# Canadian League Against Epilepsy 2017 Scientific Meeting Celebrating 40 Years

Pinnacle Hotel Harbourfront, Vancouver October 13 – 15, 2017



## At the end of the meeting, participants should be able to:

- Review cognitive, psychiatric and psychosocial issues important in epilepsy.
- Identify different approaches to challenging cases in epilepsy surgery.
- Discuss the utilization of epilepsy surgery.
- Review basic and clinical pharmacology of the newer anti-seizure drugs.
- Review common neuropathological lesions that cause seizures.
- Review personalized therapy of epilepsy.
- Review potential mechanisms underlying SUDEP.
- Review stereotactic and ablative surgery in epilepsy.
- Review pre- and post-surgical diagnostic imaging in epilepsy.
- Review infantile spasms.
- Review women and epilepsy.
- Review parietal lobe epilepsy.

Friday, October 13, 2017	
4:00 p.m. Harbourfront Foyer	Conference Registration and Exhibits
5:00 p.m.	CLAE Annual General Meeting Members Only
6:00 p.m.	Welcome + Presidential Lecture Dr. Jorge Burneo, Western University, CLAE President
6:30 p.m.	Canadian EPILEPSY Alliance / Alliance canadienne de L'EPILEPSIE Successes of the Past and Challenges in the Future CEA Board Members
7:00 p.m.	Keynote Speaker Dr. Andres Kanner, University of Miami Chair: Dr. Paolo Federico, University of Calgary
8:00 p.m.	Wrap-up for the Day

Saturday, Octobe	r 14, 2017
6:30 a.m.	CLAE Fun Run/Walk  Join us for the 2 <sup>nd</sup> CLAE Fun Run/Walk!  Meet at 6:15 a.m. in the lobby of the Pinnacle Hotel Harbourfront
7:30 a.m. Harbourfront Foyer	Registration and Breakfast
8:25 a.m.	Welcome and Introductions  Dr. Paolo Federico, University of Calgary
8:30 a.m. Plenary	What are we Missing? Cognitive, Psychiatric and Psychosocial Issues in Epilepsy Dr. Mary Pat McAndrews, University of Toronto  Further session details are pending
10:15 a.m. Harbourfront Foyer	Break and Exhibits
10:45 a.m.	Breakout Sessions
Session 1-A	Personalized Therapy of Epilepsy: Where are we in 2017? Chair: Dr. Kathy Speechley, Western University  Learning Objectives:  Review gene discovery in epilepsy and integration in clinical practice. Review screening for new therapies using a zebra fish model. Review personalized therapies for epilepsy in 2017. Review the impact of early diagnosis and treatment on health related quality of life and psychiatric comorbidity.  Target Audience: Epileptologists, residents, fellows, nurses, psychologists.  Topics and Speakers:  Integration Of Next Generation Sequencing Into Clinical Care Dr. Michelle Demos, University of British Columbia  Screening For New Anti-Seizure Therapies Using High Throughput Sequencing In A Zebra Fish Model Dr. Deborah Kurrasch, University of Calgary  Targeted Therapies In Epilepsy (Includes Case Presentations) Dr. Mary Connolly, University of British Columbia
	Determinants Of Quality Of Life And Psychiatric Comorbidity In Epilepsy In Children Dr. Mary Lou Smith, University of Toronto

Session 1-B	The Utilization of Epilepsy Surgery: Potential Gaps and Future Directions Chair: Dr. Mark Keezer, Université de Montréal
	Learning Objectives:
	Review the evidence for the underutilization of epilepsy surgery.
	<ul> <li>Interpret preliminary results of the 2016 National Epilepsy Surgery Survey, a national epilepsy surgery.</li> </ul>
	<ul> <li>Review barriers to ready-access to epilepsy surgery and present strategies to improve this access.</li> </ul>
	Review the recently-launched Ontario Comprehensive Epilepsy Care program.
	Target Audience:
	Neurologists, epileptologists, epilepsy surgeons, and allied health providers.
	Topics and Speakers:
	Patterns Of Utilization Of Epilepsy Surgery
	Dr. Mark Keezer, Université de Montréal
	The National Epilepsy Surgery Survey
	Dr. Walter Hader, University of Calgary
	Barriers And Strategies To Improve Access Epilepsy Surgery
	Dr. Nathalie Jetté, University of Calgary
	The Ontario Comprehensive Epilepsy Care Program
	Dr. Carter Snead, University of Toronto
Session 1-C	Brainstem Seizures: Implications for Autonomic Dysfunction and SUDEP
	Chair: Dr. G. Campbell Teskey, University of Calgary
	Learning Objectives:
	Review brainstem seizures.
	<ul> <li>Review the relationship between brainstem seizures and autonomic dysfunction.</li> <li>Review modelling of sudden unexpected death in epilepsy in rodents.</li> </ul>
	Review potential interventions and the possibility for their translation to the clinical series and the possibility for their translation to the clinical series and the possibility for their translation to the clinical series and the possibility for their translation to the clinical series and the possibility for their translation to the clinical series and the possibility for their translation to the clinical series and the possibility for their translation to the clinical series and the possibility for their translation to the clinical series and the possibility for their translation to the clinical series and the possibility for their translation to the clinical series and the possibility for their translation to the clinical series and the possibility for their translation to the clinical series and the possibility for their translation to the clinical series and the possibility for their translation to the clinical series and the possibility for their translation to the clinical series and the possibility for their translation to the clinical series and the possibility for their translation to the clinical series and the possibility for the series and the series
	Target Audience:
	Epileptologists, scientists, neurophysiologists, imagers, students.
	Topics and Speakers:
	Brainstem Hypoxia Following Forebrain Seizures Is Linked To Apnea Followed By Asysto In A Mouse Model Of SUDEP
	Dr. G. Campbell Teskey, University of Calgary

12:30 p.m. Harbourfront Foyer 12:45 p.m.	Brainstem Seizures In A Rat Model Of Acute Recurrent Hippocampal-Originating Seizures: Apnea, Cardiac Suppression, And Clinical Relevance Dr. Peter Carlen, University of Toronto  Visualizing Spreading Depression During Fatal And Non-Fatal Seizures Dr. Stuart Cain, University of British Columbia  Lunch and Exhibits  Poster Tour
Salon C	
1:45 p.m.	Top Trainee Abstract Presentations Chair: Dr. Paolo Federico, University of Calgary
3:00 p.m.	Breakout Sessions
Session 2-A	Basic and Clinical Pharmacology of Newer Anti-Seizure Drugs Chair: Dr. Jong M. Rho, University of Calgary  Learning Objectives:  Review the fundamental mechanisms through which six newer anti-seizure drugs (ASDs) exert their clinical effects.  Review the major drug interactions that could occur when newer ASDs are used in combination, or with other non-epilepsy medications.  Review the pivotal clinical trials that led to regulatory approval of newer ASDs.  To describe both common and rare adverse side-effects of newer ASDs.  To critically assess whether mechanisms of action matter with regard to clinical use of ASDs in general.  Target Audience: Neurologists, neurosurgeons.  Topics and Speakers:  Mechanistic Overview of Anti-Seizure Drugs Dr. Tara Klassen, University of British Columbia  Pharmacokinetic Profiles of Newer Anti-Seizure Drugs Dr. Jong M. Rho, University of Calgary  Clinical Efficacy of Newer Anti-Seizure Drugs Dr. Jorge Burneo, Western University  Adverse Effect Profiles of Newer Anti-Seizure Drugs Dr. Lionel Carmant, Université de Montréal
Session 2-B	Pre and Post-Surgical Neuroimaging Diagnostics in Childhood and Adult Epilepsy

Chairs: Dr. Boris Bernhardt, McGill University and Dr. Ali Khan, Western University

#### Learning Objectives:

- Review neuroimaging studies in children with drug-resistant epilepsies
- Review functional and structural network analyses in patients with epilepsy
- Relate imaging markers to SEEG and guidelines for effective ex-vivo/in-vivo studies

#### Target Audience:

Students, researchers, clinicians.

**Topics and Speakers:** 

# Lesion Detection In Children And Adults With Drug-Resistant Seizures Based On Structural Imaging

Dr. Dewi Schrader, University of British Columbia

# Functional Network Analysis In Epileptic Children Using Multimodal Imaging, SEEG, And Surgical Pathology

Dr. Roy Dudley, McGill University

## Integrating In-Vivo And Ex-Vivo MRI In Patients Undergoing Epilepsy Surgery

Dr. Ali Khan, Western University

#### **Connectome Analysis In Epilepsy**

Dr. Boris Bernhardt, McGill University

#### Session 2-C

## 175 Years of Riding West: Working Towards a Better Understanding of Infantile Spasms

Chairs: Dr. Morris H. Scantlebury, University of Calgary and Dr. Lionel Carmant, Université de Montréal

#### Learning Objectives:

- Review infantile spasms clinical semiology, EEG and treatment options.
- Review the mechanisms of infantile spasms in light of advances in the development of rodent models and genetics.
- Discuss the developmental outcome of patients with infantile spasms and its management.
- Discuss how consensus guidelines, large databases, internet connectivity and shared data influence treatment decisions and outcomes in patients with infantile spasms.

#### Target Audience:

Neurologists, pediatricians, clinical neurophysiologists and allied health providers.

**Topics and Speakers:** 

## **Infantile Spams: Clinical Overview**

Dr. Peter Camfield and Dr. Carol Camfield, Dalhousie University

#### Rodent Models of Infantile Spasms and the Hunt for new Treatments

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	Dr. Morris Scantlebury, University of Calgary
	What do the Genetics of Infantile Spasms tell us about Mechanisms Dr. Elsa Rossignol, Université de Montréal
	Neurodevelopmental Outcome in Infantile Spasms: are we Making a Difference?  Dr. Lionel Carmant, Université de Montréal
	Infantile Spasms in the Age of Guidelines, Pathways and Big Data Dr. Carter Snead, University of Toronto
4:45p.m. Harbourfront Foyer	Break and Exhibits
5:00 p.m. (ends at 6:45 p.m.)	Breakout Sessions
Session 3-A	Neuro-Intensive Monitoring Chair: Dr. Juan Pablo Appendino, University of Calgary
	<ul> <li>Learning Objectives:</li> <li>Identify seizures and patterns of uncertain clinical significance on regular EEG trace.</li> <li>Assess new tools available for long term monitoring, in particular trends.</li> <li>Recognize the difficulties and challenges to record prolonged EEGs in ICU settings.</li> <li>Determine whether a questionable finding is artefactual or not.</li> </ul>
	Target Audience: Physicians, nurses, neurophysiologist and EEG Technologists.
	Topics and Speakers:
	Seizure Recognition and Patterns of Uncertain Clinical Significance in ICU: What is the New Trend?  Dr. Juan Pablo Appendino, University of Calgary
	Is it Real or an Artifact? The Challenges of ICU Recording Susan McGregor, Foothills Medical Centre
Session 3-B	Stereotactic Ablative Techniques in Epilepsy Surgery Chair: Dr. David A. Steven, Western University
	<ul> <li>Learning Objectives:</li> <li>Review the different types of stereotactic lesioning techniques for epilepsy surgery.</li> <li>Review the indications for stereotactic lesioning techniques for epilepsy surgery.</li> <li>Review the effectiveness of stereotactic lesioning techniques for epilepsy surgery.</li> <li>Review the risks and limitations of stereotactic lesioning techniques for epilepsy surgery.</li> </ul> Target Audience:
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	Neurosurgeons, neurologists, nurses, and allied health care providers.
	Topics and Speakers:
	Topics and Speakers.
	History Of Stereotactic Ablative Techniques For Epilepsy
	Dr. Andrew Parrent, Western University
	Stereotactic Radiosurgery And High-Intensity Focused Ultrasound Ablative Techniques For
	Epilepsy  Dr. Wass Starroyald, University of Colgany
	Dr. Yves Starreveld, University of Calgary
	MRI-Guided Laser Thermal Ablation For Epilepsy
	Dr. Alex Weil, St. Justine
Session 3-C	Women and Epilepsy
	Chair: Karen Legg, QEII Health Sciences Centre
	Learning Objectives:
	Demonstrate competence in recommending an appropriate anti-seizure medication
	for teenage girls and young women and with how to optimize vitamin
	<ul> <li>supplementation in women of childbearing age with epilepsy.</li> <li>Review interactions between anti-seizure medications and oral contraceptives and</li> </ul>
	awareness about birth control recommendations for women with epilepsy.
	Review aspects of managing epilepsy in pregnancy and counselling pregnant women  with a file and a second counselling pregnant women.
	<ul><li>with epilepsy.</li><li>Review implications of menopause on epilepsy.</li></ul>
	Target Audience:  Neurologists, nurses, and allied health care providers caring for women with epilepsy.
	Neurologists, nurses, and affect fleatth care providers caring for women with epilepsy.
	Topics and Speakers:
	Optimizing AED Selection and Vitamin Supplementation in Teenagers Girls and Young
	Women
	Dr. Anita Datta, University of British Columbia
	Birth Control and AEDs
	Dr. Elaine Wong, Children's and Women's Health Centre of British Columbia
	Prenatal, Pregnancy and Postpartum Medication Management
	Dr. Tiffany Townsend, Health PEI
	Counselling Women with Epilepsy in Pregnancy
	Jessica Rieckmann, University of Alberta
7:30 p.m.	CLAE Reception and Gala Dinner: 40 <sup>th</sup> Anniversary
	(Tickets must be purchased in advance)

Sunday, October	15, 2017
7:30 a.m. Harbourfront Foyer	Breakfast
8:30 a.m. Plenary	Challenging Topics in Epilepsy Surgery Dr. Matthew Wheatley, University of Alberta
	Further session details are pending
10:15 a.m. Harbourfront Foyer	Break and Exhibits
10:45 a.m.	Breakout Sessions
Session 4-A	<ul> <li>Neuropathology of Epilepsy Chair: Dr. Harvey B. Sarnat, University of Calgary</li> <li>Review the range of neuropathological lesions that might be demonstrated in resected brain tissues in the surgical treatment of focal epilepsy, including both classical focal cortical dysplasias (FCD) and recent findings to explain pathogenesis of epileptic networks, with clinical and neuroimaging correlations.</li> <li>Review the grades of hippocampal sclerosis at the microscopic level.</li> <li>Review recent findings of neuronal dispersion and synaptic plexi in the U-fibre layer beneath FCD that contribute to epileptic networks and distinguish them from heterotopia in deep white matter.</li> <li>Review the two most frequent epileptogenic tumours of cerebral cortex.</li> <li>Review neuroimaging correlates of neuropathological lesions.</li> </ul> Target Audience: Neurologists, epileptologists, neurosurgeons, clinical neurophysiologists and neuroradiologists.  Topics and Speakers:  Neuropathology of Focal Cortical Dysplasias and Related Lesions Dr. Harvey B. Sarnat, University of Calgary  Neuroimaging Of Focal Cortical Dysplasias and Related Lesions Dr. Andrea Bernasconi, McGill University
Session 4-B	Parietal Lobe Epilepsy Chair: Dr. Dang Khoa Nguyen, Université de Montréal
	<ul> <li>Learning Objectives:</li> <li>Review the structural and functional connectivity of the parietal lobe.</li> <li>Review the semiology of seizures arising from major subdivisions of the parietal lobe.</li> </ul>

- Review the value of non-invasive localization techniques in the investigation of parietal lobe epilepsy.
- Review the value of invasive EEG investigation of parietal lobe epilepsy: indications, methods and risks.
- Review the technical considerations, seizure outcomes and risks associated with parietal lobe epilepsy surgery.

#### Target Audience:

Neurophysiologists, neurologists, epileptologists, neurosurgeons, and trainees.

**Topics and Speakers:** 

## Structural and Functional Connectivity of the Human Parietal Lobe

Dr. Jimmy Ghaziri, Université du Québec à Montréal

#### **Semiology of Parietal Lobe Seizures**

Dr. Dang K. Nguyen, Université de Montréal

## Non-Invasive and Invasive Investigations of Parietal Lobe Epilepsy

Dr. François Dubeau, Montreal Neurological Hospital and Institute

#### **Parietal Lobe Epilepsy Surgery**

Dr. Andrew G. Parrent, Western University

Session 4-C	Neuropsychiatric Aspects of Epilepsy: Addressing Challenges Across the Lifespan
	Chair: Dr. Islam Hassan, University of British Columbia
	Learning Objectives:
	<ul> <li>Review the challenges presented by neuropsychiatric aspects of epilepsy in pediatric, adult and older adult patients.</li> </ul>
	Review recent updates on the diagnosis and management of various neuropsychiatric disorders in patients with epilepsy across the lifespan.
	<ul> <li>Review various models of integrating neuropsychiatric care into adult and pediatric epilepsy programs.</li> </ul>
	Target Audience:
	Neurologists, psychiatrists, psychologists, neuropsychologists, nurses, social workers.
	Topics and Speakers:
	Epidemiology of Neuropsychiatric Aspects of Epilepsy Across the Lifespan Dr. Jose Tellez-Zenteno, University of Saskatchewan
	Psychiatric Diagnosis and Management within a Pediatric Epilepsy Program
	Dr. Andrea Chapman, University of British Columbia
	Roles of the Neuropsychiatrist within an Adult Epilepsy Program: Clinical Challenges and Models of Care
	Dr. Islam Hassan, University of British Columbia
	The Impact of Neurocognitive Deficits in Older Adults with Epilepsy
	Dr. Marilyn Jones-Gotman, McGill University
12:30 p.m. Harbourfront Foyer	On-The-Go Lunch
12:30 p.m.	Corporate Advisory Lunch (by invitation only)