMENTARY**

375 Is Prophylactic Lumbar Discectomy Ever Indicated?

Fred L. Cohen, William J. Murphy, Mark Bernstein

#### CORRESPONDENCE

379 To the Editor - Re: Carotid Stenting in Asymptomatic Carotid Stenosis: The Calgary Experience. Can J Neurol Sci. 2010; 37: 568-73.

David M. Pelz

379 Erratum

380 Books Received/Books Reviewed

A-8 CNSF Sponsors

A-9 Information for Authors

A-10 Advertisers Index

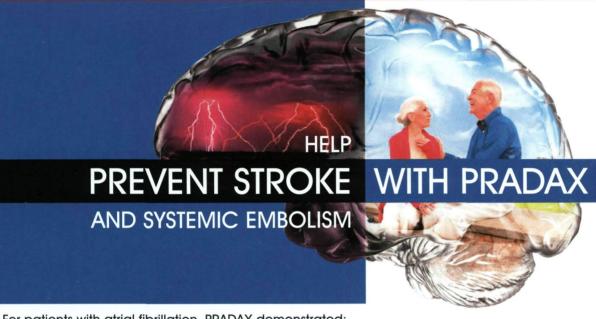
A-11 Board of Directors/Committee Chairs

A-5, A-19, A-20 Classified Ads

A-21 Congress-at-a-Glance

# NEW PRADAX™ 150 mg BID

NOW INDICATED FOR THE PREVENTION OF STROKE AND SYSTEMIC EMBOLISM IN PATIENTS WITH ATRIAL FIBRILLATION. IN WHOM ANTICOAGULATION IS APPROPRIATE.



For patients with atrial fibrillation, PRADAX demonstrated:

## 35% reduced risk of stroke or systemic embolism vs. warfarin 1-3\*†

Dabigatran 150 mg BID (1.1%/yr) vs. warfarin (1.7%/yr), p=0.0001.

PRADAX (dabigatran etexilate) is indicated for the prevention of stroke and systemic embolism in patients with atrial fibrillation, in whom anticoagulation is appropriate.

PRADAX is contraindicated in patients with: severe renal impairment (CrCL <30 mL/min); hemorrhagic manifestations, bleeding diathesis, or patients with spontaneous or pharmacological impairment of hemostasis; lesions at risk of clinically significant bleeding, e.g. extensive cerebral infarction (hemorrhagic or ischemic) within the last 6 months, active peptic ulcer disease with recent bleeding; concomitant treatment with the strong P-glycoprotein (P-gp) inhibitors, i.e. oral ketoconazole, and with known hypersensitivity to dabigatran, dabigatran etexilate or to any ingredient in the formulation or component of the container.

Bleeding is the most relevant side effect of PRADAX; bleeding of any type or severity occurred in long-term treatment in 16.5% of patients with atrial fibrillation treated for the prevention of stroke and systemic embolism. As with all anticoagulants, PRADAX should be used with caution in circumstances associated with an increased risk of bleeding. Bleeding can occur at any site during therapy with PRADAX. An unexplained fall in hemoglobin and/or hematocrit or blood pressure should lead to a search for a bleeding site. Patients at high risk of bleeding should not be prescribed PRADAX. Close clinical surveillance (looking for signs of bleeding or anemia) is recommended throughout the treatment period, especially if risk factors are combined. Should severe bleeding occur, treatment with PRADAX must be discontinued and the source of bleeding investigated promptly. Patients who develop acute renal failure must discontinue PRADAX. In patients who are bleeding, an aPTT test may be useful to assist in determining an excess of anticoagulant activity, despite its limited sensitivity. An aPTT >80 sec at trough, i.e. when the next dose is due, is associated with a higher risk of bleeding.

Agents that may enhance the risk of hemorrhage should not be administered concomitantly with PRADAX, or, if necessary, should only be administered with caution. Treatments that should NOT be administered concomitantly with PRADAX due to increase in bleeding risk include: unfractionated heparin and heparin derivatives, low molecular weight heparins (LMWH), fondaparinux, bivalirudin, thrombolytic agents, GPIIb/IIIa receptor antagonists, ticlopidine. sulfinpyrazone and vitamin K antagonists such as warfarin. The concomitant use of PRADAX with the following treatments has not been studied and may increase the risk of bleeding: rivaroxaban, prasugrel and the strong P-gp inhibitors itraconazole, tacrolimus, cyclosporine, ritonavir, tipranavir, nelfinavir and saquinavir. Unfractionated heparin may be administered at doses necessary to maintain a patent central venous or arterial catheter. In patients with atrial fibrillation treated for the prevention of stroke and systemic embolism, the co-administration of oral anti-platelet (including ASA and clopidogrel) and NSAID therapies increases the risk of bleeding by about two-fold (see ACTION and CLINICAL PHARMACOLOGY,

## 59% reduced risk of intracranial bleeding vs. warfarin 1-3\*5

Dabigatran 150 mg BID (0.3%/yr) vs. warfarin (0.8%/yr), p < 0.0001.

monitoring or dose titration

No INR

Special Populations, Pharmacokinetic Interactions), If necessary, co-administration of low-dose ASA, i.e. ≤100 mg daily with PRADAX may be considered for other indications than stroke prevention in atrial fibrillation. The concomitant use of PRADAX with the strong P-gp inducer, rifampicin, reduces dabigatran plasma concentrations. Other P-gp inducers such as St. John's Wort or carbamazepine are also expected to reduce dabigatran plasma concentrations and should be co-administered with caution.

The most common adverse events observed in ≥1% of PRADAX 150 mg BID patients and 110 mg BID patients was anemia (1.6%, 1.2%), epistaxis (1.1%, 1.1%), gastrointestinal hemorrhage (4.6%, 3.3%), urogenital hemorrhage (1.4%, 1.1%), abdominal pain (2.2%, 2.3%), diarrhea (1.2%, 1.3%), dyspepsia (3.9%, 4.2%) and nausea (1.2%, 1.0%), respectively. Gastrointestinal adverse reactions occurred more often with dabigatran etexilate than warfarin. These were related to dyspepsia (including upper abdominal pain, abdominal pain, abdominal discomfort, epigastric discomfort) or gastritis-like symptoms (including GERD, esophagitis, erosive gastritis, gastric hemorrhage, hemorrhagic gastritis, hemorrhagic erosive gastritis and gastrointestinal ulcer). Gastrointestinal hemorrhage occurred at a higher frequency with PRADAX 150 mg BID and 110 mg BID (4.6%, 3.3%, respectively) compared to warfarin (2.6%). The underlying mechanism of the increased rate of GI bleeding has not been established.

Allergic reactions or drug hypersensitivity including urticaria, bronchospasm, rash and pruritus have been reported in patients who received dabigatran etexilate. Rare cases of anaphylactic reactions have also been reported.

Patients at an increased risk of bleeding should be closely monitored clinically. A coagulation test, such as aPTT may help to identify patients with an increased bleeding risk caused by excessive dabigatran exposure.

For complete prescribing information, please refer to the Product Monograph.

\*A randomized non-inferiority trial of 18,113 AF patients at risk of stroke. Patients received dabigatran 110 mg BID or 150 mg BID (blinded arm) and adjusted doses of warfarin (unblinded arm).

†Stroke or systemic embolism: dabigatran 150 mg BID (n=6076, no. of events=134) vs. warfarin (n=6022, no. of events=202).

‡Intracranial bleeding includes adjudicated hemorrhagic stroke, subarachnoid, and/or subdural bleeding. §Intracranial bleeding: dabigatran 150 mg BID (no. of events=38) vs. warfarin (no. of events=90).

References: 1. Pradax Product Monograph. Boehringer Ingelheim (Canada) Ltd., 11/08/10. 2. Connolly SJ et al. Dabigatran versus Warfarin in Patients with Atrial Fibrillation. N Engl J Med. 2009;361:1139–1151. 3. Connolly SJ et al. Newly Identified Events in the RE-LY Trial. N Engl J Med. 2010;363:1875-1876 supp appendix.

Pradax™ is a trademark used under license by Boehringer Ingelheim (Canada) Ltd.











Volume 38 Number 2 March 2011

#### Editor-in-Chief/Rédacteur en chef G. Bryan Young LONDON, ON

Associate Editors/Rédacteurs associés

J. Max Findlay EDMONTON, AB Michael Shevell MONTREAL, QC Timothy J. Benstead HALIFAX, NS Mike Poulter LONDON, ON

Serge Gauthier VERDUN, QC Robert Hammond LONDON, ON

Past Editors/Anciens rédacteurs en chef

Douglas W. Zochodne CALGARY, AB James A. Sharpe TORONTO, ON Robert G. Lee CALGARY, AB Robert T. Ross WINNIPEG, MB (Emeritus Editor, Founding Editor)

#### Editorial Board/Conseil d'éditorial

Jorge Burneo LONDON, ON Richard Desbiens QUEBEC CITY, QC David Fortin SHERBROOKE, QC Mark Hamilton CALGARY, AB Hans-Peter Hartung DUSSELDORF, GERMANY Michael Hill CALGARY, AB Alan C. Jackson WINNIPEG, MB Daniel Keene OTTAWA, ON Terence Myles CALGARY, AB James Perry TORONTO, ON Oksana Suchowersky CALGARY, AB Brian Toyota VANCOUVER, BC Brian Weinshenker ROCHESTER, MN, USA Samuel Wiebe CALGARY, AB Elaine Wirrell ROCHESTER, MN, USA

#### SECTION EDITORS/CONSEIL DE RÉDACTION

Neuroimaging Highlight/Neuroimagerie David Pelz LONDON, ON

Neuropathological Conference/Conférence sur la neuropathologie

Robert Hammond LONDON, ON

Book Review/Critiques de livres Reflections/Reflets

Andrew Kirk SASKATOON, SK

Critically Appraised Topic Summaries (CATS)

Jorge Burneo LONDON, ON Mary Jenkins LONDON, ON

#### Editorial Review Board/Conseil de Revue d'éditorial

Donald Brunet KINGSTON, ON

Lionel Carmant MONTREAL, OC Colin Chalk MONTREAL, QC K. Ming Chan EDMONTON, AB Robert Chen TORONTO, ON Mary Connolly VANCOUVER, BC Joseph Dooley HALIFAX, NS Paolo Federico CALGARY, AB Daryl Fourney SASKATOON, SK Hannah Glass SAN FRANCISCO, CA, USA Alan Goodridge ST. JOHN'S, NL Ian Grant HALIFAX, NS Alan Guberman OTTAWA, ON John Hurlbert CALGARY, AB Manouchehr Javidan VANCOUVER, BC Patrick McDonald WINNIPEG, MB Martin McKeown VANCOUVER, BC Joseph Megyesi LONDON, ON Vivek Mehta EDMONTON, AB Steven Miller VANCOUVER, BC Neelan Pillay CALGARY, AB Christopher Power EDMONTON, AB Alex Rajput saskatoon, sk Jean Raymond MONTREAL, QC Gary Redekop VANCOUVER, BC Mark Sadler HALIFAX, NS Harvey Sarnat CALGARY, AB John Stewart VANCOUVER, BC Jeanne Teitelbaum MONTREAL, QC Eve Tsai OTTAWA, ON Shannon Venance LONDON, ON Matt Wheatley EDMONTON, AB Jerome Yager EDMONTON, AB

Journal Staff - Calgary, AB Dan Morin, Chief Executive Officer

Maggie McCallion, Designer/ **Production Coordinator** Cindy Leschyshyn, Editorial Coordinator

#### Advertising representative/Représentant de publicité:

Brett Windle

Corporate Development Coordinator Tel (403) 229-9575 Fax (403) 229-1661 E-mail: brett-windle@cnsfederation.org

#### Printer/Imprimeur:

Unicom Graphics, 4501 Manitoba Road SE Calgary, Alberta T2G 4B9

The official journal of: | La Revue officielle de:

The Canadian Neurological Society La Société Canadienne de Neurologie

The Canadian Neurosurgical Society La Société Canadienne de Neurochirurgie

The Canadian Society of Clinical Neurophysiologists La Société Canadienne de Neurophysiologie Clinique

The Canadian Association of Child Neurology L'Association Canadienne de Neurologie Pédiatrique

The permanent secretariat for the four societies and the Canadian Neurological Sciences Federation is at: Le secrétariat des quatre associations et du Fédération des sciences neurologiques du Canada est situe en permanence à:

> 7015 Macleod Trail SW, Suite 709 Calgary, Alberta, Canada T2H 2K6

The Canadian Journal of Neurological Sciences is published bimonthly. The annual subscription rate for Individuals are: C\$120 (Canada), C\$140 (Foreign including USA). Subscription rates for Institutions are: C\$150 (Canada), C\$170 (Foreign including USA). See www.cjns.org for details. Single copies C\$30 each plus postage and handling. Communications should be sent to: Canadian Journal of Neurological Sciences, 709 - 7015 Macleod Trail SW, Calgary, AB Canada T2H 2K6. Telephone (403) 229-9575; Fax (403) 229-1661. E-mail: journal@cjns.org; Web: www.cjns.org COPYRIGHT© 2011 by THE CANADIAN JOURNAL OF NEUROLOGICAL SCIENCES INC. All rights reserved. No part of this journal may be reproduced in any form without the prior permission of The Canadian Journal of Neurological Sciences. Postage paid at Calgary, Alberta.

Le Journal Canadien des Sciences Neurologiques est publié 6 fois par an. L'abonnement annuel est de 120 \$C (non-membres au Canada); 140 \$C (Etats Unis et ailleurs); l'abonnement annuel for pour les institutions est de 150 \$C (non-membres au Canada); 170 \$C (Etats Unis et ailleurs); Voir www.cjns.org pour détails. Copie simple: 30 \$C plus affranchissement et manutention. Toutes les communications doivent être adressés à Journal Canadien des Sciences Neurologiques, 709 - 7015 Macleod Trail SW, Calgary, AB Canada T2H 2K6. Téléphone (403) 229-9575; Fax (403) 229-1661. E-mail journal@cjns.org; Web:www.cjns.org. DROITS D'AUTEUR© 2011: THE CANADIAN JOURNAL OF NEUROLOGICAL SCIENCES INC. Tous droits réservés. Aucune partie de ce Journal ne peut être reproduite, sous quelque forme que ce soit, sans la l'authorisation du Journal Canadien des Sciences Neurologiques. Port payé à Calgary, Alberta.

This journal is indexed by / Cette Journal est cité et indexé dans: AgBio, BIOBASE, BiolAb, BIOSIS Prev, CABS, ChemAb, CSA, CurAb, CurCont, E-psyche, EBSCO, Elsevier, EMBASE, ExcerpMed, IBZ, Index Medicus, Index to Dental Literature, Index to Scientific Reviews, Inpharma, Internationale Bibliographie der Rezensionen Geistes-und Sozialwissenschaftlicher Literatur, JW-N, MEDLINE, MetaPress, MycolAb, NRN, NSCI, PE&ON, Personal Alert, PsycFIRST, PsycInfo, Psychological Abstracts, PubMed, Reac, RefZh, SCI, SCOPUS, Swets, TOCprem, Web of Science ADVERTISING.

ISSN 0317 - 1671





Proud to be the host hotel for the 46th Annual Congress of the Canadian Neurological Sciences Federation

Make your room reservation online at https://resweb.passkey.com/go/cnsfannualcongress by April 15th and be eligible to win a Hyatt Prize Package.







care hospitals and extensive community-based residential, home health, mental health and public health services. As a physician with Fraser Health, you will join a team of dedicated professionals focused on innovation and best practices.

Our recruitment continues in order to meet needs for our capacity-building initiatives. In 2011, the 17,500 square-metre Surrey Outpatient Care & Surgery Centre will open and provide a unique combination of day surgery, medical tests and procedures, and specialized health clinics in a modern care setting. The Critical Care Tower at Surrey Memorial Hospital, set for completion in 2014, will increase the hospital to 650 beds and will include a dedicated regional Perinatal Centre, new Emergency Department, helipad and expanded ICU, as well as additional academic space.

#### **NEUROLOGIST OPPORTUNITIES**

We are seeking Neurologists eligible for licensure in the Province of British Columbia, for the following sites:

- Abbotsford Regional Hospital & Cancer Centre Royal Columbian Hospital
- Surrey Memorial Hospital Surrey Outpatient Care & Surgery Centre

For more details, please visit our website at: www.fraserhealth.ca/careers

You may be eligible for relocation assistance of up to \$10,000. Apply online at: www.fraserhealth.ca/careers Facebook: www.facebook.com/fraserhealthcareers

Email: recruitment@fraserhealth.ca Toll-Free: 1.866.837.7099





# **FACED WITH PAIN**\*

IN HER STRUGGLE WITH FIBROMYALGIA

# fibromyalgia<sup>1</sup>

#### Pregabalin: first-line treatment for chronic

# neuropathic pain<sup>2</sup>

# **DEMONSTRATED SIGNIFICANT RELIEF IN PAIN**

## AND PAIN-RELATED SLEEP DIFFICULTIES IN FIBROMYALGIA<sup>1</sup>

### Demonstrated powerful, rapid and sustained pain relief1,3-5

#### In fibromyalgia:

- In a 14 week study, LYRICA demonstrated significant pain reduction as early as week 1 (p<0.05 for all doses). Mean changes in pain scores at the end of the study for LYRICA-treated patients were significantly greater versus placebo (300 mg/day, n=183: -1.75, p=0.0009; 450 mg/day, n=190: -2.03, p<0.0001; 600 mg/day, n=188: -2.05, p<0.0001; placebo, n=184: -1.04)<sup>3</sup>
- In another study of 26 weeks' duration of patients who initially responded to LYRICA during a 6-week, open-label phase, 68% of those who continued on their optimized dose (n=279) maintained a treatment response versus 39% of those on placebo (n=287). The time to loss of therapeutic response was longer in the LYRICA group (p<0.0001)<sup>4</sup>

#### Also in neuropathic pain (NeP):

• Sustained pain relief (starting at week 2 for LYRICA 150-600 mg/day, n=141; p<0.05 vs placebo, n=65) was demonstrated throughout a 12 week study in patients with DPN or PHN<sup>5</sup>

## Demonstrated effective in relieving pain-related sleep difficulties<sup>1,6</sup>

#### In fibromyalgia:

• In a 13 week study, LYRICA reduced overall MOS-Sleep Scale scores significantly more at the end of the study vs. placebo (300 mg/day -19.1, p=0.0174; 450 mg/day: -20.41, p=0.0026; 600 mg/day: -19.49, p=0.0101; placebo: -14.29)<sup>6</sup>

#### Also in NeP:

LYRICA reduced sleep disturbances across several studies in DPN and PHN, of 8-12 weeks duration

## Flexible dosing across all indications<sup>1†</sup>

LYRICA (pregabalin) is indicated for the management of neuropathic pain associated with diabetic peripheral neuropathy (DPN), postherpetic neuralgia (PHN) and spinal cord injury in adults. LYRICA may be useful in the management of central neuropathic pain in adults. LYRICA is indicated for the management of pain associated with fibromyalgia in adults. The efficacy of LYRICA in the management of pain associated with fibromyalgia for up to 6 months was demonstrated in a placebo-controlled trial in patients who had initially responded to LYRICA during a 6-week open-label phase.

LYRICA is contraindicated in patients who are hypersensitive to pregabalin or to any ingredient in the formulation or component of the container.

The most commonly observed adverse events (≥5% and twice the rate as that seen with placebo) in the recommended dose range of 150 mg/day to 600 mg/day in PHN and DPN patients were: dizziness (9.0-37.0%), somnolence (6.1-24.7%), peripheral edema (6.1-16.2%), and dry mouth (1.9-14.9%) and were dose related; in spinal cord injury patients: somnolence (41.4%), dizziness (24.3%), asthenia (15.7%), dry mouth (15.7%), edema (12.9%), constipation (12.9%), amnesia (10.0%), myasthenia (8.6%), amblyopia (8.6%), and thinking abnormal (8.6%); in fibromyalgia patients: dizziness (37.5%), somnolence (18.6%). weight gain (10.6%), dry mouth (7.9%), blurred vision (6.7%), and peripheral edema (6.1%). In LYRICA-treated fibromyalgia patients, the most commonly observed dose-related adverse events were: dizziness (22.7-46.5%), somnolence (12.9-20.7%), weight gain (7.6-13.7%), peripheral edema (5.3-10.8%). The most commonly observed adverse events in the PHN, DPN, spinal cord injury and fibromyalgia patients were usually mild to moderate in intensity. Discontinuation rates due to adverse events for LYRICA and placebo, respectively, were 9% and 4% in DPN, 14% and 7% in PHN, 21% and 13% in spinal cord injury, and 20% and 11% in fibromyalgia. There was a dose-dependent increase in rate of discontinuation due to adverse events in fibromyalgia

There have been post-marketing reports of angioedema in patients, some without reported previous history/episodes, including life-threatening angioedema with respiratory compromise. Caution should be exercised in patients with previous history/episodes of angioedema and in patients who are taking other drugs associated with angioedema.

In clinical trials and in post-marketing experience, there have been reports of patients, with or without previous history, experiencing renal failure alone or in combination with other medications. Caution is advised when prescribing to the elderly or those with any degree of renal impairment.

There have been post-marketing reports of events related to reduced lower gastrointestinal tract function (e.g., intestinal obstruction, paralytic ileus, and constipation) in patients, some without reported previous history/episode(s), during initial/acute and chronic treatment with LYRICA, primarily in combination with other medications that have the potential to produce constipation. Some of these events were considered serious and required hospitalization. In a number of instances, patients were taking opioid analgesics including tramadol. Caution should be exercised when LYRICA and opioid analgesics are used in combination, and measures to prevent constipation may be considered, especially in female patients and elderly as they may be at increased risk of experiencing lower gastrointestinal-related events.

Dosage reduction is required in patients with renal impairment (creatinine clearance <60 mL/min) and in some elderly patients as LYRICA is primarily eliminated by renal excretion.

Please see Prescribing Information for complete Warnings and Precautions, Adverse Reactions, Dosage and Administration and patient selection criteria.

† Please consult Prescribing Information for complete Dosage and Administration instructions.



Working together for a healthier world™

©2010 Pfizer Canada Inc. Kirkland, Quebec H9J 2M5

MPfizer Inc, used under license LYRICA® C.P. Pharmaceuticals International C.V., owner/Pfizer Canada Inc., Licensee







# Canadian Neurological Sciences Federation



# 45th Annual Congress

#### **Early Committed Sponsors**

The Canadian Neurological Sciences Federation is pleased to recognize those Sponsors who, as of December 15, 2010 committed to supporting the 2011 Congress. These organizations partner with CNSF to determine the causes of, and develop treatment for diseases and injuries of the nervous system, and in the care of patients with these diseases and injuries.





Merck Frosst Canada Ltd., Kirkland, Quebec



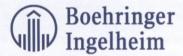


THE **EPILEPSY**COMPANY™

















#### SUPPORTER



NEUROLOGICAL SCIENCES FOUNDATION OF CANADA

- General Fund
- CNS Don Paty Fund

If you and your organization would like more information, or would like to discuss how you can partner with CNSF and meaningfully connect with our Congress delegates, please call or email Brett Windle, Corporate Development Coordinator at (403) 229-9544 or brett-windle@cnsfederation.org.

**VANCOUVER, B.C. CANADA** 

www.cnsfederation.org