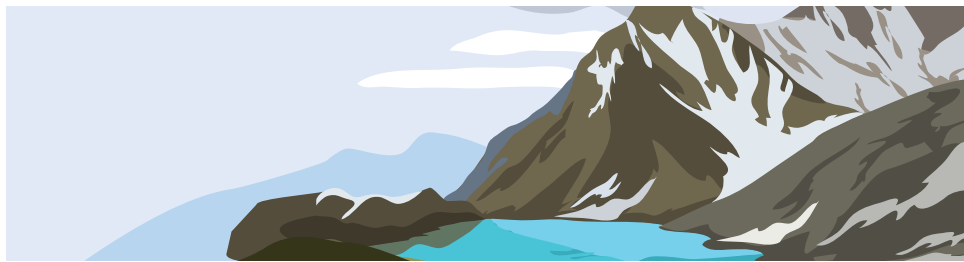


# 5TH BANFF INTERNATIONAL EPILEPSY SYMPOSIUM

## ICTAL INTERICTAL CONTINUUM

THE RIMROCK RESORT HOTEL  
BANFF, ALBERTA, CANADA

FRIDAY, MAY 19, 2023



# A WARM WELCOME TO BANFF

Welcome to the 5th Banff International Epilepsy Symposium (BIES)!

This year the BIES focuses on the intriguing and highly relevant topic of The Ictal-Interictal Continuum.



Clinicians and researchers are increasingly aware of the importance of addressing and recognizing the grey zone between an electrographic seizure proper, and a highly active interictal rhythmic or periodic electrographic pattern. A similar clinical continuum exists where seizures occur in clusters without quite satisfying the criteria for status epilepticus.

The recognition of these patterns has broad diagnostic, therapeutic and prognostic ramifications across age groups, syndromes and clinical conditions; and the 5th BIES brings together the top world experts to address these areas.

During the symposium, world experts will discuss topics related to EEG patterns that exist along the ictal-interictal continuum and implications for clinical management. By the end of this Program, participants will be able to:

1. Identify epileptogenic patterns on EEG and their clinical implications.
2. Reappraise the concept of the interictal - ictal continuum and the evidence for the treatment of these conditions.
3. Recognize the up-to-date medical and surgical treatment of Status Epilepticus.
4. Identify how highly epileptogenic EEG patterns contribute to pediatric developmental and epileptic encephalopathies.

This academic tour de force takes place amidst the breathtaking vistas of the Canadian Rocky Mountains in Banff and we hope you can take some time to also experience nature and its beauty.

Sincerely,

Julia Jacobs, Director, Calgary Paediatric Epilepsy Programme

Samuel Wiebe, Director, Calgary Adult Epilepsy Programme

# SYMPOSIUM AGENDA

<b>08:00-08:50</b>	<b>BREAKFAST - Salon B</b>
<b>08:50-09:00</b>	Opening Remarks
<b>09:00-09:15</b>	Case
<b>09:15-09:55</b>	Seizure Clusters: Outpatient Management <b>Dr. Michael Sperling</b>
<b>09:55-10:10</b>	<b>BREAK - Wildrose Prefunction</b>
<b>10:10-10:50</b>	Paediatric DEE from Interictal to Ictal <b>Dr. Elaine Wirrell</b>
<b>10:50-11:30</b>	Surgical Management for Status Epilepticus <b>Dr. Walter Hader</b>
<b>11:30-12:00</b>	Panel Discussion
<b>12:00-13:00</b>	<b>LUNCH – Salon B</b>
<b>13:00-13:15</b>	Case
<b>13:15-13:55</b>	The Ictal-Interictal Continuum and Electro-Clinical Gap- What does it mean? <b>Dr. Eugen Trinka</b>
<b>13:55-14:35</b>	Where do West and Lennox-Gastaut Syndromes fit on the Ictal-Interictal Continuum <b>Dr. Amy Brooks-Kayal</b>
<b>14:35-14:50</b>	<b>BREAK – Wildrose Prefunction</b>
<b>14:50-15:30</b>	Updates on the Diagnosis and Management of Status Epilepticus <b>Dr. Felix Rosenow</b>
<b>15:30-16:10</b>	Walking the line: EEG Patterns that exist on the Ictal-Interictal Continuum and their relevance in Clinical Practice <b>Dr. Lawrence Hirsch</b>
<b>16:10-16:50</b>	Panel Discussion
<b>16:50-17:00</b>	Adjournment

**Non accredited activity:** Social Night/Family Dinner Friday May 19th, 2023,  
07:00-10:00pm – HAWTHORN AB



# SEIZURE CLUSTERS: OUTPATIENT MANAGEMENT

Dr. Michael Sperling, MD

## LEARNING OBJECTIVES

By the end of this session, participants will be able to:

- a) Develop a seizure management plan for emergencies and clusters
- b) Recognize the indications for various types of seizure cluster rescue therapy
- c) Develop rescue therapy treatment for patients with seizure clusters

**Dr. Michael R. Sperling** is Baldwin Keyes Professor of Neurology and Vice Chair for Research at the Sidney Kimmel Medical College at Thomas Jefferson University, and Director of the Jefferson Comprehensive Epilepsy Center.



Dr. Sperling is an internationally recognized clinician-scientist in the field of epilepsy, known particularly for his work in clinical neurophysiology, epilepsy surgery, and investigational therapeutics. He has published approximately 500 peer-reviewed papers, reviews, book chapters, and several books.

He is presently Editor-in-Chief of *Epilepsia* and is a former president of the American Clinical Neurophysiology Society and the Philadelphia Neurological Society. He received the J. Kiffin Penry award from the American Epilepsy Society in 2018 and the Ambassador for Epilepsy award from the International League Against Epilepsy in 2021.

# PEDIATRIC DEE: FROM INTERICTAL TO ICTAL

**Dr. Elaine Wirrell, MD**

## LEARNING OBJECTIVES

By the end of this session, participants will be able to:

- a) Distinguish between Developmental Encephalopathy vs Epileptic encephalopathy?
- b) Recognize the outcomes in patients with DEE
- c) Analyze if these outcomes can be improved?

**Dr. Elaine Wirrell** is the Chair and Professor of Child Neurology and Program Director of Child and Adolescent Neurology at the Mayo Clinic in Rochester, Minnesota. She completed medical school at the University of British Columbia and her Pediatric Neurology training at Dalhousie University in Halifax, Nova Scotia.



She is the past Co-chair of the Nosology and Status Epilepticus Task Force and a member of the Pediatrics Task Force of the International League Against Epilepsy. She serves as the Co-Editor-in-Chief of Epilepsy.com and is on the Medical Advisory Board for the Dravet Syndrome Foundation and the Lennox-Gastaut Foundation.

Dr. Wirrell's main research interests are in early onset, medically intractable epilepsies including developmental and epileptic encephalopathies and epidemiology and comorbidities of pediatric epilepsy.

She is the recipient of the 2021 Kiffin-Penry Award from the American Epilepsy Society and the 2016 Distinguished Clinician award from Mayo Clinic.

# SURGICAL MANAGEMENT FOR STATUS EPILEPTICUS

Dr. Walter Hader, MD, MSc, FRCS (C)

## LEARNING OBJECTIVES

By the end of this session, participants will be able to:

- a) Select appropriate Patient candidates for surgical treatment of Status Epilepticus
- b) Examine the surgical options in status epilepticus
- c) Review the outcomes of surgery in status epilepticus

**Dr. Walter Hader** is an associate professor in the Department of Clinical Neurosciences at the University of Calgary. He is the section chief of pediatric neurosurgery at the Alberta Children's Hospital and head of Epilepsy surgery in the Calgary Epilepsy Program.



Dr. Hader completed a Masters degree in Neuroanatomy prior to completion of his medical training in 1994, both at the University of Saskatchewan. He subsequently completed Neurosurgical residency training at the University of British Columbia. Following residency training, he obtained postgraduate clinical fellowships in Pediatric Neurosurgery at the Hospital for Sick Children at the University of Toronto and in Epilepsy Surgery at the Montreal Neurological Institute.

His research interests include advancing access to the surgical treatment of epilepsy and the neurocognitive sequelae of neurosurgical interventions.

# THE ICTAL-INTERICTAL CONTINUUM AND ELECTRO-CLINICAL GAP: WHAT DOES IT MEAN?

**Dr. Eugen Trinka, MD, MSc, FRCP**

## LEARNING OBJECTIVES

By the end of this session, participants will be able to:

- a) Apply the electroclinical definition of non convulsive status epilepticus
- b) Identify the current concept of electroclinical gap
- c) Appraise the clinical evidence of brain damage after prolonged seizures and status epilepticus

**Dr. Mag. Eugen Trinka** has been Chairman of the University Department of Neurology, Deputy Medical Director of the Christian Doppler Clinic and President of the Salzburg Medical Society since 2010.



He is also currently Past President of the Austrian Society of Neurology and President of the International League Against Epilepsy in the Europe Region. He has published more than 570 scientific publications on various neuroscientific topics, in particular cognition, functional neuroimaging as well as epilepsy, coma and intensive care neurology.

He is the recipient of numerous scientific awards, including the Herbert Reisner Prize in 2000, Humes Visiting Professorship Award in 2015, and Ambassador for Epilepsy in 2017. Professor Trinka was inducted as a Fellow in the Royal College of Physicians in 2016.

# WHERE DO WEST AND LENNOX-GASTAUT SYNDROMES FIT ON THE ICTAL-INTERICTAL CONTINUUM?

**Dr. Amy Brooks-Kayal, MD, PhD**

## LEARNING OBJECTIVES

By the end of this session, participants will be able to:

- a) Recognize the unique nature of background abnormalities in West Syndrome (WS) and Lennox-Gastaut Syndrome (LGS)
- b) Interpret the effect of these persistent abnormalities on neurodevelopment
- c) Identify the unique EEG patterns associated with epileptic spasms and tonic seizures

**Dr. Amy Brooks-Kayal** is Professor and Chair of the Department of Neurology and the Andrew John Gabor, M.D., Ph.D., Presidential Chair in Neurology at University of California Davis School of Medicine.



As an internationally recognized physician leader, epileptologist, and leader in research on novel seizure therapies, she clinically specializes in the care of children and teens with complex epilepsy and her research has identified cellular and molecular changes involved in the transition of the brain from normal to epileptic, with emphasis on understanding the molecular regulation of GABA(A) receptor expression during epileptogenesis leading to the development of novel therapeutics.

Dr. Brooks-Kayal has held numerous leadership roles in the neurology, epilepsy and neuroscience research communities, and is currently a director of the American Board of Psychiatry and Neurology and Associate Editor for Epilepsy for the Annals of Neurology. She was the 2019 recipient of the AES Founders Award and a 2021 recipient of the International League Against Epilepsy (ILAE) Ambassador for Epilepsy award for her international contributions to activities advancing the cause of epilepsy.

# UPDATES ON THE DIAGNOSIS AND MANAGEMENT OF STATUS EPILEPTICUS

Dr. Felix Rosenow, MD, PhD

## LEARNING OBJECTIVES

By the end of this session, participants will be able to:

- a) Review the Ictal-interictal Continuum in the EEG in status epilepticus
- b) Identify superior choices in the treatment of Status epilepticus
- c) Recognize the ictal-interictal continuum in consciousness in status epilepticus

**Dr. Felix Rosenow** studied medicine at the Free University of Berlin, received a doctoral research grant from the Max-Planck Institute for Neurological Research Cologne and subsequently a MD degree at the University of Cologne, where he also was trained as board certified neurologist.



He received postdoctoral training at the Cleveland Clinic Foundation (Dept. of Neurology, Section of Epilepsy and Sleep, Director: Prof. Dr. Hans O. Luders, M.D. Ph.D.).

He subsequently served as Ulran-Professor for Neurology/Epileptology at the Philipps University Marburg and is now Professor and Director of the Epilepsy Center Frankfurt Rhine Main, Department of Neurology (Director: Prof. Dr. Helmuth Steinmetz) at the University Hospital Frankfurt and

the Goethe-University Frankfurt, Germany.

His research interests include clinical and translational epilepsy research, clinical neurophysiology, status epilepticus, presurgical diagnosis of epilepsy, and epilepsy genetics.

He currently serves as member of the Research Strategy Committee of the Medial Faculty and as speaker of the LOEWE Center for Personalized Translational Epilepsy Research (CePTER) of the Goethe-University Frankfurt and is Past-President of the German Society of Clinical Neurophysiology and Functional Imaging ([www.DGKN.de](http://www.DGKN.de)). He is the head of the Commission on Epilepsy and Syncope of the German Neurological Society (DGN). He was previously a member of the Evidence Based Epilepsy Surgery Commission of the ILAE.

# WALKING THE LINE: EEG PATTERNS THAT EXIST ON THE ICTAL-INTERICTAL CONTINUUM AND THEIR RELEVANCE IN CLINICAL PRACTICE

**Dr. Lawrence Hirsch, MD, FAAN, FACNS, FANA, FAES**

## LEARNING OBJECTIVES

By the end of this session, participants will be able to:

- a) Identify the concept of the Ictal-Interictal Continuum (IIC)
- b) Recognize the patterns that can occur within the IIC and when and why to be most concerned about them
- c) Formulate better management plans for patients with IIC patterns and discuss the pros and cons of different levels of treatment

**Dr. Lawrence J. Hirsch** is Professor of Neurology, Chief of the Division of Epilepsy and EEG, and Co-Director of the Comprehensive Epilepsy Center, all at Yale University. He has held leadership positions in the American Clinical Neurophysiology Society (ACNS), American Epilepsy Society, American Academy of Neurology, and the Epilepsy Foundation, and is lead author of the 2012 and 2021 ACNS guidelines on critical care EEG terminology.



He is founder and former chair of the Critical Care EEG Monitoring Research Consortium, which now includes more than 50 centers, and co-chair of the medical advisory board of the NORSE Institute.

He has been an active researcher throughout his career, having published more than 200 peer-reviewed manuscripts and more than 100 reviews, editorials or book chapters on topics including status epilepticus, all aspects of EEG including intracranial recordings and brain monitoring in the critically ill, brain stimulation, epilepsy surgery, seizure clusters, rescue medications, sudden death in epilepsy (SUDEP), and anti-seizure medication use. He has won multiple teaching awards

# SYMPOSIUM COORDINATORS

## **Dr. Juan Pablo Appendino**

Paediatric Neurologist – Epileptologist at the Alberta Children's Hospital.  
Clinical Associate Professor in the Department of Pediatrics,  
Cumming School of Medicine, University of Calgary.

## **Dr. Julia Jacobs**

Pediatric Neurologist, Director Alberta Children's Epilepsy Program  
Associate Professor, Department of Pediatrics and Clinical Neurosciences  
Cumming School of Medicine, University of Calgary

## **Dr. Colin Josephson**

Neurologist and Associate Professor in Departments of Clinical Neurosciences and  
Community Health Sciences, Cumming School of Medicine, University of Calgary.  
Member of the O'Brien Institute of Public Health and Hotchkiss Brain Institute.

## **Dr. Shaily Singh**

Neurologist and Clinical Assistant Professor, Department of Clinical Neurosciences,  
Cumming School of Medicine, University of Calgary.

## **Dr. Samuel Wiebe**

Neurologist and Professor in the Departments of Clinical Neurosciences,  
Community Health Sciences, and Pediatrics for the Cumming School of Medicine,  
University of Calgary. Director and founder of the Clinical Research Unit.



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