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# Neurological Sciences

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# Sciences Neurologiques

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30th MEETING OF THE  
CANADIAN CONGRESS OF  
NEUROLOGICAL SCIENCES



Victoria, British Columbia

June 20 - 24, 1995

## ABSTRACTS

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Victoria, British Columbia

June 20 - 24, 1995

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OF NEUROLOGICAL SCIENCES

PROGRAM and  
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# 30th Meeting of the Canadian Congress of Neurological Sciences Scientific Program

*Tuesday, June 20*

## **Child Neurology Day: Advances in Pediatric Neuromuscular Diseases**

Merosin Positive and Merosin Negative Congenital Muscular Dystrophy:  
The Clinical Phenotypes  
Clinical Approach to Neuromuscular Diseases in the Newborn  
Molecular Genetics of Spinal Muscular Atrophy: Clinical Implications  
The Role of Mitochondrial Disorders in Pediatric Muscle Disease  
Juvenile Dermatomyositis  
Interesting Case Presentations and Discussion: Neuromuscular Diseases

Victor Dubowitz, London, UK

Elke Roland, Vancouver  
Alexander E. MacKenzie, Ottawa  
Lorne Clarke, Vancouver  
Victor Dubowitz, London, UK

## **Satellite Symposium 1: New Treatment Strategies in Parkinson's Disease**

Introduction  
Etiology of Parkinson's Disease  
Experimental Basis for New Therapeutic Strategies of Parkinson's  
Disease  
Current Drug Therapy of Parkinson's Disease  
New Drugs in Clinical Trials for Parkinson's Disease  
Surgical Treatments for Parkinson's Disease

Mark Guttman, Markham  
Donald Calne, Vancouver  
Tom Chase, Bethesda

Terry Curran, Vernon  
Mark Guttman, Markham  
Andres Lozano, Toronto

## **Satellite Symposium 2: Neurocritical Care: Withdrawal of Treatment**

Welcome and Introductory Remarks  
Current Physician Attitudes and Practices Regarding Withdrawal of  
Critical Care  
Medical Futility and the Withdrawal of Care in Critical Neurological  
Illness  
Medical, Ethical, and Medico-Legal Issues Regarding Withdrawal of Care  
in Critically Ill Children  
Case Presentations and Panel Discussion

Richard Moulton, Toronto  
Roman Jaeschke, Hamilton

Peter Black, Boston

Shashi Seshia, Winnipeg

## **Satellite Symposium 3: Progressing Towards Successful Stroke Treatment**

Ischemic Cascade - Implications for Treatment  
Interventional Strategies for Acute Stroke  
Thrombolytic Treatment for Acute Stroke  
Hypothermia for Acute Stroke  
Acute Intervention for Hemorrhagic Stroke  
Acute Stroke Units  
Round Table Discussion - Drs. Sutherland, Teitlebaum and Coté

Marc Mayberg, Seattle  
Alastair Buchan, Ottawa  
Frank Silver, Toronto  
Dale Corbett, St. John's  
H. Hunt Batjer, Dallas  
Vladimir Hachinski, London

## **Satellite Symposium 4: Normal Pressure Hydrocephalus**

Welcome  
Symposium Introduction  
Review of History of NPH  
Neurology of NPH  
To include NSF Assessment  
Radiology of NPH  
To Include Risa; MRI; CT

Serge Gauthier, Montreal  
Jean-Guy Villemure, Montreal

William Pryse-Phillips, St. John's

D. Melanson, Montreal

Neuropsychology of NPH  
Surgical Management of NPH  
To include Pressure Monitoring Surgical Risks and Benefits, Technical Issues, Surgical Outcome and Duration  
Measurement Issues in NPH  
How is Improvement Quantitated - Scales; Video ; Physio  
Current Canadian Practice  
To Include Survey Results of CSR Centres. Proposal for either Consensus Statement or Collaborative Research Study

Roger McKelvey, Montreal  
Peter Black, Boston

Ken Rockwood, Halifax

Howard Feldman, Vancouver

### **New Generation AEDs: Recent Developments in the Treatment of Epilepsy**

Quality of Life and New AED's in the Treatment of Epilepsy  
Overview of Lamotrigine  
Overview of Gabapentin  
Overview of Vigabatrin  
An Overview of the Use of Anti-epileptic Drugs

David Chadwick, Liverpool  
Martin Brodie, Glasgow  
Joseph Bruni, Toronto  
Alan Guberman, Ottawa  
B. J. Wilder, Gainesville

### **Movement Disorders Video Session and Dinner**

Unusual Movement Disorders

**Wednesday, June 21**

### **Course 1: Neurogenetics Workshop**

Introductory Remarks  
The New Genetics - An Overview  
The Role of Triplet Repeats in Neurological Disease  
Myotonic Dystrophy  
Panel Discussion  
Diseases of the Mitochondria  
Predictive Testing: Lessons from Huntington Disease  
Gene Therapy for Neurological Diseases  
A Practical Guide to Accessing Molecular Diagnostic Services in Canada

Wayne Shtybel, Victoria  
Patrick MacLeod, Victoria  
Guy Rouleau, Montreal  
Robert Korneluk, Ottawa

Derek Applegarth, Vancouver  
Michael Hayden, Vancouver  
Max Cynader, Vancouver  
Sylvie Langlois, Vancouver

### **Course 2: Minimally Invasive Neurosurgery**

#### **Image Guided Neurosurgery**

Frameless Stereotactic Neurosurgery  
Overview and Examples of Specific Applications for Adult Patients  
The ISG Wand in Pediatric Neurosurgery  
Experience with an Ultrasound Based System  
Video Imaging Frameless Stereotactic Surgery  
Magnetic Field Localization  
Frameless Stereotaxis in Epilepsy Surgery  
The Accustar Frameless Stereotactic System

Michael McDermott, San Francisco

James Drake, Toronto  
Doug Cochrane, Vancouver  
Peter Black, Boston  
Kim Manwaring, Phoenix  
Andre Olivier, Montreal  
Mitch Berger, Seattle

#### **Endoscopy**

Instrumentation and Surgical Anatomy  
Third Ventriculostomy  
Shunt Placement and Elimination  
Problems and Pitfalls  
Percutaneous/Endoscopic Disc Surgery  
Endoscopic Carpal Tunnel Surgery  
Endoscopic Sympathectomy  
Hands-On Work Stations (8)

Mark Hamilton, Calgary  
Keith Aronyk, Edmonton  
Kim Manwaring, Phoenix  
James Drake, Toronto  
Harvey Thomas, Calgary  
Peter Gropper, Vancouver  
Ab Guha, Toronto

**Course 3: Spinal Instrumentation - Thoracic and Lumbar**

Biomechanics of Thoracolumbar Spine and Assessment of Instability  
 Principles of Hook-Rod Fixation  
 Pedical Screw Fixation  
 Anterior Instrumentation of Thoracolumbar Spine  
 Hands On Session 1 - Posterior Instrumentation  
 Luncheon Lecture  
 Hands On Session 2 - Anterior Instrumentation  
 Case Discussions with an expert panel

John Hurlbert, Toronto  
 Paul Marcotte, Philadelphia  
 Robert Martin, Syracuse  
 Michael Fehlings, Toronto

Ziya Gokaslan, Houston

**Course 4: Epilepsy: Current Topics and Relevant Electroencephalography**

Single Seizure: Data and Management  
 Epilepsy and Pregnancy  
 Aspects of Pharmacokinetics: Drug Interactions and Pharmacokinetics in the Elderly  
 Use of New Antiepileptic Drugs in Children  
 The Place of Epilepsy Surgery in the Current Management of Intractable Seizure Disorders  
 Epilepsy and Driving  
 EEG in Investigation of Epilepsy  
 Distinguishing Epileptiform from Similar Non-Epileptiform EEG Phenomena

David Chadwick, Liverpool  
 Martha Morrell, Stanford  
 David Chadwick, Liverpool

Kevin Farrell, Vancouver  
 Jerome Engel, Los Angeles

Michael Jones, Vancouver  
 Mark Sadler, Halifax  
 Warren Blume, London

**Course 5: Neurology in the Year 2000**

Introduction  
 Undergraduate and Post Graduate Education  
 Clinical Practice  
 Clinical Research  
 Neuroscience Horizons  
 Academic Health Centres  
 Panel Discussion and Questions from the Floor  
 Open Forum: Manpower Planning for Neurology

T. J. Murray, Halifax  
 Keith Brownell, Calgary  
 William Pryse-Phillips, St. John's  
 Roger Rosenberg, Dallas  
 William Tatton, Toronto  
 Vladimir Hachinski, London

**Course 6: Behavioral Neurology**

Constructional Apraxia  
 Hemispatial Neglect  
 Category Specificity in Visual Agnosia  
 Cognitive Rehabilitation  
 Functional Activation with PET  
 Anatomical Structure and Language Function MRI

Andrew Kirk, Saskatoon  
 Sandra Black, Toronto  
 Daniel Bub, Victoria  
 Catherine Mateer, Victoria  
 Howard Chertkow, Montreal  
 Andrew Kertesz, London

**Thursday, June 22**

**Poster Session I****Plenary Session I - Guests of the Congress**

Opening Remarks  
 Inaugural Address  
*Speaker of the Royal College of Physicians and Surgeons of Canada -  
 Neurology: Lessons Learned from the Genetic Study of Neurofibromatosis  
 Type 2, Amyotrophic Lateral Sclerosis and Other Neurological Disease*  
*Speaker of the Royal College of Physicians and Surgeons of Canada -  
 Pediatric Neurology - Advances in Childhood Muscular Dystrophy*

Jean-Pierre Bouchard, Quebec  
 Patrick McGeer, Vancouver  
 Guy Rouleau, Montreal

Victor Dubowitz, London, UK

*Speaker of the Royal College of Physicians and Surgeons of Canada -  
Neurosurgery - The Evolving Role of the Neuroscope: Indications and  
Limitations*

Kim Manwaring, Phoenix

*Canadian Society of Clinical Neurophysiologists Guest Lecture  
Excitation and Inhibition in Epilepsy*

Jerome Engel, Los Angeles

Report on Manpower in Canada

H. Hugenholtz, A. Guberman

**Oral Presentations: Sessions A -G**

**Friday, June 23**

**Poster Session II**

**Plenary Session II - Guests of the Congress**

Opening Remarks

Renn Holness, Halifax

*Richardson Lecture - Neurology and the Community*

T. J. Murray, Halifax

*Penfield Lecture - Virtual Reality, Sex Hormones and Radiosurgery: New  
Aspects of Meningioma Management*

Peter Black, Boston

**Oral Presentations: Sessions H - O**

**Saturday, June 24**

**Neurobiology Review Course - 1995**

Immunology of the Nervous System

Immunologic manipulation in Multiple Sclerosis

Neuron Channels and Second Messengers

Mechanisms of Action of Antiepileptic Drugs

Apoptosis and the Premature Death of Neurons

Clues to the Etiology and Management of ALS

Genetics of Myelin Formation

New Understanding of Inherited Neuropathies

Basics of Tumour Biology

Prospects for Gene Therapy of Tumours

Trevor Owens, Montreal

Donald Paty, Vancouver

Terrence Snutch, Vancouver

Donald Weaver, Kingston

Donald Price, Baltimore

Guy Rouleau, Montreal

G. Jackson Snipes, San Francisco

Kenneth Fischbeck, Philadelphia

James Rutka, Toronto

E. Antonio Chiocca, Charlestown

## Society Award Presentations

(in order of presentation)

### **The K G McKenzie Prize for Clinical Research in Basic Neuroscience (2nd Prize)**

*Thursday, June 22, Session A, 15:00*

Shah Siddiqi

Cytokine (TNF- $\mu$ ) Mediated Neuroprotection in a New In Vitro Model of Anoxic-ischemic Neuronal Injury

### **The Francis McNaughton Memorial Prize for Clinical Research**

*Thursday, June 22, Session B, 15:00*

Jason J S Barton

Global Motion Perception, Smooth Pursuit, and Saccades to Moving Targets in Humans with Cerebral Lesions

### **The K G McKenzie Prize for Clinical Research in Basic Neuroscience (1st Prize)**

*Friday, June 23, Session H, 11:45*

David Clarke

Survival of Injured Mammalian Neurons in the Central Nervous System: Effects of In Vivo Administration of Neurotrophin-4 and an Endogenous Intraocular Source of Neurotrophic Support

### **The Andre Barbeau Memorial Prize for Basic Research in Neuroscience**

*Friday, June 23, Session I, 11:45*

Joon H Uhm

Glioma Invasion Requires a 72 Kda Metalloprotease that is Regulated by Protein Kinase C

### **The Herbert Jasper Prize**

*Friday, June 23, Session J, 11:45*

Mohammed Entezari-Taher

Estimating the Size of the Corticomotoneuronal Core: Changes with Aging and Amyotrophic Lateral Sclerosis