

CLAE CONNECTIONS

JULY 30, 2015; VOLUME 3: ISSUE 2



Canadian League Against Epilepsy



MESSAGE FROM THE PRESIDENT

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Dear CLAE members,

I hope that you are enjoying the summer.

I am pleased to report that the membership on our newly formed committees has been finalized. These committees include the Awards Committee (Chair Dr. Nathalie Jette), the Education Committee (Chair Dr. Paolo Federico), the Fundraising Committee (Chair Dr. Jose Tellez-Zenteno), the Publication Committee (Chair Dr. Rajesh RamachandranNair), the Medical Therapeutics Committee (Chair Dr. Carter Snead, Co-Chair Dr. Suzanne Nurse) and the Driving Task Force (Chair Jeff Jirsch). I would like to thank all those who agreed to serve on these important committees. Despite the academic slow down in the summer, a number of our committees are going full steam ahead and are already addressing important issues to ensure we provide our members and the community we serve (especially those with epilepsy) with the best possible services and outcomes.

In recent weeks, we also received an unsurpassed number of high quality applications for our trainee award competition (Epilepsy Fellowship, Summer Studentships and Publication awards). It was definitely a tough competition! Congratulations to all the awardees (see full list of awardees in this newsletter) including Dr. Trevor Steve from the University of Alberta, the winner of the 2015 CLAE Fellowship funded by Eisai. I would like to thank all of our sponsors (Eisai, Sunovion, UCB Canada, and the Canadian Epilepsy Alliance) for helping us make this competition possible.

Our Education Committee will be working hard this coming year planning our next biennial meeting. I am pleased to announce that our next CLAE meeting will be held in Quebec City in October 14-17, 2016. There will also be a meeting in October 2017, at which time we will be celebrating our 40th Anniversary in Vancouver, the home of our inaugural CLAE meeting, thanks to our founding members Dr. Juhn Wada, Dr. Norman Auckland, Dr. Frederick Andermann, Dr. Warren Blume, Dr. Henry Dunn, Dr. Keith Meloff and Dr. Allan Sherwin.

We continue to be committed to our mission of optimizing epilepsy care through research and education. This can only occur with the support of our sponsors, our members (both in kind and financial) and successful fundraising, which is challenging in this day and age. As such, I would like to thank all those who contributed generously these past few weeks by providing in-kind and financial support to the CLAE. We could not do it without you!

Enjoy the rest of the summer!

Nathalie Jette, MD, MSc, FRCPC



Canadian League Against Epilepsy



DR. TREVOR STEVE WINNER OF THE 2015 CLAE FELLOWSHIP AWARD



Dr. Steve is currently a clinical / research fellow in epileptology at the University of Alberta under the supervision of Dr. Donald Gross. He completed his undergraduate medical education at the University of Saskatchewan and neurology residency training at the University of Alberta. During his residency, he began working towards a PhD studying high-field magnetic resonance imaging (MRI) in epilepsy.

During his fellowship, Dr. Steve plans to develop experience with surgical evaluation of medically intractable epilepsy with surface and depth electrode recordings. He will also develop longitudinal experience in the management of patients with seizure disorders in the outpatient epilepsy clinic. Finally, he plans to become proficient with interpretation of outpatient and inpatient

electroencephalography.

Dr. Steve will continue to work on advanced applications of high-field MRI in epilepsy throughout his fellowship. His project aims to make use of the high spatial resolution of high-field MRI to accurately measure critical brain regions in patients with epilepsy. This technique holds promise for prediction of seizure-free outcomes in patients being evaluated for surgical treatment. Dr. Steve's long-term plan is to develop a career as a clinician-scientist at an epilepsy program in Canada. In particular, he endeavors to study novel MRI-based techniques to improve the diagnosis and treatment of medically intractable epilepsy. He was privileged to receive the CLAE Epilepsy Post Graduate Fellowship in 2015, which will provide critical support for his clinical and research goals.

Congratulations Dr Steve!

RISING STAR



Dr. Aylin Reid is finishing an epilepsy fellowship at the University of California Los Angeles this summer and will be joining the epilepsy group at the University of Toronto. Aylin received her BSc and MD from Dalhousie University before starting neurology residency at the University of Calgary. Early on in residency Aylin devel-

oped a keen interest in epilepsy and entered the PhD Neuroscience program. She worked under the supervision of Drs. Quentin Pittman and Cam Teskey, studying long term consequences of prolonged experimental febrile seizures. Aylin was the recipient of several pre-doctoral scholarships, including an Alberta Heritage Foundation for Medical Research fellowship, an Izaak Walton Killam Memorial Scholarship, and a Banting & Best Canada Graduate Scholarship from CIHR. She studied the altered expression of various neurotransmitter receptor subunits and cation-chloride channels that were associated with increased seizure susceptibility after a prolonged febrile seizure. Aylin also investigated alterations in neocortical motor representations in adulthood after an infantile febrile seizure, showing these changes are dependent on the age at time of insult and the genetic background of the animal. She received numerous awards, including awards from AES, CLAE, as well as the André Barbeau Memorial Award from the Canadian Neurological Society. Upon completion of her PhD in 2010, Aylin was the first resident to graduate from the Clinical Investigator Program of the Royal College at the University of Calgary.

During residency Aylin was also involved in epilepsy health services research, working with Drs. Nathalie Jetté and Samuel Wiebe. She received the Mary Ann Lee Award from the CLAE for a paper studying health resource utilization in patients with epilepsy. After completing neurology residency in 2012, Aylin moved to California to do post-doctoral work with Dr. Pete Engel. She has been characterizing a model of experimental post-traumatic epilepsy using lateral fluid percussion injury. She and her colleagues have studied the progression of electrophysiological events leading up to the development of spontaneous seizures, also working to identify biomarkers that may be useful in not only animal models but also in patients at risk of developing epilepsy after brain injury. Aylin has also been studying the role that age at time of brain injury plays in the development of epilepsy. Her research at UCLA has been funded by a Clinical Fellowship from Alberta Innovates Health Solutions and a Detweiler Travelling Fellowship from the Royal College.

For the past two years, Aylin has been enrolled in the Epilepsy Fellowship at UCLA, with a particular focus on surgical management of patients with epilepsy. She will be finishing her training in June 2015 and is looking forward to returning to Canada to begin her career as a clinician-scientist at the University of Toronto. Aylin plans to continue her work on experimental models of post-traumatic epilepsy to further address questions about epileptogenesis and to investigate potential protective strategies. She is particularly interested in the role of inflammation in cellular and molecular dysfunction after traumatic brain injury, and how this is related to the development of epilepsy.

CANADIAN PEDIATRIC EPILEPSY NETWORK (CPEN)

Mary B. Connolly, Kathy N. Speechley

The Canadian Pediatric Epilepsy Network (CPEN) is a collaborative group of Canadian investigators with a special interest in pediatric epilepsy. Our mission is to promote, facilitate and engage in collaborative research that will advance understanding of pediatric epilepsy, particularly regarding its pathogenesis, causes, natural history, diagnosis, management and its impact on the child and others. CPEN was developed with a grant from the Canadian Institute of Health Research (CIHR) in 1999 entitled "Towards a multidisciplinary approach to pediatric epilepsy in Canada". The original objectives of CPEN were to gain a better understanding of childhood epilepsy through a collaborative research program involving physicians, nurses, psychologists, epidemiologists, social workers, basic scientists and educators across Canada. As inaugural Chair, Dr. Sharon Whiting led CPEN for many years, followed by Dr. Elizabeth Donner. Currently, CPEN is led by Drs. Connolly and Speechley as Co-Chairs with a Steering Committee: Drs. Lionel Carmant, Elizabeth Donner, Jong Rho, Mary Lou Smith, and Sharon Whiting. CPEN has a track record of successfully facilitating a number of collaborative research projects that have advanced our understanding of pediatric epilepsy:

Completed Studies

Randomized controlled trial of flunarizine as add-on therapy in children with infantile spasms. Principal Investigator: Lionel Carmant; Co-investigators: Joseph Dooley, Kevin Farrell, Isabel Fortier, Maryse Lassonde, Shelly Weiss, Sharon Whiting. Funded by CIHR. The goal was to prospectively examine the effect of flunarizine, a neuroprotective agent on cognitive outcome in children with infantile spasms. 101 children were enrolled in the study involving 7 centers across Canada. This study failed to demonstrate a protective effect of flunarizine on cognitive function but subgroup analysis suggested that flunarizine may improve cognitive function in infants with infantile spasms where no etiology was demonstrated (Bitton et al., *Epilepsia*, 2012; 53(9):1570-1576). Long-term follow-up data from this study were used to assess the impact of treatment of infantile spasms on the incidence and risk factors for autism spectrum disorders (ASD), demonstrating ASD in children with symptomatic infantile spasms and an increased risk of ASD in those with fronto-temporal epileptiform EEG abnormalities and non-white origin (Bitton et al. *Epilepsia*, 56(6):856–863, 2015).

Health Related Quality of Life in Children with new onset Epilepsy (HERQULES): a 2 year prospective cohort study. Principal Investigator: Kathy Nixon Speechley; Co-Investigators: Mary Lou Smith, Carol Camfield, Samuel Wiebe, Guangyong Zou, Simon Levin. Funded by CIHR. This study assessed over 300 children and demonstrated

that HRQL was relatively good overall but individual trajectories were highly variable. At least 50% of children with epilepsy did not experience clinically meaningful improvements or declined over 2 years. Cognitive problems were the strongest risk factor for compromised HRQL at 2 years following diagnosis. (Speechley et al. *Neurology* 79(15):1548-55, 2012; Ferro et al, *Epilepsia* 54(11):1889-97, 2013). The study also reported on prevalence and trajectories of depressive symptoms in mothers of children with epilepsy and impact on children's quality of life (Ferro et al. *Epilepsia* 52(2): 316-325, 2011; Ferro et al. *Epilepsia* 52(2): 326-336, 2011).

Ongoing Studies

Health-related Quality of Life in Children with New-Onset Epilepsy: A Long-term Follow-Up. Principal Investigator: Kathy Nixon Speechley; Co-Investigators: Carol Camfield, Mark Ferro, Simon Levin, Mary Lou Smith, Samuel Wiebe, Guangyang Zou. Funded by CIHR. HERQULES was extended to assess the long-term course of HRQL for the initial cohort by continuing to follow these youth 6 to 9 years after diagnosis.

Impact of Pediatric Epilepsy Surgery on Health-Related Quality Of Life (PEPSQOL) Principal Investigators: Elysa Widjaja, Mary Lou Smith; Co-Investigators: Kathy Nixon Speechley, Mark Ferro, Carter Snead, Mary B. Connolly. Funded by CIHR.

Neuropsychological outcome in Encephalopathy associated with electrical Status Epilepticus of Sleep (ESES). Principal Investigator: Rajesh RamachandranNair, Mary Lou Smith, Cristina Go; Co-Investigators: Kevin Jones, Ayako Ochi, Asuri N Prasad, Sharon Whiting, Mary B. Connolly, Linda Huh, Jeff Buchhalter, Luis Bello-Espinosa. Funded by Jamie Buchanan memorial award- McMaster Children's Hospital Foundation and the Ontario Brain Institute.

SUDEP Registry Principal Investigator: Dr. Elizabeth Donner. Among the objectives are to: determine the incidence of SUDEP in Canadian children; determine modifiable risk factors for SUDEP in children; and to increase awareness of SUDEP among pediatric health care providers.

Enhanced physical activity (PA) in children and youth with epilepsy (CWE): Developing evidence of impacts on health, functioning, psychological well-being and quality of life. Principal Investigators: Gabriel Ronen and Daniela Pohl. The primary research question of this 2-site (McMaster and CHEO) project is: Amongst CWE, do increasing PA levels through a 6-month motivated walking program, as compared to current practice, positively influence health and quality of life (QoL), using the WHO's concepts and definitions of Functioning, Disability, Health and QoL, over one year?



CLAE TRAINING AWARDS 2015

Epilepsy Post Graduate Training Fellowship Award - \$60,000

Dr. Trevor Steve, supervised by Dr. Donald Gross of the University of Alberta for:

Development of unique expertise correlating in vivo and ex vivo Magnetic Resonance Imaging (MRI) measurements with histology of the hippocampus

Undergraduate Summer Studentship Awards - \$5,000

Mr. Alexander Shephard, supervised by Dr. Miguel Cortez of the Hospital for Sick Children for: *The EEG effects of fluoxetine in the Ts65Dn model for infantile spasms*

Ms. Veronica Birca, supervised by Dr. Dang Nguyen of the Centre Hospitalier de L'université de Montréal (CHUM) for: *Audit of the management of psychogenic nonepileptic seizures in a tertiary center*

Ms. Violet Wu, supervised by Dr. W. McIntyre Burnham of the University of Toronto for: *Testing 5A- Dihydroprogesterone Analogs in Female Amygdala-Kindled Rats*

Ms. Natalie Wiebe, supervised by Dr. Nathalie Jetté and Khara Sauro of the University Of Calgary- Cumming School Of Medicine for: *The epidemiology of post-traumatic epilepsy*

Publication Awards - \$1,000

Mr. Ken Myers - Resident Award (Mary Ann Lee Award) of the University of Calgary for: *Myers KA, Bello-Espinosa LE, Wei XC and Scantlebury MH. Infraslow EEG Changes in infantile spasms. J Clin Neurophys, 2014 Dec;31(6):600-5.*

Mr. Maged Goubran - Fellow Award of Western University for: *Goubran M, Hammond RR, de Ribaupierre S, Burneo JG, Mirsattari S, Steven DA, Parrent AG, Peters TM and Khan AR. Magnetic resonance imaging and histology correlation in the neocortex in temporal lobe Epilepsy. Ann Neurol, 2015 Feb;77(2):237-50, Epub 2014 Dec 17.*

Mr. Seok-Jun Hong - Graduate Student/Medical Student Award of McGill University for: *Hong SJ, Kim H, Schrader D, Bernasconi N, Bernhardt BC, Bernasconi A. Automated detection of cortical dysplasia type II in MRI-negative epilepsy. Neurology 2014 Jul 1;83(1):48-55.*

Ms. Natalie Wiebe - Allied Health Student Award of the University of Calgary- Cumming School of Medicine: *Wiebe N, Fiest KM, Dykeman J, Liu X, Jette N, Patten S and Wiebe S. Patient satisfaction with care in epilepsy: How much do we know? Epilepsia 2014 Mar;55(3):448-55.*

CLAE COMMITTEES

Awards Committee

- Nathalie Jette (Chair)
- Francois Dubeau
- David Steven
- Mary Connolly
- Thomas Snyder
- Aylin Reid

Education Committee

- Paolo Federico (Chair)
- Neda Bernasconi
- Peter Carlen
- Mary Pat McAndrews
- Bernd Pohlmann-Eden
- Gordon Cam Teskey
- Richard Desbiens
- Linda Huh
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- Ms. Gail Dempsey
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- Juan Pablo Appendino
- Danielle Andrade
- Richard Desbiens
- Mark Sadler

Publication Committee

- Rajesh RamachandranNair (Chair)
- Mary Pat McAndrews
- Luis Bello-Espinosa
- Eliane Kobayashi
- Minh Dang Nguyen

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- Suzanne Nurse (Co-Chair)
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- JP Appendino
- Susan Rahey
- Ms. Laura Wang
- Manouchehr Javidan
- Cyrus Boelman

Driving Task Force

- Jeff Jirsch (Chair)
- Richard McLachlan
- Chantelle Hrazdil
- Lysa Boisse Lomax
- Ms. Karen Legg
- Ms. Pierrette Cloutier
- Martin Veilleux



Canadian League Against Epilepsy

The Canadian League Against Epilepsy is an organization of medical and basic sciences professionals including physicians, basic scientists, nurses, neuropsychologists, neuroradiologists, students and other healthcare professionals.



NOTE FROM YOUR EDITOR

The next issue of CLAE Newsletter (September 2015) will include meaningful and relevant information to CLAE members, including but not limited to the following:

1. CLAE Stars: A member who has received local, national or international recognition for his/her research, teaching, innovation or advocacy.
2. Innovative new programs and services (clinical, research or advocacy). These include, but are not restricted to: new major regional/ institutional or provincial clinical programs, new research themes, platforms, consortium and networks, outreach programs in vulnerable/ marginalized communities, innovative educational programs and advocacy initiatives/projects.
3. Major publications by Canadians in the field of epilepsy during the last six months.
4. Information on epilepsy meetings, and epilepsy related social events.
5. Information on recruitment of patients for research studies and opportunities for research, educational and clinical collaboration.
6. Success and success stories in major grant competitions.
7. Colleagues we recently lost /an In Memoriam section.

If you are interested in contributing and providing content to the CLAE Newsletter, please contact Rajesh Ramachandran Nair (rnair@mcmaster.ca) before September 5, 2015.

Thank you!

Rajesh Ramachandran Nair, MD, FRCPC

Editor-in-Chief, CLAE Connections

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EDITOR'S PICK

NOTABLE PUBLICATIONS FROM CANADA IN 2015

1. Rapid eye movement sleep reveals epileptogenic spikes for resective surgery in children with generalized interictal discharges. Okanari K, Baba S, Otsubo H, Widjaja E, Sakuma S, Go CY, Jones KC, Nishioka K, Oba S, Matsui T, Ueno M, Ukitsu S, Rutka JT, Drake JM, Donner EJ, Weiss SK, Snead OC 3rd, Ochi A. *Epilepsia*. 2015 Jul 15.
2. What do epileptologists recommend about discontinuing antiepileptic drugs for a second time in children? McCarthy AL, Camfield CS, Camfield PR, Valencia I. *Epilepsy Behav*. 2015 Jun;47:120-6.
3. Does treatment have an impact on incidence and risk factors for autism spectrum disorders in children with infantile spasms? Bitton JY, Demos M, Elkouby K, Connolly M, Weiss SK, Donner EJ, Whiting S, Ronen GM, Bello-Espinosa L, Wirrell EC, Mohamed IS, Dooley JM, Carmant L. *Epilepsia*. 2015 Jun;56(6):856-63
4. Magnetic resonance imaging pattern learning in temporal lobe epilepsy: classification and prognostics. Bernhardt BC, Hong SJ, Bernasconi A, Bernasconi N. *Ann Neurol*. 2015 Mar;77(3):436-46.

UPCOMING PROGRAMS

31st International Epilepsy Congress

Istanbul; September 9-12, 2015

<http://www.epilepsyistanbul2015.org/>

American Epilepsy Society 69th Annual Meeting -
December 4-8, 2015 , Philadelphia

[https://www.aesnet.org/meetings_events/
annual_meeting/general_info](https://www.aesnet.org/meetings_events/annual_meeting/general_info)

CLAE biennial meeting- Quebec City, October 14-17, 2016.